SB

150

3.

DELIVER TO: JPOM

ORIGINAL
SENT: 02/21/85 TIME: 09:05
FROM: LANA TRUJILLO
SUBJECT: POM
PRINT DATE: 02/21/85 TIME: 09:06

TO: SEN. BENNETT, COGHILL, ELIASON, FAHRENKAMP, FAIKS, VIC FISCHER, HALFORD, JOSEPHSON, KELLY, RODEY, STURGULEWSKI, ZHAROFF AND ZIEGLER

REP. CATO, CLOCKSIN, DAVIS, FULLER, GRUENBERG, GRUSSENDORF, HERRMANN, JENKINS, MARTIN, MM MILLER, MW MILLER, PEARCE, PETTYJOHN, PHILLIPS, PIGNALBERI, SHULTZ, SUND, TAYLOR, THOMPSON AND WALLIS

FROM: SHERWIN START, 320 MCCARREY ST., ANCHORAGE, 99504, 337-8988(HM)

RE: SB 150

ALASKA STATE WATERS ARE FAST APPROACHING TOTAL ALLOCATION OF USE. THIS BILL MAKES AN ATTEMPT TO MAKE THE INDIVIDUAL WATER USERS SHOW NEED BY ACTUAL USE OF THEIR APPROPRIATED QUANTITY OF WATER. THIS BILL WILL REQUIRE A CONSIDERABLE INCREASE IN THE DEPT. OF NATURAL RESOURCES WATER USE ENFORCEMENT STAFF.

MSP © MBF v Patents 3,016,308 3,429,827 Moore Business Forms, Inc.

APR 0 8 1985

Jim + Kay Hansen
Box 246
Nome, Ak.
99762
Ph: 443-1074

April 3, 1985

Mrs. Arliss Sturgulewski
Senator
Pouch V
Juneau Ak.

Mr. Sturgulewski:

First as your constituents we want to thank you for your individual efforts and concern in the past.

Inclosed find information on a problem many of us are <u>very</u> concerned about.

Jim + Kay Hansen.

Jim + Kay Hansen

Ms. Sturgulewski:

Greetings and hope all is well with you in Juneau.

You may already be aware of a situation that threatens to bring the State to a grinding halt! That is right — Alaska's cities, agriculture, fisheries processor and hatcheries, most types of industry, all mining, forestry processors (some of whom have already been closed) and even future Oil development and the support facilities of present oil production will be closed down! In short everyone or entity that uses <u>water</u>.

How can this happen?! Simply through enforcement of Federal and State <u>water</u> <u>regulations</u>.

Most people are not aware of the situation. The regulations however apply to all users.

The basic problem is this:

The Federal clean water Act, 33 U.S.C., required the states to classify their waters within a relatively short period of time. The state of Alaska had made little effort at this previously, therefore decided (under environmental pressure) to simply classify <u>all waters</u> as "Drinking water" pure — the most restrictive. Complaint was made, however, the state said the classification was simply to comply with the short Federal time constraints. Later we can take time to study + reclassify they said. The "Feds", however, changed the procedure allowed for reclassification, CFR 131.12, making it virtually <u>impossible to reclassify</u>!

Thus all of our water is still "drinking water" pure.

this is a noble classification. the problem is, however, that you can not use any water in Alaska for any other purpose but drinking without exceeding the Fed E.P.A. regulatory effluent guidelines of 5 N.T.U. (measurement of Turbidity)

that is right - it is virtually impossible for any users of water to comply with this regulation that is imposed on All water users

the fines are not just the "slap on the wrist" type either — $10000/day and jail sentences for violators! this, coupled with court injunctions, will allow the agencies and even an individual to "shut down" the state. Of course a shut down of this nature is seen as unacceptable to the public at large so it appears an effort is possibly being made to close or curtail one activity at a time -

It appears the present target is the mining activity. Now, if enforcement is carried on against the mining community over turbidity, I believe a class-action law suit would be filed. One of the complaints in this suit would be that they are being unconstitutionally singled out for prosication.

This would compell the agencies to prosicute all users of water for inability to meet the Fed. E.P.A. 5 N.T.U. standard.

Enforcement action on this scale would be out of the question but this would perhaps force a "common-sence" solution.

Now you may say this sounds just like another "dirty water miner" the State + Feds. are trying to clean up. He just doesn't want to put a little money + effort in to compliance.

Unfortunatly this is wrong!

Almost No water users can comply!

The Canadian Government recognizes this scientific fact of reality and therefore does not even have turbidity requirements for mining. Further, they realize that turbidity in itself is not generally harmful and at times even helpful. For instance, scientific studies have shown that most of Alaskas fresh water fish are healthier in a turbid aquatic environ.

Many feel this is a potentially disastrous "catch 22" situation we are in and feel it should be addressed in this session of the legislature.

We urge you to contact other knoledgable users of water and seek possible solutions

May we suggest one <u>possible solution</u> if legal.

Legislativly <u>recind</u> the regulatory action that was taken to classify all waters as "drinking water" and blanket reclassify all waters to a lower category. This would allow reasonable water uses to continue. Re classifying certain waters to a higher standard where needed would then be easy as E.P.A. requirements are readily met when reclassifying in this direction.

I hope you as an individual legislator and as a group can make some progress on this unbelievable bureaucratic screw up! Hopefully you can resolve this matter.

Best of luck in this and your other endevors.

Sincerely,

Jim + Kay Hansen.

DELIVER TO: LTCJ

ORIGINAL
SENT: 01/22/86 TIME: 13:51
FROM: HARRY MANDREGAN
SUBJECT. 1ST EMAIL
PRINT DATE: 01/22/86 TIME: 13:52

TO: BILL IN JNU

FROM: HARRY IN ANC

PARTICIPANT LIST FOR THIS AFTERNOONS TELECONFERENCE ON WATER RIGHTS

1. MIKE FRANK-STATE AGO
2. TOM MEACHAM-AK. WATER BOARD
3. PEG TILESTION

STATE OF ALASKA
THE LEGISLATURE

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907-465-3300

LEGISLATIVE AFFAIRS AGENCY

LEGISLATIVE REFERENCE LIBRARY

May, 1988

Copies of minutes listed below were originally included in this file. The minutes are available on the STAIRS database CMPR. In order to save space copies of minutes have not been left in the files.

Mary Van Nimwegen

SR 3-8-85 1:40pm

Alaska Department of
NATURAL
RESOURCES
ESTHER WUNNICKE,
COMMISSIONER

Fact Sheet:
RESERVING WATER FOR INSTREAM USE

OCTOBER, 1984

WHAT ARE RESERVATIONS OF WATERS?

A reservation of water is a type of water right. The use of water within a stream, lake, or other surface water body may be reserved to maintain an adequate instream flow or level of water for specific activities, such as fish spawning or a river rafting enterprise. Water can be reserved for one or more permissible uses at a particular point or part of a stream or other waterbody, during a certain period of time. Under Alaska Statute 46.15.145, permissible instream uses include:

- Protection of fish and wildlife habitat, migration and propagation,
- Recreation and park purposes,
- Navigation and transportation purposes, and
- Sanitary and water quality purposes.

A reservation of water for one use may also serve as a reservation for another purpose. For example, a reservation for fish spawning may also benefit recreation.

Like out-of-stream water rights, a reservation of water is a property right. However, it cannot be abandoned, conveyed, transferred, assigned, or converted to another use without the approval of the Department of Natural Resources.

WHO CAN APPLY FOR A RESERVATION OF WATER?

Private individuals or organizations as well as government agencies may apply for a reservation of water for instream use. This is not a required permit, but rather an optional water right. Those who wish to divert, impound, or withdraw water from a surface or ground water source will continue to file for their water rights under Title 46 for obtaining diversionary water rights.

HOW CAN I APPLY FOR A RESERVATION OF WATER

- You can get an Application for Reservation of Water (Form 10-1151) at any Department of Natural Resources, Division of Land and Water Management district office. Your application, however, must be submitted to the district office in the area where your proposed reservation of water will occur.

- Before submitting your application, you should talk with the district office people about the type of work or study needed to quantify the instream water use, and information needed in your application.

- When your application is complete and has been accepted, it will be reviewed to ascertain the need for the reservation of water, impacts on other water right holders, and the public interest. An assessment will be made to determine if water is available for the reservation, and if the hydrologic and technical information in the application is accurate and adequate. Public notice of your application must be given.

- Certificates of reservation, when issued, will be granted to the applicant. Conditions may be placed on certificates.

- Certificates of reservation must be reviewed by the Division of Land and Water Management every ten years, but can be reviewed in less than ten years if changed conditions warrant a review.

WHAT COSTS ARE INVOLVED?

- The Application for Reservation of Water should be accompanied by the appropriate filing fee as set forth in the fee schedule of the Department of Natural Resources.

- You will be required to pay the cost of a legal advertisement to notify the public of your proposed reservation of water.

- If a certificate is issued, you may be required to install and maintain measuring devices, such as stream gages, weirs, or staff gages, and monitor and report on the instream flow or level of water.

- You may also be responsible for additional data collection or analysis during the certificate review period.

WHY SHOULD I APPLY FOR A RESERVATION OF WATER?

You should apply if you want to ensure that the level or flow of water in a stream or lake that you need for your purposes will be available when and where you need it, and will not be appropriated or diverted for another use.

If you have an established instream water right, you have priority use of that water over people who file later for water rights as well as legal standing in case of conflicting uses of water by those without a water right.

WHAT OTHER WATER RESOURCES PERMITS MIGHT BE NEEDED FROM THE DEPARTMENT OF NATURAL RESOURCES?

A permit or certificate of appropriation is required for diverting, impounding, or withdrawing water for use from a water body or ground water source.

A certificate of approval is required if you want to construct or modify a dam ten feet or more in height, or if the storage capacity is 50 acre-feet or more. A separate application form along with a sliding filing fee applies for various size dams as set forth in regulations (11 AAC 93.200).

Further information about reservations of water for instream uses and application forms may be obtained from the following offices:

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF LAND AND WATER MANAGEMENT

SOUTHEASTERN REGIONAL OFFICE
400 Willoughby Avenue
Pouch MA
Juneau, Alaska 99811
465-3400

NORTHERN REGIONAL OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHCENTRAL REGIONAL OFFICE
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
276-2653

▲ Mat-Su Area Office
Century Plaza, Suite 202
Pouch 874008
Wasilla, Alaska 99510
376-4595

Western Energy Update

Western Interstate Energy Board/WINB
6500 Stapleton Plaza . 3333 Quebec Street
Denver, Colorado 80207
303/377-9459

Newsletter No. 85-22
December 6, 1985

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COAL

Interior Department Releases Management Action Plan for OSM

Last week the Interior Department released an advanced draft of a Management Action Plan (MAP) for the troubled Office of Surface Mining. The MAP is the first significant effort by the Department to develop solutions to the wide range of problems identified by numerous special investigations. Most of the investigations have focused on the agency's failure to deal with the problems of unpaid fines and outstanding violations and abuses of the 2-acre exemptions--conditions which are predominantly found in the east. The rough ideas found in the MAP are largely the product of work by Earle Gjelde, assistant to the secretary, and Jed Christensen, acting OSM director.

State regulatory agencies had their first opportunity to provide the Department with feedback on the MAP this week at meetings held in Albuquerque, NM. Environmental groups and industry are expected to meet with the Department in Washington, D.C. early next week.

In their preliminary review of the MAP, the states found the concept of a management action plan a significant improvement which may provide for the first time a comprehensive indication of the Office of Surface Mining's policies and objectives. Regarding enforcement, the states: supported the concept of decentralizing assessments as a sound method of improving compliance by making imposition of penalties for violations rapid, as compared with the current Washington, D.C. assessment policy; questioned the effectiveness of the "buyer blocking" approach as opposed to current permit denial provisions in SMCRA; and emphasized that the law does not require identical state and federal programs, but rather requires state programs which are as effective as the federal program. Regarding oversight, most states expressed concern that the MAP fails to establish a process to measure the effectiveness of reclamation on the ground, but merely enhances the emphasis on "bean counting," e.g. counting the number of inspections, number of violations, etc. Other states did not object to bean counting, in part because they doubted OSM's ability to develop program effectiveness measures.

In response to the historic long delays and duplicate reviews needed to secure decisions on mine plans on federal lands, the MAP proposes delegating final signoff authority to State BLM Directors. Western Governors have suggested delegating approval authority to OSM field personnel, however, the Department concludes in the MAP that SMCRA prohibits any OSM official from approving mine plans on behalf of the Department. As for Abandoned Mine Lands, the MAP proposes that the secretary's share of AML funds be distributed 50 percent on the basis of a flawed National Abandoned Lands Inventory and 50 percent on the basis of historic coal mining. In addition, $20 million per year would be set aside to be available for matching by states for any AML priorities authorized under SMCRA. As has been the case in other AML issues, there was little agreement among states on the wisdom of such an allocation. There was agreement, however, in favor of the MAP's proposal to delegate greater AML decision authority to field offices.

Regarding management changes, there was support for the MAP objective of decentralizing the highly centralized agency, but significant uncertainty as to what decisions were in fact being proposed to be delegated to the field offices. States stressed the continuing problems with the failure of OSM to make timely decisions on such critical topics as amendments to state programs. The states also questioned the wisdom of the MAP proposal to shift responsibility for Illinois, Indiana and Michigan to the Western Assistant Director. The midwest states suggested that OSM consider the establishment of an Assistant Director for midwest states. The Department is apparently reconsidering the proposed move of those states to the West.

House Interior Committee Chairman Morris Udall (D-AZ) has written Secretary Hodel expressing a number of views on the MAP. Udall asked that there be a comment period of at least 30 days and that the plan include a crosswalk between agency initiatives and the requirements of SMCRA. He said he "would vigorously oppose any proposal, for example, that on-site deference be given to state inspectors where the Federal inspectors believe a violation contrary to the Act exists. In addition, OSM must be ready and willing to institute a Federal program in the unfortunate event that a complete breakdown occurs." Finally, Udall stated that he would like to see a Management Task Force, which was recommended in a committee report earlier this year, be established by January 1.

Based on a Department briefing in October, environmental groups have written the Department supporting a "comprehensive approach to the myriad problems now confronting the Office of Surface Mining," but have taken issue with many of the concepts now contained in the MAP. Environmentalists specifically take issue with proposals for changes to oversight, inspection and enforcement by OSM, bonding, and remining incentives. "In short, we have fundamental problems with your MAP proposal...Your Plan would also reduce federal enforcement at the same time a bipartisan effort in Congress is strengthening the federal inspection force to deal with problems created by state failures. The MAP is not only at variance with reality; it is in flat conflict with the Act. Should it go forward, it would face certain challenge, and we believe defeat, in the Courts...Your proposed course of action would lead to confrontation and to years of instability in a program that cries out for stability."

The Department is seeking comments on the advanced draft by December 10 so that such comments can be reflected in the draft MAP to be published in early January. According to the MAP: "We too are concerned about the limited time for

this review but feel the draft should get out to the many other people who need to review it." The MAP is designed to be an ongoing document with regular updates beginning in June 1986.

Coal Notes...

The BLM is conducting a study on whether **railroad coal** affiliates should be allowed to lease federal coal and, if so, how it might be done. A BLM official said there is no target date set for completing the report. Steve Griles, assistant secretary-designate for lands and minerals management, recently announced the Interior Department supports a system of cooperative leasing where a railroad affiliate would offer its checkerboard coal at a lease sale along with federal coal. All of the coal would be offered together and would be awarded to the highest bidder. ("Inside Energy/with Federal Lands," Dec. 2)

Mid-Continent Resources has laid off 118 of 538 employees at its three **coal mines in Colorado**, due to lack of sales. The three mines near Glenwood Springs produce metallurgical coal used to make steel. Mid-Continent's major customer is U.S Steel in Provo, Utah, which is the only raw steel producer left in the West. The firm also sells to Lone Star Steel in Texas and Korea, but because of the distance to a port, potential international markets are limited. The company is continuing to modernize the mine to make the mining operations more efficient. ("Rocky Mountain News," Dec. 3)

The long term uncertainty about oil prices suggests **continued growth in the use of coal** according to Chase Manhattan Bank's Quarterly review "Sensitivity of World Coal Markets to Falling Oil Prices." The short-term outlook favors oil, but only a "very dramatic sustained decrease in the price of oil could challenge" the conclusion that coal use will continue to increase, wrote Vincent J. Calarco, Jr., Chase's vice president and coal economist. Coal has an advantage over oil for new power plants planned for the early 1990s. To eliminate that advantage, real crude oil prices in the U.S. would have to fall below $18.03 per barrel with no real increase in coal prices or fall below $19.25 if coal prices increase by one percent, according to Calarco. "In general, barring a collapse of [the Organization of Petroleum Exporting Countries'] production-sharing system and a subsequent price war, existing thermal coal markets are relatively secure," the review said. ("BNA's Energy Report," Nov. 14)

Seven eastern states and four environmental groups have sued the Environmental Protection Agency (EPA) for failing to set new limits on **smokestack emissions** that return to the ground as acid rain. Environmentalists hope the suit, filed in U.S. District Court, will spur the agency to action after years of study and litigation, representatives of the plaintiffs said. The suit claimed EPA failed to review and revise its standards for emissions of sulfur oxides every five years as required by the Clean Air Act of 1977. The lawsuit charged that the lack of stricter limits on emissions from coal-burning power plants, ore smelters and other industries in the Midwest is damaging health, property and the environment. "As a nation, we have been pregnant with the problem of acid rain for far too long," said FredericD. Krupp, director of the Environmental Defense Fund. The National Resources Defense Council, the National Parks and Conservation Association, and the Sierra Club also took part in the suit. ("Denver Post," Dec. 6)

NUCLEAR ENERGY

House Interior Marks Up Price-Anderson Nuclear Liability Bill

The House Interior Subcommittee on Energy and Environment has started marking up Rep. Morris Udall's (D-AZ) bill to reauthorize the Price-Anderson Act governing nuclear liability. Udall had proposed a $10 billion liability ceiling, but the Subcommittee approved a $2 billion ceiling proposed by Rep. Austin Murphy (D-PA), although Udall said that the fight would continue at the Committee level. The Subcommittee also voted to delete a provision which would have allowed utilities not involved in an incident to sue the responsible utility for reimbursement of monies paid under the utilities' retrospective premium program. The Subcommittee rejected an amendment by Rep. Manuel Lujan (R-NM) to extend the Price-Anderson Act by 20 years, rather than 10 years.

The Subcommittee is scheduled to meet this week to discuss other liability provisions, including application of the Price-Anderson act to high-level radioactive waste activities. Several representatives are expected to offer amendments. Rep. Barbara Vucanovich (R-NV) has a bill to impose unlimited liability on the federal government for accidents involving the nuclear waste program, with a $5 billion contribution from the Nuclear Waste Fund (which is financed by nuclear utility ratepayers). Rep. Joe Barton (R-TX) may amend the Vucanovich proposal by limiting liability for waste accidents to the same levels provided for incidents involving commercial reactors, with the U.S. Treasury as the source of the funds. Rep. Jerry Huckaby (D-LA) would impose federal government liability only for defense or DOE wastes; commercial waste incidents would be compensated for under the Price-Anderson Act.

Amendments are also expected in other areas. Rep. Sam Gejdenson (D-CT) has prepared amendments to: increase the statute of limitations to five years from the time an injury and its cause are discovered; extend Price-Anderson coverage to acts of theft and sabotage; and prohibit the use of required insurance and utility liability funds to pay legal fees and investigative costs. Rep. John Seiberling (D-OH) is considering an amendment to raise the first layer of coverage (the involved utility's insurance) from $160 million to $1 billion. Seiberling may also introduce a change in the definition of an "extraordinary nuclear occurrence" by tying it to a release of a specified amount of radiation, rather than leaving the determination to the Nuclear Regulatory Commission's discretion. ("Inside Energy/with Federal Lands," Nov. 25 & Dec. 2; "EESI Weekly Bulletin," Dec. 2; "EEI Washington Letter," Nov. 22)

OTA Urges DOE to Develop Consensus on MRS Nuclear Storage Facility

The Office of Technology Assessment urged the Department of Energy to work towards developing a strong consensus on DOE's proposed Monitored Retrievable Storage facility (MRS) for high-level radioactive waste. DOE released the draft environmental assessment for the project, but the final proposal to Congress is not due until January. DOE must work with all affected groups, including candidate repository states (such as Washington, Nevada, and Utah), transportation corridor states, utilities, environmental groups, and Tennessee (candidate MRS host) to develop a "core compromise" on the facility, OTA said. OTA warned that congressional MRS authorization on a close vote could lead to new attacks each year, as was the case with the Clinch River Breeder Reactor, which was eventually cancelled by Congress in 1983. ("Inside Energy/with Federal Lands," Nov. 25)

Nuclear Notes...

Prohibiting the Department of Energy from **enriching foreign uranium for domestic use** would only increase prices of uranium, enrichment, and electricity, without providing any relief to the shut-down domestic uranium mines and mills, according to 32 utilities. The utilities asked the U.S. District Court in Colorado to rule against the uranium producers on count 1 of their complaint in Western Nuclear v. Huffman requesting the court to enjoin DOE's foreign uranium enrichment for domestic use. Earlier this year, the court sided with the producers on a separate count to hold DOE's enrichment contracts null and void. ("Inside Energy/with Federal Lands," Dec. 2)

California's San Onofre Nuclear Plant Unit 1 was shut down for inspection and repairs following an electrical problem in the non-nuclear portion of the plant. A leak of non-radioactive water occurred following the shut-down, but no radiation was released in the incident.

Portland General Electric Co. and the Oregon Public Utility Commission have reached a court-approved settlement with Oregon consumers and environmentalists over the utility's **investment in the abandoned** Pebble Springs and Skagit/Hanford **nuclear plants.** At issue was whether the utility had unlawfully included part of the costs of the incomplete plants in its rate base. The consumer and environmental groups agreed to drop their lawsuits. In exchange, Portland General agreed to: 1) dismiss its appeal of the PUC's denial of cost recovery on the abandoned plants; 2) refund $14 million of PUC-approved rate increases; 3) donate $500,000 to the Sierra Club Foundation as an "advisory grant" which can be tapped by the consumer groups for activities not contrary to the utility's interests; and 4) pay the consumer groups' attorney fees. ("BNA's Energy Report," Nov. 14)

Colorado's Office of Consumer Counsel asked the Public Utilities Commission to **remove the Fort St. Vrain nuclear plant from the utility's rate base.** The country's only high temperature, gas-cooled reactor has operated for only 10 days in the last 21 months, and has not produced electricity since June 1984. The consumer office asked that $46 million annually be removed from the rate base and said that Public Service Co. should purchase any useful electricity the plant produces in the future and recover its purchase price through the quarterly fuel cost adjustments, the consumer office said. ("BNA's Energy Report," Nov. 14)

The House Energy Subcommittee on Energy Conservation and Power has requested the Office of Management and Budget's (OMB's) opinion regarding how much money the Department of Energy's **uranium enrichment program** owes the U.S. Treasury for its wasted investment in the gas centrifuge enrichment plant. The Subcommittee sent OMB a lengthy set of questions to be answered at the Subcommittee's hearing next week. There is widespread disagreement regarding the size of DOE's debt, with estimates ranging from $350 million to $6 billion. ("Inside Energy/with Federal Lands," Dec. 2)

The American Nuclear Energy Council adopted a resolution supporting the Department of Energy's proposed concept of a **Monitored Retrievable Storage facility (MRS)** as an integral part of the high-level radioactive waste disposal program. The Council also urged DOE to establish a public information program for the facility, and to address concerns of the host state and community regarding financial assistance and citizen involvement. ("Nuclear Waste News," Nov. 28)

The Senate Environment and Public Works' Subcommittee on Nuclear Regulation cancelled its November 22 **markup on low-level radioactive waste compact legislation.** However, this move will not delay the bill, which will move directly to full Committee markup this week. ("Radioactive Exchange," Nov. 22)

The first phase of an audit has been completed on the **Palo Verde Nuclear Power Plant.** The audit, agreed to by the utility commissions in Arizona, California, New Mexico, and Texas, was prompted by a 210% cost overrun on the plant, and seeks to find costs which were not reasonably incurred, and thus, should not be included in the rate base. The first phase identified as areas for more in-depth study those project elements which are questionable and involve large sums of money. ("Arizona Corporation Commission News," Nov. 27)

UTILITIES

Utility Notes...

Two-thirds of state public utility commissions do not require **least-cost planning** of their utilities and they also "lack adequate information and analytical planning tools," acording to a survey conducted by Rep. Claudine Schneider's office. The results of the $1 million survey were released on November 14, as the first step in a three year program to transfer the findings of federal research on efficiency and least-cost alternatives to state commissions. The campaign has the backing of the National Association of Regulatory Utility Commissioners. "If we were as efficent as European nations we would free upwards of $200 billion per year for non-energy business expansion, job creation, and community economic development," Schneider (R-RI) said, citing studies by Amory Lovins. Copies of the report are available from Schneider's office; telephone (202) 225-2735. ("BNA's Energy Report," Nov. 21)

The Montana Public Service Commission has approved a plan for Montana Power to sell its share of the **Colstrip 4 power plant** and lease back power from the plant, the utility said. Under the plan, Montana Power will sell its 30 percent share of the 700 megawatt plant for $266 million to a partnership, using most of the proceeds to retire long-term debt. The partnership is made up of units of Shell Oil Co., General Electric Co. and Drexel Burnham Lambert Inc. The remaining 70 percent of Colstrip is owned by Puget Sound Power & Light, Washington Water Power Co., Portland General Electric Co. and Pacific-Corp. Montana Power will lease back electricity for about $29 million a year over a 25-year period. It plans to sell the power to other utilities in the region, noting it will not need the power until the early 1990s. Colstrip is scheduled to begin producing power next April. ("Wall Street Journal," Dec. 3)

Portland General Electric has announced a 28-year contract to sell 75 megawatts of electricity annually to San Diego Gas & Electric Co. The agreement is the first **long-term sale of firm power** from the Northwest to a California utility. Northwest utilities have been selling power on a short-term basis to California utilities for some time. The sale will likely be viewed "very cautiously" by the Northwest Power Council, according to Don Goddard, a member of the regional planning body. The council is concerned that long-term exports of firm power could turn the Northwest into an "energy farm for California," he said. There is also concern that the current electricity surplus in the region could disappear if power is exported. Portland General is projecting a power surplus until the late 1990s. The power may come from the company's little-used Boardman

coal plant or from power purchased from Bonneville Power Administration. ("BNA's Energy Report," Nov. 14)

The **Bonneville Power Administration** has published its "Draft 1986 Resource Strategy" which is a study of how the agency might meet its future power needs and addresses the demand for power predicted in BPA's 20-year forecast. BPA's proposed blueprint for building a secure electric energy future for the Pacific Northwest includes preservation of two partially completed nuclear projects, minimal "capability building" in the area of generating resources and a moderate conservation effort involving all user groups. The "Preferred Resource Strategy" recommends continued preservation of mothballed WPPSS nuclear plants, WNP-1 and -3. BPA's resource planning is guided by the Northwest Power Planning Council's Power Plan which recommends that BPA acquire options to buy hydro generating resources and develop the capability to acquire conservation savings through incentive programs when needed. BPA's Resource Strategy substantially reflects the Council's Draft Power Plan and preliminary Council decisions made since its Draft Plan was established. "We are seeking public comment on the draft strategy. This is an excellent opportunity for people to get involved in decisions on their energy future," said BPA Administrator Peter T. Johnson. After soliciting public comment, BPA will develop its final "1986 Resource Strategy" scheduled for release in February 1986. For further information on the 1986 Resource Strategy, public meetings, or how to acquire the documents, contact the BPA Public Involvement Office, P.O. Box 12999, Portland, OR 97212.

OIL and GAS

FERC's Block Billing Proposal Attacked

Industrial users and many users of natural gas are attacking the Federal Energy Regulatory Commisssion's proposed block billing for natural gas. The comments were in response to FERC's proposal to change the way in which prices paid at the wellhead for low-cost old (still regulated) gas and higher-cost new gas are melded together before the gas reaches the end user. Interstate pipelines have traditionally averaged their low and high acquisition costs for gas purchases. This gave the pipeline greater leverage in its purchasing practices, especially when demand was greater than supply, since it could pay above market prices for newer gas then average it with lower priced old gas. However, it also led to charges that some pipelines were imprudent in their purchasing policies. FERC's proposal, however, would have pipelines bill separately for old and new gas, preserving the benefits of lower-priced gas for old customers. The commission issued a revised block bill proposal on October 9 when it issued the final rule dealing with the first three parts of its transportation rule. The Department of Energy also criticized FERC's proposal saying it would penalize new users of natural gas.

Industrial users said that the proposal is fundamentally unworkable and discriminatory. Industrial groups representing over 200 large and small manufacturers stated, "[t]he revised proposal is still fundamentally flawed, and we therefore strongly urge the commission to abandon block billing." The groups are the American Iron and Steel Institute, the Association of Business Advocating Tariff Equity, the Chemical Manufacturers Association, the Georgia Industrial Group, and the Process Gas Consumers Group. The National Association of Manufacturers (NAM), which represents 13,000 corporations, also expressed its strong opposition to block billing.

Most producers also oppose the block billing proposal, according to Nicholas J. Bush, president of the Natural Gas Supply Association (NGSA). In testimony before the House Energy Subcommittee on Fossil and Synthetic Fuels, Bush said, "[i]t will not serve the public interest and will merely push the existing pricing distortions further down the marketing chain.... The right to so-called old gas, with its regulated prices, is reserved to a select and arbitrary group of consumers. Furthermore, NGSA believes block billing would significantly harm exploration and development of new gas supplies."

The Department of Energy claimed that FERC's analysis of the effects of block billing is "incomplete and flawed." DOE said the proposal would: raise consumer gas prices by about 18 cents per thousand cubic feet in the first year; reduce total gas consumption and production by 450 billion cubic feet in the first year and, from 1985 to 1995, total domestic production would be 3.3 trillion cubilc feet less than under current regulations; reduce domestic producers gas revenue by $3.4 billion in the first year and, between 1985 and 1995, by $20 billion in real terms; and reduce the revenues of interstate pipelines by $540 million to $590 million in the first year and, between 1985 and 1995, by $3.1 to $3.5 billion in real terms. DOE said block billing would create three major problems. For one, since it would increase marginal prices to consumers and cause U.S. gas consumption to decline, it would cause fixed charges to be allocated over smaller volumes, exacerbate the current take-or-pay problems, and seriously harm gas producers. "Block billing would also shift the old gas cushion from interstate pipelines to their customers, primarily local distribution companies,thereby reducing incentives for the distribution companies to act in an efficient manner," DOE told FERC. "Finally, block billing is an esentially arbitrary allocation of old gas entitlements to historical users of natural gas and, as such, it would make more difficult the start-up of new companies dependent on natural gas fuel or feed-stocks." DOE said FERC should abandon its billing concept and raise the prices of old gas to market levels. In this regard, DOE is proposing a rule to achieve the latter. ("BNA's Energy Report,"Nov. 21)

Oil and Gas Notes...

A compromise to establish negotiations to settle the dispute over **California offshore leasing** is expected to be approved by the House Rules Committee. The proposal, formulated principally by Rep. Ralph Regula (R-OH), calls for periodic negotiations between a congressional team, made up of six Californians plus other members serving on committees with jurisdiction over leasing, and Interior Secretary Donald Hodel. The proposal reportedly has been accepted by Rep. Leon Panetta (D-CA), leader of those congressmen trying to reimpose a moratorium on California OCS leasing since talks broke down with Sec. Hodel. The oil and gas industry, however, is likely to oppose such an approach. An industry source said that, while not opposed to a negotiated settlement of the dispute, the majority of companies might be opposed to a "special process" operating outside the normal public participation procedures of the federal offshore leasing law. ("Oil Daily," Dec. 4)

Another report attacks the Interior Department's **oil and gas lottery leasing** procedures. A report prepared by Keplinger Technology Consultants, Inc. found that BLM employees are hopelessly behind in determining the energy potential on certain federal lands and the agency is short on qualified personnel to make those resource assesments. The report echos the findings of the House Appropriations Committee investigations staff which critizied Interior's performance in determining the likely location of oil and gas reserves. Mistakes in determining

locations of reserves or "known geologic structures" (KGS) can lead to the loss of federal revenue. Tracts with known oil and gas potential must be offered competively to maximize the government's return. Other tracts are offered through the non-competitive simultaneous leasing system, or lottery. Congressional critics of the lottery have charged that it is hopelessly flawed and should be discarded. A House lottery leasing reform bill is expected to be offered by Rep. Morris Udall (D-AZ), perhaps before Christmas. ("Inside Energy/with Federal Lands," Dec. 2)

DOE is developing legislative options for **deregulation of natural gas** and expects to send them to President Reagan shortly. A senior DOE official said that Energy Secretary John Herrington expects "that we will be able to get a decision by Christmas." DOE recently decided that drafting an Administration bill is preferable to endorsing any of several gas bills already pending in Congress. ("Inside Energy/with Federal Lands," Nov.25)

Natural gas prices have fallen since FERC's new transportation rule took effect one month ago. As producers have found it increasingly difficult to move supplies to market, spot prices have plunged below $2 per thousand cubic feet in California and Texas. ("Oil Daily," Dec. 2)

The Oklahoma Independent Petroleum Association has asked U.S. Attorney General Edwin Meese to investigate **possible antitrust violations** by interstate pipelines that have elected not to participate in FERC's new natural gas transportation program. In its letter OIPA said the pipelines' decision "is devastating to Oklahoma gas producers ..." ("BNA's Energy Report," Nov. 14)

The Minerals Management Service has changed the requirement on length of time an **OCS bid** may be reviewed before it is considered rejected. The agency currently has 90 days to accept a bid on an OCS lease before it is considered rejected, but MMS said that requirement is too inflexible when the offered leases are "in an area subject to extensive defense-related activities that may be or may become incompatible with mineral exploration/development activities." MMS has amended the rule to permit the Interior secretary to "determine how long the authorized officer may consider the bid before it is accepted or rejected." The determination would appear in the final sale notice. ("Inside Energy/with Federal Lands," Nov. 25)

Net **imports of crude** oil in October were down 21 percent from a year ago, DOE said. Net imports of crude oil, including SPR oil, and petroleum products together averaged 4.1 million barrels per day. Total petroleum products supplied averaged 15.6 million bpd, about the same as a year ago. Stocks of crude oil were down about 9 percent from a year ago. U.S. refineries operated at 79.5 percent of capacity during the four weeks ending November 1.

DOE received 32 bids from 17 companies in its **test sale** of 1.1 million barrels of crude oil from the **Strategic Petroleum Reserve.** The bids ranged from $26.12 per barrel for sour (or high sulfur) crude oil to $31.25/barrel for sweet (or low surlfur) crude. Minimum acceptable bids for the four different grades of oil offered ranged from $26.2006 to $28.4596 per barrel. The minimum bid levels were pegged at 90 percent of the oil's market value on the New York Mercantile Exchange for the last 11 trading days prior to closing the bids. ("Oil Daily," Nov. 27; "Inside Energy/with Federal Lands," Dec. 2)

The oil and gas industry is attacking the Interior Department's proposal to **raise the bonding rates.** The proposal is intended to make sure bond amounts cover restoration costs of leased federal properties that are developed for oil, gas and geothermal resources. The twelve types of bonds now used would be streamlined to four and their dollar amounts increased. Industry does not consider consolidating the bonds a problem, but raising the liability limits is. Industry claims that because of the slump in oil and gas activities only the larger, major oil companies would qualify for the higher bonds, not the smaller independent companies that do most of the drilling. ("Inside Energy/with Federal Lands," Dec. 2)

The Process Gas Consumers Group, an association of industrial gas consumers, has suggested six strategies that state and federal regulators could adopt to **promote gas supply competition.** According to a phamplet put out by the group, the six strategies are: promotion of competition at all levels -- wellhead, pipeline, and distributor; continued regulatory oversight of pipelines and distributors sheltered by considerable monopoly power; effective incentives for efficient operation and good business practices by pipelines and distributors; equal access to gas supplies for all potential purchasers and obligatory non-discriminatory transport for all gas; rates, including transportation rates, based on the cost of service at both pipeline and retail levels; and curtailments of sales and service based on end use. ("BNA's Energy Report," Nov. 14)

The **New Mexico Taxation** and Revenue Department has revised the property tax regulation implementing the statutory valuation method to be used in assessing some oil and gas facilities. The revised regulations deal with pipelines, tanks, sales meters, and plants used in processing, gathering, transmission, storage, measurement or distribution of oil, natural gas, carbon dioxide or liquid hydrocarbons.

SYNTHETIC FUELS

Senate Committee Votes to Cut Funds for SFC

The Senate Appropriations Committee has voted to cut the SFC's remaining funds in half as part of the omnibus spending bill approved by the committee. The spending bill, or continuing resolution, will provide funds for agencies that have not had regular appropriations bills passed by Congress. The committee cut about $3 billion from the SFC's funding leaving it with about $3.6 billion to try to salvage the program.

Meanwhile, in a letter to Senate Energy Committee Chairman James McClure (R-ID), the Reagan Administration said that it is now up to Congress to "settle the matter" of funding for the Synthetic Fuels Corp. The message effectively dissolves the 1984 agreement between the Administration and Congress which allowed the SFC to continue operating, although at a lower funding level. It also strengthens the hand of Energy Secretary John Herrington and others who object to any more financial aid provided by the SFC. The letter was signed by M.B. Oglesby Jr., assistant to the president for legislative affairs. It was in reply to a letter Sen. McClure had written to the President in October asking if the compromise reached in late 1984 is still valid. A Senate vote on the SFC is expected soon when the Senate again takes up the Interior appropriations bill for FY-86. The letter did not surprise SFC Vice Chairman Tom Corcoran. "I think it's what we've suspected to be the case for some time," he said. He noted though,

that even if SFC funding is rescinded in the Interior bill, the President is likely to veto the bill because it exceeds the FY-86 budget target. ("Wall Street Journal," Dec. 6; "Inside Energy/with Federal Lands," Dec. 2)

Synthetic Fuels Notes...

On November 19, The Synthtic Fuels Corp. took a series of actions to resolve the status of all **projects pending before the SFC.** In its consideration of the remaining Third General Solicitation projects in the West, the SFC Board of Directors set a December 13 deadline for the Paraho-Ute project in Utah to submit additional information on a proposed scaled-down project producing 4,500 barrels of shale oil per day. The board received a briefing on the status of the Seep Ridge project (Utah) and directed the staff to resolve all outstanding issues with regard to the project by the next board meeting. The board was also briefed on two proposals for down-sizing the Cathedral Bluffs oil shale project in Colorado. For western projects in the SFC's Fourth General Solicitation, the board directed that negotiations on key financial terms be completed for the Utah Methanol project by January 31, 1986. Finally, for projects in the Corporation's Tar Sands Solicitation, the staff reported that the PR Springs and Sunnyside projects in Utah appear to meet the qualification criteria of the solicitation and are relatively equal when compared against the solicitation's ranking criteria.

Occidental Oil Shale Inc. has now filed two funding proposals with the SFC for "down-sized" developments. Both proposals call for using Occidentals modified in-situ method of retorting shale. ("Rocky Mountain News," Dec. 6)

The **Great Plains coal gasification** plant is in danger of slipping into the red soon as a result of a second pipeline refusing to pay the contract price for the gas. Tennessee Gas Pipeline Co. recently joined Natural Gas Pipeline Co. in refusing to pay the higher price. In light of the former sponsors' actions, DOE officials last week presented Energy Secretary John Herrington with options for continuing operation of the plant, an official said. None of the options call for shutting down the plant soon, the official added. That will not be done as long as litigation over the validity of the gas contracts ensues, he said. ANG Coal Gasification Co. which runs the plant for DOE, is exploring ways of diversifying the coal gasification operation to increase its revenues. ANG is studying two options: developing and marketing additional byproducts and/or reconfiguring the plant to produce other liquid products. ("Inside Energy/with Federal Lands," Nov. 25)

PUBLIC LANDS

Judge Supports Federal Reserve Water Rights in Wilderness Areas

A U.S. District Court judge in Colorado has ruled that "federal reserve water rights do exist" in 24 wilderness areas in Colorado that are in national forests. Under the ruling, potential water projects to divert water to cities could not be built upstream from a wilderness area since that would rob wilderness areas of water and would deprive this and future generations of Americans "the enduring resources of the wilderness," Judge John L. Kane, Jr. wrote. The Sierra Club had filed suit asking that the federal government be forced to assert water rights for wilderness areas in Colorado Water Court. District Court Judge John Kane agreed with the Sierra Club that when Congress passed the 1964 Wilderness Act, it intended to create a federal reserve water right to protect the pristine nature of lands designated as wilderness areas.

In his decision, Judge Kane said that federal officials were not required by law to file for water rights, though they could have done so to protect the rights. But he noted he was dismayed at the U.S. Forest Service's "benign neglect of this issue of federal reserved water rights" and he called for federal officials to present a plan to "comply with their statutory duty to protect wilderness water resources" to him by April 1.

The lawsuit was opposed by the state, the city of Denver, the Colorado Water Congress, a state association of farm, industrial and municipal water users, and the Mountain States Legal Foundation. It appears likely the judge's decision will be appealed. Gregg Hobbs, attorney for the Water Congress said, that since the decision is the first of its kind, "we ought to see what the appellate courts think about the law." He labeled the decision far-reaching and added "Congress is going to have to look at its implications in designating additional wilderness in Colorado. The wilderness areas could interfere with future development that might be needed in the state."

Sen. William Armstrong (R-CO) said that he and other western congressmen intend to stall the designation of any new western wilderness areas unless they can overturn through legislation the judge's ruling. Armstrong said he is confident that no more Colorado wilderness areas will be created as long as the ruling stands. Sen. Malcolm Wallop (R-WY), chairman of the Senate committee with jurisdiction over wilderness areas has said that he intends to hold up wilderness designation for more than 20 million acres of western lands under study by the Bureau of Land Management until the water rights issue is settled. Other congressmen, however, called for negotiations between environmentalists and water providers to resolve the matter. ("Denver Post," Nov. 27; "Rocky Mountain News," Dec. 6)

Public Lands Notes...

A federal court in Washington, D.C. temporarily enjoined the Department of the Interior from carrying out activities to open up over 170 million acres of federal lands, mostly in the West, to **mining and mineral exploration and other development.** Environmental groups had sued the Interior Department over its proposed activities, saying that required land use plans had not been prepared for the lands. ("Wall Street Journal," Dec. 5)

CONSERVATION AND RENEWABLE RESOURCES

Renewable Resources Notes..

Planning has begun for the American Solar Energy Society's 11th National **Passive Solar Conference** to be held this summer. The conference will be held on June 8 through 14, 1986 in Boulder, CO. ASES has issued a call for papers and is especially interested in papers dealing with the government role in solar energy development. People interested in submitting a paper should submit an abstract to the ASES office before January 15. For more information contact the ASES office at (303) 443-3130 or call Pamm McFadden at (303) 443-4308.

With momentum still behind them, the Solar Energy Industries Association is attempting to get favorable clarification in the Committee report on the Ways and Means tax reform package. Recently the committee voted to extend the **solar tax credits** at reduced rates over a three year period. SEIA wants to make it clear that the extension includes photovoltaics. Moreover, it wants the report to

reflect a different interpretation of eligibility than the IRS interpretation earlier this year for certain hot water tanks. IRS ruled that some hot water tanks used in solar energy applications that had backup electrical or gas heating elements were dual-purpose tanks and thus were ineligible for solar credits. The bill would require collectors to be certified by the Solar Rating and Certification Corporation, but SEIA wants to make it clear that consumers would have until December 31, 1986 to obtain certification. SRCC estimates that less than 30 percent of the collectors sold today are uncertified and that the percentage will drop to 5 percent once the provision is in place. ("Solar Energy Intelligence Report," Nov. 25)

With less than 25 days left until the **energy tax credits** expire, the Solar Lobby is working on all the angles to see that the credits remain available. Though the Ways and Means Committee has passed the tax reform bill, the House strategy seems to be to wait so that the Senate only has time for a straight up or down vote and then adjourn. The Senate would, therefore, not be able to seek a conference to iron out the differences between that bill and a measure of its own. The House is likely to send a quick "clean-up" bill that would cover only those elements of the 16 tax measures expiring this year that have already become part of the larger tax reform package. The Committee's bill does not include wind energy or residential conservation. To counter that problem, the lobby has been working with Senator Mark Hatfield (R-OR) who has encouraged and supported solar energy and together they are looking for a member of the Finance Committee to offer a bill providing a general extension of all the credits. But, Finance Committee Chairman Bob Packwood, a fellow Oregon Republican has said that he would limit the extension to the items in the Ways and Means bill. An additional effort seeks to have the Treasury Department not enforce the expiration date of the credits until all the voting is done early next year. At that time the credits could be extended retroactively. ("Solar Energy Intelligence Report," Dec. 2)

Sales of fuel ethanol are expected to show another big gain this year. Early predictions had been somewhat less optimistic than the latest forecasts which predict sales growth near 34 percent. This would bring the two-year growth to 77 percent. Total volume is expected to hit 7.59 billion gallons of ethanol blend, or 7 percent of the total gasoline market. Sixteen states have sales volumes in excess of 10 percent. WIEB states in this group include Nebraska (32.16%), Colorado (17.25%) and New Mexico (13.62%). Paradoxically, some 88 small-scale farm ethanol plants built during the late 1970s and early 1980s have been shuttered, yet the capacity of American ethanol refiners continues to grow. Capacity of American refiners will jump to 625 million gallons from 430 million gallons last year. The estimates were made by the consulting firm of Information Resources Inc., of Washington D.C. ("Solar Energy Intelligence Report," Nov. 25)

House efforts to reform **hydroelectric licensing** legislation began in earnest this month with a markup session in the House Energy Subcommittee on Energy Conservation and Power. According to subcommittee Chairman Markey (D-MA), a majority of the members have already agreed upon: elimination of municipal preference; greater protection of fish and wildlife; and fair compensation for those utilities which lose a facility to a new licensee. Issues still in dispute include: grandfathering of existing cases; whether the bill should include an economic impacts test; and whether the bill should include some form of antitrust scrutiny. The grandfathering issue would let the courts decide currently pending licensing proceedings, rather than having the new, non-preference policy apply. Rep. Markey, however, favors a position whereby investor-owned utilities would compensate municipals for their legal fees and for "the benefits these challengers

would have gained under the old law." Another unresolved issue is wheeling. Rep. Markey remarked, "[i]t has been suggested that the most meaningful way to address teh perceived imbalance caused by the elimination of municipal preference in relicensing would be to increase the ability of public utilities to obtain access to adequate transmission." Markey announced that his committee, along with help from the utilities would undertake a study of the issue. Also mentioned at the hearing was the possible elimination of PURPA benefits for new small hydroelectric projects. ("EEI Washington Letter," Nov. 22)

Rep. Edward Markey would like to see a bill reforming the **Commercial and Apartment Conservation Service** considered and approved by his subcommittee before the end of the year. He is currently negotiating with Rep. Ralph Hall (D-TX) a panel member and a critic of CACS over changes that would address the concerns of natural-gas and electric utilities without compromising the program's basic purpose. Although DOE has implemented a standby federal program for use in states without their own plans, it is reluctant to issue orders requiring utilities to implement CACS while the issue is pending before congress. The Senate has already approved a bill to repeal CACS. The Senate bill also includes reforms in a related program for homeowners, the Residential Conservation Service. Only about ten states have proposed plans for implementing CACS. Utilities having to comply with the federal plan would not have the kind of flexibility offered in most state plans. ("Inside Energy/with Federal Lands," Dec. 2)

A new national directory of **energy software for microcomputers** has been published by the Bureau of Governmental Research and Service of the University of Oregon. The directory annotates more than 100 software packages. Each listing includes a description of the software, hardware requirements, price, contact, and whether the software is proprietary or copy-protected. The information on each package was reviewed and approved by the vendors themselves. For more information, or to order copies at $15.00 each, contact: Bureau of Governmental Research and Service, University of Oregon, P.O. Box 3177, Eugene, OR 97403.

For Further Information Contact: Lori Friel
Douglas Larson
David Lewis
Judy Sandusky
Alison Wilson, Editor

APPROACHING COMMENT DEADLINES ON KEY PROPOSED RULES

	Comment Deadline	Federal Register Reference
Proposed amendments to special rules applicable to Surface Coal Mining Hearings and Appeals-OHA	12/16/85	50 FR 47237 11/15/85
Notice of application to amend authorization to import natural gas from Canada-ERA	12/16/85	50 FR 47250 11/15/85
Availability of the final EIR/EIS for the Pacific Texas Crude Oil Pipeline to CA-BLM	12/23/85	50 FR 48269 11/22/85

New Federal Regulations and Notices

12/6/85

COAL	Status	Federal Register Reference
Final rule regarding approval of amendments to the Colorado Permanent Program under the Surface Mining Control and Reclamation Act of 1977-OSM	Effective 11/15/85	50 FR 47215 11/15/85
Final rule regarding petitions for award of costs and expenses under the Surface Mining Control and Reclamation Act of 1977-OHA	Effective 12/16/85	50 FR 47222 11/15/85
Notice of public comment period and opportunity for public hearing regarding proposed modifications to the Utah Permanent Regulatory Program-OSM	Comments by 12/16/85 Hearing 12/10/85	50 FR 47233 11/15/85
Proposed amendments to special rules applicable to Surface Coal Mining Hearings and Appeals-OHA	Comments by 12/16/85	50 FR 47237 11/15/85
Availability of EIS regarding petition to designate certain Federal lands in the Red Rim area of Wyoming as unsuitable for Surface Coal Mining operations-OSM	Effective 11/26/85	50 FR 48844 11/27/85

Environment	Status	Federal Register Reference
Final rule regarding redesignation to attainment for carbon monoxide of a portion of the Fresno-Clovis Metropolitan Area, CA-EPA	Comments within 30 days of this notice	50 FR 47735 11/20/85
Notice of final determination on Arizona's application for final authorization of State Hazardous Waste Management Program-EPA	Effective 12/4/85	50 FR 47736 11/20/85
Final rule regarding National Oil and Hazardous Substances Pollution Contingency Plan-EPA	Effective 2/18/86	50 FR 47912 11/20/85
Availability of Final EA and record of decision for mining activity in Mill Creek Wilderness Study Area, Utah-BLM	Notice of 11/21/85	50 FR 48139 11/21/85
Notice of availability of the Draft EIS for the James Creek Coal Preference Right Lease Application in CO-BLM	Comments by 2/24/86	50 FR 48270 11/22/85
Proposed rulemaking regarding approval and promulgation of revision to the Colorado SIP-EPA	Comments by 12/26/85	50 FR 48613 11/26/85
Notice of proposed rulemaking regarding approval and promulgation of State implementation plans in the South Coast Air Quality Management District and Ventura County Air Pollution Control District in California-EPA	Comments by 12/27/85	50 FR 48798 11/27/85

Nuclear	Status	Federal Register Reference
Extension of comment period on proposed rule to change safeguards reporting requirements-NRC	Comments by 12/31/85	50 FR 48220 11/22/85
Notice of fees for Federal interim storage of Spent Nuclear Fuel from Civilian Nuclear Power Plants in the U.S. for calendar year 1986-DOE	Effective 1/1/86	50 FR 48457 11/25/85

Oil & Gas	Status	Federal Register Reference
Notice of application to amend authorization to import natural gas from Canada-ERA	Comments by 12/16/85	50 FR 47250 11/15/85
Availability of the final EIR/EIS for the Pacific Texas Crude Oil Pipeline to CA-BLM	Comments by 12/23/85	50 FR 48269 11/22/85

Utilities	Status	Federal Register Reference
Notice of programmatic memorandum of agreement regarding a California-Oregon transmission project-Advisory Council on Historic Preservation	Comments by 12/16/85	50 FR 47239 11/15/85
Notice of final allocations of contingent capacity and associated energy from the Boulder Canyon Project Uprating Program-WAPA	Effective 30 days from this notice	50 FR 47830 11/20/85

Western Interstate Energy Board/WINB
Suite 6500 Stapleton Plaza
3333 Quebec
Denver, Colorado 80207

The Hon. Arliss Sturgulski
State Senator
Pouch V
Juneau, AK 99811

9/86

M E M O R A N D U M January 22, 1986

TO; Senator Sturgulewski

FRO: Resource Committee Staff

RE: Participants at 1-22 meeting

The following people will be participating in this afternoon's hearing:

From Anchorage:

MIKE FRANK, Assistant Attorney General not determined for Q

TOM MEACHAM, member of Alaska Water Resources Board Q: was polled as ass't A.G.

Peg Isleib " " " " "

Anchorage Water Board members, as yet unidentified.

In Juneau:

MARY LOU HARLE, Water Resource Officer, DNR ✓

RANDY WANAMAKER, Chairman, Alaska Water Resources Board ✓

Also present from DNR, but not testifying, will be:

PAULA BURGESS ~~East~~ Land & Water

MIKE VADINER

Bruce Baker. Frisch

Water Resources Board

MEMBER	APPT	REAPPT	TERM
Thomas E. Meacham 810 "N" Street Anchorage 99501 Public/Restricted	82/09/17		86/02/21
A. Michael Neimeyer 503 East Sixth Anchorage 99501 Public/Restricted	85/01/09		89/02/21
William R. Ross DEC Juneau 99811 Comm./Designee	85/02/04		
Stanley C. Rybachek P.O. Box 55698 North Pole 99705 Public/Restricted	84/07/31		88/02/21
Margaret B. Tileston 4780 Cambridge Way Anchorage 99503 Public/Restricted	80/02/28	84/03/27	88/02/21
David Vanderbrink P.O. Box 1236 Homer 99603 Public/Restricted - ~~Chairman~~	81/02/03	85/03/08	89/02/21
Cyril R. Wanamaker (SANDY) P.O. Box 2234 Juneau 99803 Public/Restricted — CHAIRMAN	83/12/27	85/03/08	89/02/21
Wayne E. Westberg SRA Box 1559 Anchorage 99507 Public/Restricted	81/02/03	85/06/05	89/02/21
Esther Wunnicke DNR Juneau 99811 Comm./Mandated	82/12/06		

Phil Holdsworth brought by for you. TM NF

Section 46.15.040 (Note: Mike Frank is sending a letter clarifying the state liability question)

Amend subsection (d) to read: The commissioner's issuance of a permit under AS 46.15.080, or of a certificate under AS 46.15.065 or AS 46.15.120, does not represent a guarantee by the state to the permittee or certificate holder that water will be available for appropriation at a certain volume, quality, artesian pressure, or cost. This subsection does not, however, alter any rights a permittee or certificate holder may have against later appropriators, including governmental agencies.

Section 46.15.165(c)

Add a new subsection (7) to read: serve the order on all mining claimants of record with the United States and the State as of the date of the order initiating the administrative adjudication. Failure of the commissioner to notify mining claimants under this subsection shall not disable the commissioner from otherwise adjudicating the rights of parties in the adjudication.

(7)

(Note: If there is a way to avoid opening the door to notice to special interests groups, we should do so. Records of mining claimants are fairly easy to obtain; however, title searches for other landowners within a basin would be very time consuming and expensive. However, Frank Homan advised me he doesn't believe Senator Fahrenkamp will accept the bill without this. The last sentence is to provide for the situation where DNR may miss a mining claimant during the record search and to allow the adjudication to continue given the omission.)

DELIVER TO: Ned Farquhar LOCATION Juneau
FROM: Mary Lu Harle LOCATION Anchorage
TELEPHONE/TELECOPIER # 586-2754 TOTAL NUMBER OF PAGES 2
TRANSMITTING ON/SPEED _____ DATE 1-23-86 TIME 3:10
PHONE FOR PROBLEMS-NAME/NUMBER M. L. Harle 763-4317
COMMENTS Please make copy for Paula Burgess

Section 46.15.165(c)(3)

Amend this subsection to read: (3) serve the order on ~~any~~ person who owns or claims land within the adjudication area if the land is held in trust by the United States for the person or if the patent, deed or certificate to the land from the United States was issued ~~pursuant to~~ under 25 U.S.C. 334 [Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented], 25 U.S.C. 372 [the Allotment Act of June 25, 1910, 36 Stat. 855], 43 U.S.C. 270-1, 270-2 [the Allotment Act of May 17, 1906, 34 Stat. 197], or any other allotment act, or the Alaska Native Townsite Act of May 25, 1926, 44 Stat. 629, and serve the order on the United States on ~~behalf~~ behalf of ~~any such~~ its person;

(Note: Bruce Landon, U.S. Dept. of Justice, worked with Mike Frank and has approved this language. We should explain in the letter that notice to specifically named agencies, such as the Bureau of Indian Affairs (BIA) can be named in the implementing regulations to keep the statute uncluttered by numerous references to numerous federal agencies. In any case, notice to the federal government of any trust land that might have federal reserved water rights must be served primarily on the U.S. Justice Department.

Section 46.15.165(c)(6)

Amend this subsection to read: (6) serve any regional corporation or village corporation established under the Alaska Native Claims Settlement Act, 43 U.S.C. §§1601-1628, ~~which~~ that has pending land selections or has acquired ownership to land under that Act ~~which~~ that are located within the adjudication area; and

Resolution No. 85-15

ALASKA WATER RESOURCES BOARD FUNDING

The Alaska Water Resources Board was established by the Water Use Act in 1966 and is specifically charged with advising the Governor on water related issues. The Board is required by statute to meet at least twice a year (once in Juneau). The Department of Natural Resources is designated as the agency responsible for providing the necessary clerical assistance.

Water issues are becoming increasingly critical, complex, and are of importance to every Alaskan. The efforts of the Water Resources Board to encourage inter-departmental coordination to elevate water issues to the attention of decision makers, and to provide a forum for public comments have played an important role in water management.

To date, Water Resources Board's funding has been in the budget of the Department of Natural Resources. Because of restraints on DNR budgets, the Board's funding was eliminated in FY 84 and FY 83, precluding its advice to the Governor and its role as a conduit for public concerns.

Since the Water Resources Board is one of only seven boards and commissions that are directly responsible to the Governor, funding for Board travel and per diem should be placed in the Governor's budget. Funds for clerical support should remain with the Department of Natural Resources.

THE ALASKA WATER RESOURCES BOARD, in order to assure adequate and consistent funding, requests that its budget be included in the Governor's budget and that $20,000 be included for FY 87 for Board travel and per diem.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 85-14

DAM SAFETY: SB 95

The Alaska Water Resources Board has followed the progress of the dam safety inspection program in Alaska. The continuation of the dam safety program is of vital importance to ensure the safety and well being of Alaskan citizens and property.

THE ALASKA WATER RESOURCES BOARD urges the Alaska legislature to pass SB 95, an act establishing a dam safety program for Alaska.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 85-13

WATER MANAGEMENT STAFFING

Alaska's future is directly dependent upon its water resources. Many communities are already experiencing water shortages and many capital projects, land disposals, and resource development projects involve serious water issues. Effective water management requires sufficient, knowledgeable, and experienced personnel.

THE ALASKA WATER RESOURCES BOARD urges the Department of Natural Resources to make every effort to reduce personnel turnover in the Water Section and to retain the existing positions within the section.

Adopted this 8th day of March, 1985
ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 85-12

RECREATIONAL RIVERS BILL: HB 93

Over the years the Alaska Water Resources Board has expressed concern about overuse and abuse of certain recreational rivers, and has supported improved management of recreation rivers by the Division of Parks and Outdoor Recreation.

The Alaska Water Resources Board supports HB 93 which establishes a system state recreation rivers.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 85-11

ADMINISTRATION OF WATER APPROPRIATION PERMITS AND INSTREAM FLOW APPLICATIONS

An application to appropriate water by means of an instream flow reservation under AS 46.15.145 is treated differently from the more traditional water appropriation application for a diversionary use in that, while the traditional appropriator establishes his or her priority date at the time of initial application, the priority date for an instream flow applicant is not assigned until all data has been collected and a certificate has been issued. This, in practice, places the instream flow applicant at a disadvantage because there is no assurance, after the studies have been completed, that the water originally applied for will still be available.

The Department of Natural Resources has informally adopted policy guidelines establishing the duration of water appropriation permits, after which the appropriation applied for, if it is not perfected, will lapse. However, the fact that these guidelines have not been adopted as regulations raises questions about their validity.

THE ALASKA WATER RESOURCES BOARD resolves that:

a. The Department of Natural Resources is encouraged to develop regulations establishing a permitting process for instream flow applications under AS 46.15.145 with a priority date of the date of initial application.

b. The Department of Natural Resources is encouraged to adopt regulations which set duration limits for perfecting the various types of water appropriation rights under all appropriation permits which the Department may issue.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 85-10

CLEAN WATER ACT FIELD LABORATORY

Placer mining and other industries have a long history in Alaska and have provided a large economic contribution to the state. These industries may no longer be viable due to recent Environmental Protection Agency (EPA) regulations.

Section 208 of the Clean Water Act (CWA) mandated that the EPA study pollution mitigation alternatives to meet the goals of the Clean Water Act. Specifically, Section 104E of the CWA states "The Administration shall establish, equip, and maintain field laboratory and research facilities, including, but not limited to . . . one in the State of Alaska for the conduction of research, investigations, experiments, field administration, and studies and training relating to the prevention, reduction and elimination of pollution."

Technology has not yet been developed under Section 208 or 104E to enable placer mining and other industries to meet current EPA permits. Concerned citizens meeting with Senator Murkowski in February, 1985, discussed this subject and the Senator recommended that a field laboratory under Section 104E of the CWA be funded as a means of arriving at solutions to the problems facing water users in Alaska.

THE ALASKA WATER RESOURCES BOARD urges Federal funding of this project with 205 (j) monies or other appropriate funding.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 85-09

EPA NATIONAL PLACER MINING STANDARDS

The U.S. Environmental Procection Agency (EPA) will be issuing proposed national standards for placer mining in April, 1985. These proposed standards have never before been issued for this industry and, in the interim, the State of Aalska's minimum water quality standards have been applied to placer mining. The existing standards have proved to be economically unachievable with currently existing technology. The national placer mining standards will represent a very beneficial and realistic step forward, and should reflect a coordinated, thorough State response to EPA.

THE ALASKA WATER RESOURCES BOARD urges the Governor to insure that:

a. Every state agency with an interest in water allocation and quality, including the Department of Natural Resources, the Department of Environmental Conservation, the Department of Fish and Game, the Department of Commerce and Economic Development, the Department of Law, the Department of Community and Regional Affairs and the Office of Management and Budget is encouraged to thoroughly review and respond to the proposed EPA placer mining standards.

b. The State of Alaska's response to the EPA's proposed placer mining national standards is coordinated and expressed through the Office of the Governor.

Adopted this 8th day of March, 1985
ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

Resolution No. 86-3

SOUTH ANCHORAGE GROUNDWATER DECLINE

Testimony presented before the Alaska Water Resources Board at its September 1985 meeting raised serious concerns regarding groundwater resources in the middle and lower Hillside areas of south Anchorage. These concerns are derived from several factors, including the failure of individual wells, the mixture of self-sufficient large-lot zoning and newer high-density zoning, the lack of adequate well-location and well-log data on individual, community and municipal wells in this area, and the absence of an integrated groundwater and surface water development and management plan by the Municipality for Anchorage.

The Alaska Water Resources Board recommends that the Department of Natural Resources exercise its authority under the Alaska Water Resources Act to continue to evaluate the Anchorage Hillside groundwater situation, to establish a critical groundwater management area if this action is justified by the available facts, and to require, as a condition of consideration of municipal water well applications, that the Municipality of Anchorage initiate an integrated groundwater management plan which considers the availability of Eklutna Water Project water, the reliance of large-lot zoning upon individual water wells, the current construction of higher density subdivisions relying on community or municipal groundwater systems, and any anticipated development of additional municipal or community well sites.

The Alaska Water Resources Board recommends that its Chairman communicate with the Mayor of the Municipality of Anchorage , the Municipal Assembly, and the appropriate legislators regarding the Board's concerns and recommendations regarding South Anchorage groundwater.

Adopted this 13th day of September, 1985.
ALASKA WATER RESOURCES BOARD

Cyril R Wanamaker

Cyril R. Wanamaker, Chairman

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

WATER RESOURCES BOARD

555 Cordova
Pouch 7-005
Anchorage, AK 99510
(907) 276-2653

March 14, 1985

The Honorable Bill Sheffield
Governor of Alaska
Pouch A
Juneau, Alaska 99811

Re: Agency involvement in the Western States Water Council

Dear Governor Sheffield:

This letter comes to you in response to a matter that the Alaska Water Resources Board discussed during its March 4-8 meetings.

As you are no doubt aware, Alaska has recently become a fully participating member of the Western States Water Council (WSWC). Our membership allows Alaska to send three delegates to the Council meetings. Representatives from the Alaska Department of Natural Resources, the Alaska Department of Environmental Conservation, and the Alaska Department of Law are the appropriate delegates to the Council. Nevertheless, numerous other state agencies have or should have a substantial interest in water issues addressed by the Council. In particular, the participation and involvement of the Department of Fish and Game is highly recommended because of the great importance of the fish and game resource to the economy of Alaska.

The members of the Alaska Water Resources Board have asked me to convey to you the importance of providing a vehicle to these agencies that they may participate with the appointed delegates in developing Alaska's positions at Council meetings.

Although we do not foresee the need for the creation of a special task force, it is recommended that:

1) The Office of the Governor inform these various agencies of Alaska's involvement in the WSWC.

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

WATER RESOURCES BOARD

555 Cordova
Pouch 7-005
Anchorage, AK 99510
(907) 276-2653

March 14, 1985

The Honorable Bill Sheffield
Governor of Alaska
Pouch A
Juneau, Alaska 99811

Re: Agency involvement in the Western States Water Council

Dear Governor Sheffield:

This letter comes to you in response to a matter that the Alaska Water Resources Board discussed during its March 4-8 meetings.

As you are no doubt aware, Alaska has recently become a fully participating member of the Western States Water Council (WSWC). Our membership allows Alaska to send three delegates to the Council meetings. Representatives from the Alaska Department of Natural Resources, the Alaska Department of Environmental Conservation, and the Alaska Department of Law are the appropriate delegates to the Council. Nevertheless, numerous other state agencies have or should have a substantial interest in water issues addressed by the Council. In particular, the participation and involvement of the Department of Fish and Game is highly recommended because of the great importance of the fish and game resource to the economy of Alaska.

The members of the Alaska Water Resources Board have asked me to convey to you the importance of providing a vehicle to these agencies that they may participate with the appointed delegates in developing Alaska's positions at Council meetings.

Although we do not foresee the need for the creation of a special task force, it is recommended that:

1) The Office of the Governor inform these various agencies of Alaska's involvement in the WSWC.

2) The Office of the Governor urge these various agencies to become and remain actively involved in the development of these issues. The Alaska Water Resources Board further recommends that one agency, the Alaska Department of Natural Resources, be assigned the responsibility to coordinate this activity. In addition, this agency should be given the position as lead agency representing the Alaska Delegation at the Western States Water Council.

Sincerely,

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman
Alaska Water Resources Board

cc: Commissioner Wunnicke, DNR
Commissioner Ross, DEC
Commissioner Knapp, DOTPF
Commissioner Notti, DCRA
Commissioner Lyon, DCED
Commissioner Collinsworth, DF&G
Norman Gorsuch, Attorney General
Larry Crawford, Executive Director, APA
Peter McDowell, Director, OMB

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

WATER RESOURCES BOARD

555 Cordova Street
Pouch 7-005
Anchorage, AK 99510
(907) 276-2653

March 14, 1985

The Honorable Arliss Sturgulewski
Alaska State Legislature
Pouch V (MS 3100)
Juneau, Alaska 99811

Re: The Alaska Water Resources Board's Comments on SB 150

Dear Senator Sturgulewski:

Attached are comments regarding SB 150 prepared by the Alaska Water Resources Board during its March 4-8 Board meetings.

I would like to emphasize that this Board supports SB 150 provided the enclosed suggested changes are incorporated in the proposed legislation.

The Board as a unanimous body supports the adoption of a systematic water adjudication process. If the bill, as amended herein, is not adopted in this legislation, the Alaska Water Resources Board will do everything within its power to see that legislation addressing this issue is introduced in the next session.

Thank you for your kind consideration of these recommendations.

Sincerely,

For Cyril R. Wanamaker, Chairman
Alaska Water Resources Board

By: L. A. Dutton, Chief
Water Management Section

cc: Governor Sheffield
Senate Resources Committee

SB150

DISTRIBUTION LIST
WATER RESOURCES BOARD RESOLUTIONS

Resolution No. 1
Esther C. Wunnicke
Bill Ross
Donald W. Collinsworth
Loren H. Lounsbury
Emil Notti
Harold Brown
Robert Grogan

Resolution No. 2
Esther C. Wunnicke

Resolution No. 3
Esther C. Wunnicke
Mayor Tony Knowles
Anchorage Municipal Assembly
Senator Arliss Sturgulewski
Senator Jan Faiks
Representative Fritz Pettijohn
Representative Steven Rieger

Resolution No. 4
Esther C. Wunnicke

Resolution No. 5
Esther C. Wunnicke

Resolution No. 6
Esther C. Wunnicke

Resolution No. 7
Esther C. Wunnicke

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

WATER RESOURCES BOARD

POUCH 7-005
ANCHORAGE, ALASKA 99510-7005
PHONE: (907) 561-2020

October 1, 1985

The Honorable Bill Sheffield
Governor of the State of Alaska
Pouch A
Juneau, AK 99811

Dear Governor Sheffield:

The Water Resources Board is pleased to transmit to you the following seven resolutions, unanimously adopted at its last meeting held September 12-13, 1985, in Anchorage. Copies of the resolutions have been distributed as shown on the enclosed distribution list.

Resolution 86-1	EPA National Placer Mining Standards
Resolution 86-2	Re-Affirmation of Administrative Order No. 67
Resolution 86-3	South Anchorage Groundwater Decline
Resolution 86-4	Department of Natural Resources Fees for Water Rights Applications
Resolution 86-5	Federal Reserved Water Rights Adjudication
Resolution 86-6	Advisement of Legislative Action
Resolution 86-7	Filing Fee Advertisement

A summary of the minutes of the meeting is also enclosed.
Our next scheduled meeting is for February 26-28, 1986, in Juneau.

Sincerely,

Cyril R. Wanamaker
Chairman

by: L. A. Dutton
Chief, Water Management Section
Department of Natural Resources

cc: Anchorage Municipal Assembly
Harold Brown
Donald W. Collinsworth
Jan Faiks
Robert Grogan
Tony Knowles
Loren H. Lounsbury
Emil Notti
Fritz Pettijohn
Steven Rieger
Bill Ross
Arliss Sturgulewski
Esther C. Wunnicke

SB 150

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

APR 29 1985

APR 16 1985

WATER RESOURCES BOARD

555 Cordova Street
Pouch 7-005
Anchorage, AK 99510
(907) 276-2653

April 10, 1985

Resources

The Honorable Don Bennett
Alaska State Legislature
Pouch V (MS 3100)
Juneau, Alaska 99811

Dear Senator Bennett:

The Alaska Water Resources Board is pleased to present you with copies of the following seven resolutions passed unanimously at its last meeting held March 5-8, 1985.

Resolution 85-9	EPA National Placer Mining Standards
Resolution 85-10	Clean Water Act Field Laboratory
Resolution 85-11	Administration of Water Appropriation Permits and Instream Flow Applications
Resolution 85-12	Recreational Rivers Bill: HB 93
Resolution 85-13	Water Management Staffing
Resolution 85-14	Dam Safety: SB 95
Resolution 85-15	Alaska Water Resources Board Funding

Also enclosed are a summary of the meeting minutes, transcripts of the two presentations dealing with federal reserved water rights, and copies of Water Resources Board correspondence concerning the Western States Water Council and SB 150.

Our next meeting will be held in late September in Anchorage.

Sincerely,

Cyril R. Wanamaker
Chairman

By: L. A. Dutton, Chief
Water Management Section
Division of Land & Water Management

Enclosures

Frank
file

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF LAND AND WATER MANAGEMENT

555 CORDOVA STREET
POUCH 7-005
ANCHORAGE, ALASKA 99510-7005
PHONE: (907) 276-2653

May 15, 1985

Honorable Arliss Sturgulewski
2957 Sheldon Jackson
Anchorage, AK 99508

Dear Senator Sturgulewski:

Here is an article entitled "The Water Wars" reprinted with permission from The National Law Journal. While the article may be read as representing the clash between the prior appropriation doctrine and the federal reserved water rights doctrine as the "Attorney's Employment Act," the article presents a good discussion of Indian water claims, federal reserved water rights, and other western water problems. We thought you might be interested in the article in light of Senate Bill 150, dealing with federal reserved water rights, which was introduced this past session.

While SB 150 was not moved out of the Senate Resources Committee, we believe it is a major piece of water resources legislation for the State of Alaska. This bill is important because it would establish judicial procedures for adjudicating federal reserved water rights which are presently lacking in the Alaska Water Use Act, AS 46.15. We hope to reintroduce this legislation next year.

The Alaska Water Use Act presently addresses appropriation of water for both out-of-stream and instream water uses, and is a progressive water law. It provides a large degree of environmental protection through the public interest criteria listed in AS 46.15.080. Also, Alaska is significantly different from the other western states, because with exception of a few locations, our groundwater and river systems are not yet over-appropriated. We thus have the opportunity to balance environmental concerns and development needs through wise water management and negotiation, rather than litigation.

Federal reserved water rights must be court adjudicated and may be adjudicated through state courts (McCarran Amendment 43 USC 666). We are hopeful that the lack of over-appropriation and often lack of competing major uses will make this process less painful here in Alaska than that experienced by the other western states. However, procedures such as those provided in SB 150 are essential to assure state jurisdiction.

I hope you find the article enlightening. Please contact us if we may provide more information to you on these subjects.

Sincerely,

Tom Hawkins

Tom Hawkins
Director

Enclosure

cc: Esther C. Wunnicke
L.A. Dutton

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF THE COMMISSIONER

BILL SHEFFIELD, GOVERNOR

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

APR 08 1985

April 4, 1985

Mr. Robert Ault, President
Circle Mining & Recording District
Box 1872
Central, AK 99730

Dear Mr. Ault:

You have requested adjudication of federal reserved water rights on the Birch and Beaver Wild and Scenic Rivers in the Steese and White Mountain areas.

The Department of Natural Resources has several activities underway with regard to federal reserved water rights. You are correct that we have initiated a basinwide adjudication of privately held, state administered water rights as well as claimed federal reserved water rights within the Indian River basin. This is the first such basinwide adjudication involving claimed federal reserved water rights undertaken by the State, and was chosen because Indian River is over-appropriated during part of the year. A general adjudication will ease water use conflicts along the river as well as settle the claimed federal reserved water rights. We are hopeful this adjudication can be negotiated, then decreed by a state court declaratory judgement. Secondly, legislation has been introduced as Senate Bill 150 that will amend the Alaska Water Use Act to specify procedures for adjudicating federal reserved water rights in state court. A copy is attached for your reference. We hope to have some form of this legislation enacted before we attempt to undertake any further general adjudications involving claimed federal reserved water rights in court.

A representative of the Bureau of Land Management (BLM) has met recently with my staff to discuss the possible quantification of federal reserved water rights on the Birch and Beaver Wild and Scenic Rivers. If a decision is made by BLM to begin work on this quantification, work would not begin until next year, and would likely take several years to complete. The quantification by BLM of instream flow reservations for the rivers is essential for evaluating the need for the adjudication or to undertake the actual adjudication. Other preliminary work to undertaking a basinwide adjudication involves determining the boundaries of the area to be adjudicated, investigating the hydrology

of the basin, evaluating existing state water rights, and examining the claimed federal reserved water rights to determine the necessity of such an adjudication, which may prove costly to the State.

As you can see, initiating a basinwide adjudication as you request is a complex matter, which may require several years to collect and analyze data necessary to begin the adjudication. This area is, however, one of interest to us, particularly since the BLM has shown interest in quantifying their reserved rights on these two rivers.

You should encourage owners of placer mines within your mining district to apply for water rights if they have not already done so. Miners can be assured of being included in an adjudication of a basin where they are located if they have water rights. Those miners holding water rights with a priority date established before the withdrawal of federal lands will have senior water rights to the federal government, while those miners filing for water rights after the withdrawal of federal lands will have water rights with priority dates junior to the federal government within a specific basin.

Your interest in federal reserved water rights is appreciated and we will keep you informed of any major activities that relate to basinwide adjudications in these areas.

Sincerely,

Esther C. Wunnicke
Commissioner

cc: Senator Arliss Sturgulewski
Representative Richard Shultz
Tom Hawkins
Jerry Brossia
Rick Thompson

To: Senate Resources Committee
Butrovich Room
205 Capitol Building
Juneau, Alaska

Re: Senate Bill 150

Senator Sturgulewski and Committee Members:

My name is Ann Puffer. I am the Regional Hydrologist for the USDA, Forest Service, Alaska Region. My comments reflect the position of Federal Land Management Agencies in Alaska (USDA - Forest Service; USDI - Bureau of Land Management, Park Service, and Fish and Wildlife Service).

Today you have before you a bill which proposes to establish procedures for adjudicating water rights under the Alaska Water Use Act. The current legislation has been thoroughly reviewed and agreed to by the recently formed State/Federal Water Rights Work Group. Of particular interest to the Federal government are the administrative procedures for general basin-wide adjudication. This landmark procedure will be a significant step forward to avoid costly and time consuming court battles currently occurring in other Western states such as Colorado and Wyoming. It provides a format of mutual benefit to all parties concerned to achieve a negotiated settlement of water rights within a defined basin. More significantly, it establishes a setting for conducting adjudications outside the more traditional antagonistic courtroom situation.

The members of the State/Federal Work Group feel this legislation provides an important tool for water resource management in the State. We, therefore, encourage this committee to recommend Senate Bill 150 to the general legislature for passage.

Thank you for your time.

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

OFFICE OF THE COMMISSIONER

JAN 13 1986

January 9, 1986

The Honorable Arliss Sturgulewski
Alaska State Senate
Pouch V
Juneau, Alaska 99811

Re: SB 150, Basin Wide Adjudication of Water Rights

Dear Senator Sturgulewski:

Recently we had the opportunity to discuss Senate Bill 150 with Senator Halford and state and federal agency representatives that participate in the Federal Reserved Water Rights Work Group chaired by DNR. Based on these discussions, we are proposing the following amendments to SB 150 to address concerns of Senator Halford and the resource management agencies:

Section 46.15.140

Amendment: Subsection (a) of proposed AS 46.15.140 should be rewritten as follows: "The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the appropriated water."

Rationale: This change makes it clearer that, if necessary, part of an appropriation may be revoked for non-use, and the certificate amended to allow continued use of the quantity of water that is still being used.

Proposed by: Senator Rick Halford

Amendment: Delete "a certificate of," and substitute "an" in subsection (d) of AS 46.15.140.

Rationale: This change will delete the reference to "certificate of appropriation" and refer only to an appropriation, which by definition [AS 46.15.260(2)] includes reservations of water for instream uses among appropriative water rights. Since instream flow and other reservations are issued with a "Certificate of Reservation," this amendment eliminates an ambiguity which could be interpreted to preclude application of this section to a reservation of water for instream use.

Proposed by: Federal Reserved Water Rights (FRWR) Work Group

Amendment: Move proposed subsection (d) of AS 46.15.140 to become a new subsection (g) of AS 46.15.145. Re-letter subsection "e" as "d".

Rationale: It was agreed that subsection (d) would be more appropriately moved to become a new subsection (g) of AS 46.15.145. The point of this new subsection is to insure that a state agency does not walk away from a reservation of water for instream use without public notice. Through the public notice, potential water users are made aware that water is now available for consumptive beneficial uses. In addition, the members of the public interested in preserving a reservation of water for instream use would have an opportunity to comment in advance.

Proposed by: Senator Rick Halford

Section 46.15.165

Amendment: Add a new subsection (d) "Service of an order under subsection (c) is not an admission by the State of Alaska that the person served with the order has a water right." Reletter the following subsections.

Rationale: This will make it clear that the State's notice to any person of an administrative adjudication is not a representation that the person holds a water right.

Proposed by: FRWR Work Group

Amendment: In Section 46.15.165(e), delete the sentence "The master may be an employee of the state" and substitute "Employment by a federal, state, or local governmental agency does not disqualify a person from being appointed a master under this subsection if in the opinion of the commissioner the person is otherwise impartial and qualified to act as a master."

Rationale: This broadens the pool of possible masters, and helps ensure that any master the commissioner appoints is both impartial and qualified.

Proposed by: FRWR Work Group

Amendment: Move the following sentence, "Any state agency may assert a water right on behalf of the state in the adjudication," from Section 46.15.165(f) to a new subsection (e) and reletter the following subsections.

Rationale: This sentence appears to be out of place and is clearer and more logically placed as a new subsection (e).

Proposed by: FRWR Work Group

Amendment: In subsection (i), change the word "shall" to the word "may."

Rationale: Allows the Commissioner discretion to take this action.

Proposed by: FRWR Work Group

Section 46.15.166

Amendment: In Section 46.15.166(c), delete the word "initially." Delete the phrase "a designee of the Commissioner as" and substitute the phrase "an impartial qualified person as."

Rationale: "Initially" is an unnecessary word. Changing the phrase allows the court to appoint a person of its choice as master, rather than being limited by the Commissioner, and requires that the appointed master be impartial.

Proposed by: FRWR Work Group

Amendment: Also in subsection (c), delete the sentence "the master may be an employee of the state" and substitute "Employment by a federal, state, or local governmental agency does not disqualify a person from being appointed a master under this subsection if in the opinion of the court the person is otherwise impartial and qualified to act as master."

Rationale: This broadens the pool of possible masters, and requires that any master is both impartial and qualified.

Proposed by: FRWR Work Group

Section 46.15.168

Amendment: In Section 46.15.168(c), delete the words "with a private person or the federal government."

Rationale: That arbitration is entered into with a person is understood and "person" is already defined in AS 46.15.260(8) and includes private persons and the federal government; therefore, these words are redundent and unncessary.

Proposed by: FRWR Work Group

Amendment: In subsection (d) of Section 46.15.168, delete the word "federal."

Rationale: This will broaden the phrase to include both federal and state court decrees.

Proposed by: FRWR Work Group

Section 46.15.169

Amendment: Rewrite this section as follows: "Nothing in AS 46.15 represents a commitment by the State of Alaska to any specific federal reserved water right."

Rationale: Federal agencies have commented that the wording in proposed Section 46.15.169 suggests that the State of Alaska believes that federal reserved water rights do not exist. The new proposed language clarifies the meaning that the state has made no commitment to any federal reserved water rights for any specific federal land reservations.

Proposed by: FRWR Work Group

Section 46.15.256

Amendment: In Section 46.15.256(3), change "an" to "a", delete "administrative", and after the word "subpoena" add "or subpoena duces tecum."

Rationale: This will make the language concerning subpoenas consistent with other state agencies' statutes.

Proposed by: Assistant Attorney General Mike Frank

Senator Halford's comments along with those of the state and federal resource agencies are very useful and we support these proposed changes. Due to the critical need for this legislation, we urge your continued support for this bill.

Sincerely,

Esther C. Wunnicke
Commissioner

cc: Senator Jan Faiks
Senator Jim Sackett
Senator Pat Rodey
Senator Rick Halford
House Resources Committee
Molly McCammon
Jim Ayers

TRANSCRIPT

FEDERAL RESERVED WATER RIGHTS PRESENTATIONS

ALASKA WATER RESOURCES BOARD MEETING

March 5, 1985

Bruce Landon, U.S. Department of Justice.

Because there have been no federal reserved water rights adjudications in Alaska, I have never done one. In the last week or so I have been on the phone with most of the justice attorneys and agency attorneys who have been heavily involved in some of the cases trying to get some of their insights. Since I do a lot of the public land cases up here in Alaska involving the federal government, what I will try to do this morning is to give some of those insights and my impressions on how they might fit into the bigger picture of Alaska land law, and some of the quirky things that we have up here. I will be the contact person for the Department of Justice if there are water right adjudications in the state. I am sure you will be working with people either in Denver or Washington, but for a local contact when you want to initiate conversations, please do get in touch with me. Right now I am located in the U.S. Attorney's Office in Anchorage. We will be moving soon to new offices, but I will remain reachable through the U.S. Attorney's Office there.

I would like to break down the talk this morning, starting out with a definition of reserved water rights and the types of problems they cause in the western water rights appropriations system. I'll talk a little bit about the McCarren Amendment which is the statute which allows for the adjudication of those federal reserved water rights, how it works, some of the alternatives that there are to litigation, some of the attributes of federal reserved water rights that make them different from state water rights, and my insights on a good step by step approach to how we would like to see water rights adjudication occur. I will talk about some of those special Alaskan conditions that I mentioned before and then talk about how we can then get together and maybe resolve some of these disputes with a minimum of time, fees, and cost.

Essentially, the definition of reserved water right is when the federal government reserves public land for a specific purpose, it impliedly reserves sufficient water to fulfill the purposes of that reservation. The problem posed here is that you have a conflict between two basic extremes of the law. One is that Congress, since at least the 1860's or the 1880's, has purposely deferred to the states and state law on the distribution of water in the western states - water on the public lands and off the public lands - and the western states have all adopted prior appropriation water systems. At the same time you have the supremacy clause in the United States constitution saying that, when there is a conflict between state law and federal law, the federal law is going to control. So you have these federal rights next to your state right system, and you're not subject to your state law control.

The other thing that makes them problematic is the way the prior appropriation system works. You probably know about it, but thinking about slices of a pie, you can think of the pie as the river system. The first appropriator gets a slice of that pie but what it is, it's a guaranteed number of calories. It's not the thickness of the slice, sliver or quarter, it's the number of calories. As that pie gets bigger or smaller, the first person in line keeps the same number of calories. If there aren't enough calories for everyone, it's the last person in line that gets none of the pie. This is where you end up with your conflict because you don't know prior to an adjudication or some other resolution of the federal reserved water rights exactly how many calories the federal government has a claim to. If you are in Arizona and you have just gone out and created an orange orchard when the federal government comes and says this is over appropriated and you don't get any of this water - you are in big trouble. This is essentially the conflict presented by the federal reserved water rights. This conflict creates a need for certainty. No one wants to invest a lot of money when they are not assured that they are going to have sufficient water to make their investment work. At the earlier part of this century, there was just no way to get certainty on these federal reserved water rights.

The first recognition of federal reserved rights was in 1908. The Supreme Court held in the Winters case that when the United States set up an Indian reservation in Montana, the U.S. impliedly reserved enough water to make it a liveable reservation. The federal government could go into court and say "stop drying up this river," but the states could not get an adjudication of the federal government. Because of the sovereign immunity of the federal government, you just couldn't get jurisdiction over the federal government in court. That was changed by the McCarren Amendment which is the statute that allows for you to sue the United States for adjudication of these reserved water rights. It's an unusual statute. Usually when the United States allows you to sue it, it makes you go into federal court. The McCarren Amendment says you can go into state court. This is because, as I said before, Congress had in mind the difference in state water law and the interest the states have in controlling their water law. A few words about the amendment: it does require that the proceedings be judicial in nature so that if you have been operating under an administrative-type plan, you are not going to be able to get the United States into the administrative procedure. The second thing about it is that it requires the adjudication be a general stream adjudication. In other words, you have to join all the appropriators that use the stream. This means that you have tons of parties. In preparation of this talk, I looked at the case of the City and County of Denver v. the United States. In the beginning of all cases you have a list of the attorneys. This took up several pages in the printed version, so you are talking about a lot of parties and a very large scale type of litigation. As I understand this question of the judicial nature of the McCarren Amendment, the purpose of SB 150 is to have a state procedure where you can get this sort of resolution and take advantage of the McCarren Amendment.

Some of the attributes of federal reserved water rights are that you are talking about the whole system of prior appropriations, so you are looking at what is this priority that the federal government gets. The priority date is the date of the reservation, the withdrawal, the creation of the park, the monument, whatever. Now this can have occurred before Statehood, it can occur after Statehood. In this respect it's very different from your submerged lands thing where you either have the lands under navigable rivers at Statehood or you didn't get them at all. You are talking about a system where new rights can come into effect as there are new reservations in the state. We have a slew of new ones in Alaska.

Another thing that's interesting about federal reserved water rights is that they can be for purposes not recognized as State law. For example, if you go to some of the dryer states, they won't let you appropriate water for certain purposes, particularly instream flows, fish habitat, boating or recreation. They just think that's too wasteful of their water. They will not recognize that sort of water right in their state law system, but again, because of the supremacy clause, if the purpose of the federal reservation is to protect the fish habitat, for example, that federal reserved water right would be for an instream flow, even though no one else under state law could get that sort of right. They are for different purposes which may or may not be recognized under state law.

The amount of the federal reserved right is the amount necessary to fulfill the purpose of the reservation and no more. OK, that's kind of a vague statement and sometimes it's stated on the reverse side of the coin - it's not more than enough to prevent "the total frustration of the reservation." Again if you think about that, it's difficult to figure out. For example, the Indian reservation, the first recognition of the federal reserved water right. What totally frustrates the purpose of an Indian reservation? Do you have to have the situation where the last member of the tribe dies of thirst? That's obviously not the meaning of it. So there's a vagueness there. You look at this purpose but then you have this problem of quantification.

As I said before, you can have reservations for purely federal purposes and then you also have a lot of reservations for Indian purposes. When we are talking about purposes the courts have to distinguish between what they either call primary purposes versus secondary purposes, or sometimes they are referred to them as purposes as distinguished from uses. Let me give you an example: In New Mexico, there's a national forest that was set aside. The purpose of setting aside the forest under the congressional statute was to protect the timber and to provide favorable flows of water. But a lot of other things go on in the national forest. Since the 1960's, Congress has said that the national forest should be used for multiple-use; there's recreation on them, there's fish and wildlife habitat, things like that. The Supreme Court has to distinguish between permissible uses --things that happen in the national forest--as opposed to the primary purpose that that forest was set up for. It's those primary purposes that you look to in determining what it is that has been reserved.

The litigation under the McCarren Amendment is very costly. I mentioned before the City of Denver case. That was filed in 1967, and it went up and down jurisdictional questions. Then there was a determination of what the purposes of the reservations were. That came out in 1983. Now that we know what the purposes of the various reservations are, everyone is trying to figure out how much water that is. We are trying to figure out a quantity of water--not a quality question, it's a quantity. How many gallons, how many acre feet, how many feet/second do you need to fulfill this purpose? Once you know that purpose, it's not intuitively obvious exactly how many gallons you need. It is very expensive to generate that sort of data. So that case that has been going on since 1976 is still going on, and I imagine it will go on for quite a while. Some of the adjudications in Nevada, I understand, started back in about 1913 and were only disposed of recently.

Because they are so expensive, and because you don't want to do a lot of duplicate work, my suggestion is that adjudications be approached in steps. The first thing you want to make sure about is that there are no problems with the jurisdiction of the court. You want to be in a court that is going to be able to fulfill the requirements, if you can, and you want to make sure that you've got a real general stream adjudication--that you have joined the proper parties--so that you don't have to come back later and get all the way to the top--get this whole system completed--and be told "No, this court could not have decided this, you have to start from ground zero."

I urge that when you are thinking about litigation that we do try to get together and see whether we can do it in a manner so that there is agreement on jurisdiction. If there is not, try to quickly resolve the question of jurisdiction.

After you know you are in the right court and you have got the right parties and the right type of jurisdiction, the next problem is the determination of the purposes. What you do there essentially, you look at the documents that reserved whatever type of reservation it is; you look at the statutes on which those reservations are based. Very often the actual withdrawal document will just say, "For the purposes in the act of..." so you are looking at number of things at the same time. Sometimes these purposes are kind of vague. For example, the Indian reservation. We know some of the purposes of an Indian reservation. There was legislative history in the Winter's case. This reservation was intended to allow this particular tribe to switch from a hunting culture to a more pastoral and agricultural culture, so that sometimes you're in gray areas where you have got a general purpose, but you're trying to really pin that down. And usually I would imagine that there will be disputes. We are not necessarily going to agree on what the purpose of a particular withdrawal is. Work on that.

Sometimes there will be a number of reservations in series. An example of this came up in the Denver case. There was an area, now the Rocky Mountain National Park. Before it was a national park, it was a national forest. So the priorities for water that go with the purposes of a national forest dated way back to the 1800's. There were additional purposes for the park, but those would only have a priority from the date that the park was created--I believe that was in 1927. So sometimes we will be looking at a series, and there will be different priority dates, different purposes.

Some of the examples of the types of purposes that have been found in the Lower 48 are the national forest--that's timber and favorable flows of water. Again, this expression "favorable flows of water", what does that mean? The Supreme Court says that doesn't mean instream flow for fish habitat. But now the question is how much water has to be going through before you have siltation of the channel and flooding in the areas which is an unfavorable condition of water flow. You can still have some purposes knocked out for instream flows, but there may be other reasons why you have an instream flow that aren't immediately obvious.

National parks are set up pursuant to 16 US Code, Sec. 1. Their purpose is, among others, to protect scenery, natural historical objects, wildlife, and "to leave them umimpaired for the enjoyment of future generations." That's a pretty high standard. In wildlife refuges you have a variety of purposes. Sometimes you have a wildlfe refuge and it is set up...I believe Nunivak Island was set up as a reindeer station originally. Now that is not going to need as much water as a refuge that is set up to protect a particular type of fish. Look at the purpose of the reservations.

One thing that we are lucky about in Alaska is that when ANILCA set up all of those new conservation units, each one of those when it was set up has a long list of its purposes. There is a lot less doubt as to those purposes for those sort of reservations. That should help us along. Then, only at that point, go into the quantification because, particularly in this state, it is very often expensive just to get people to the river. You don't want to be generating a whole bunch of information to quantify a certain purpose when it turns out that is not the purpose of the reservation.

I'd suggest that these are the three steps that you should be looking at in pursuing one of these cases.

When I talked to a lot of the people in the Lower 48 who had been working on water rights cases, they were a little bit surprised that we are having this conference because, as a general rule, you worry about your priority when the pie isn't big enough for everybody. Certainly this is a wetter state than the other western states. The purposes for which water is used are quite different. We don't have massive irrigation and we are not likely to have massive irrigation in the future. Some of the areas where you can expect problems would perhaps be hydro projects and in the more concentrated urban areas where you have a lot of domestic and business appropriation.

The use of water on the North Slope for oil and gas drilling--that's an area that gets very little rainfall. But in many instances, there is lack of either a reservation--there is not much of an upstream reservation from Prudhoe Bay, for example--or you simply have no other users, so you don't have much of a problem there.

Another thing that is different about Alaska is that Alaska depends economically on many of the uses that other western states find most obnoxious about instream flows. For example, in Nevada they can't believe that you should have fish in rivers--just to keep a river so that fish can remain in it. One of the most famous water rights cases that went to the Supreme Court, is called Cappaert v. United States. There was a very small national monument out in the desert, and there is a cave there. Inside the case is a well, a grotto. There is a fish there that doesn't live anywhere else but in this one cave. It survives on the algae that grows on a slant at the top of the pool. There is a rancher nearby who was taking out, through a well, a lot of the ground water, and the water level of this well was going down until we were starting to run out of ledge with algae on it which was going to kill the fish. The United States brought a suit on that, and of course, if you are a rancher, you think that ranching is a heck of a lot more important than these rare goldfish in the cave.

I think a very different situation exists up here, and it's recognized in Alaska law. The salmon fisheries are very important to the state, recreational boating and tourism are very important to the state, so that we don't necessarily think up here that it's a sin to let a river get all the way to the ocean. Some of the ways that it has been recognized in the Alaska statutes is that you have the ability in AS 46.15.145 to reserve instream flows for fisheries, for wildlife, for boating and recreation. That is kind of unusual for a western state. Also, in your permitting on consumptive appropriations, AS 46.15.080, as part of the public interest determination, the commissioner--or is it the engineer, I'm not quite sure--looks to the effect on fish and wildlife and boating as part of his determination of the public interest, in determining whether permits should be issued.

Another thing that's kind of different in Alaska, there is only one Indian reservation in Alaska, and that is the Annette Island Reservation at Metlakatla. It is an island all by itself and it is pretty much in the rainiest part of the state, so I can't see that there would ever be a problem there. However, the state has an extraordinary number of public domain native allotments. There have been instances in the Lower 48 where the courts have held that there is a reserved water right for allotments. Those have been on reservations. There have also been situations where there have been recognized instream flows for fisheries. A lot of the allotments were fish camps. So you've got this very interesting question that really doesn't exist anywhere else, and I don't know what the answer to the question is or have any suggestion about it, but it is something unique to Alaska and probably deserves some attention. In addition, there are a handfull of cannery sites in Southeast that are owned by IRA organizations and they could also perhaps have some sort of a reserved right.

Finally, we have this raft of new withdrawals with ANILCA, and, as I said before, they are interesting because they are much more specific than most withdrawals are as to their purposes. That should help us out in trying to assess early on what we are actually going to be locked in dispute about.

Before we took our break, there was a good deal of discussion about should Alaska be jumping into litigation, or do we wait until conflicts...is there any alternative to going into court? There are a number of alternatives. One that I think is quite interesting is that Montana has set up, by statute, a Federal and Indian Reserved Water Rights Commission, and the total purpose of this commission is to come up with a settlement and quantification of federal reserved water rights. After a settlement is reached, it has to be adopted by both the legislature in Montana and by Congress. That way you get an act of Congress and state law in agreement and that gets you out of the problem of not having a court decree. It gives you some finality to it.

I gave a copy of that statute to Mr. Wanamaker, and I understand that the copies will be available after lunch. I understand that there are some very encouraging negotiations that have been going on recently, so this may be something that you want to look into. When I talk to people Outside, they did suggest that if you are looking for guidance here in Alaska that perhaps Montana is a good place to look, since it is wetter than most of the other states in the west, and that it does allow in its state law for instream flows, and it has some of the same dependence on recreational boating and also fishing that we have up here--a lot of wilderness areas. That may be one way to look at it. I haven't really gone over the Montana statute and I don't want to say whether it's good or bad. You might want to contact Montana and find out what their frustrations were with their statute, whether it's been working for them.

Another possibility is the fact that you do have the ability under state law to reserve instream flows. One of the problems in other states, for example, Montana allows instream flow reservations, but they haven't worked out a solution or an alternative to adjudication because the date of priority of this instream flow is going to be the date the state makes the reservation. That is usually going to be way down the line. With at least the ANILCA reservations that were made only 3 years ago and in areas where I would suspect that there are relatively few other appropriators, it may very well be that you can use (at least I would suggest that you think about the possibility of trying to use) that system as a way to minimize the need for adjudication.

If there is going to be litigation, I do suggest that you contact me and we sit down with the agencies and do some preplanning, try to get the jurisdiction all cleaned up before we even start, have an idea of our positions, and try to do it as quickly and inexpensively as possible. Not only are we talking about several years in most of these adjudications, but really literally millions of dollars of attorneys' fees, and on top of that all of the technical fees in determining actual scientific quantification that is going to be involved.

Any time you go into litigation you are looking at a long haul, an expensive haul, and I think it's in everyone's best interest to try to make it as painless as possible. I think cooperation is the key to that. In looking over a lot of the briefs and the cases on water rights, I've been struck as to just how hard they have been fought. There is the possibility for cooperation and planning, but these are hard fought cases. Even in situations where there might be.... the federal government did not for some reason want to fight for an issue very hard, you do have the possibility of some outside involvement. An example of that is a recent Sierra Club suit. The Sierra Club sued the federal government because of what it alleged was the failure of the federal government to ask for sufficient water for wilderness areas in Colorado. It got before the courts--"You've got to make the federal government ask for more"--and that's still going on.

But, as I say, there is no possibility really of these things not being, I think, very, very closely and strongly litigated. Some of the cases that have started out in litigation have gone to settlement, and if Alaska does not set up a Montana-like system, you can always file your suit and try to work out a settlement. I believe it was within the last year there was a settlement in an Indian reserved water right case, the Ak Chin Reservation in Arizona. One of the things that was interesting about that settlement was that everyone for years was worried about a paper quantity of water that the reservation was going to get. And as it worked out, when they sat down and thought about it, they might get a quantity of water out of the litigation, but the reservation was not linked up to any existing irrigation system. There was no likihood that a new dam was going to be built. So there was the possibility in that situation of trading off some of the absolute quantity of water involved for benefits that the tribe could get by hooking into the existing non-Indian irrigation projects. I could see with instream flows up here, and you're talking about salmon, there may be ways in which less water would be needed if there were other types of safeguards, other types of protection of the habitat, I don't know, salmon scales, or whatever, or stairways, protection from other types of development right near the habitat so that there is that flexibility once you start talking about settlement, to have trade-offs between quantity and other types of advantages. So that's another thing that you might want to consider.

I think I've probably given you enough to try to digest at this point, and if you do have questions, I'll be happy to give it a shot. As I say, I have not been involved personally in the adjudications.

QUESTIONS:

Tom Meacham: Why does the Montana system require legislative approval? Why can't they take the negotiated settlement into court and get a consent decree?

Landon: I think it's because... they can do that, and that's always an option. I think they decided that if they had a commission just working on these reservations with a statewide jurisdiction that might give it a different perspective. And I think you do. When you have a large adjudication, just the costs in serving all the necessary parties becomes immense. I think their perception might have been that just starting litigation with the idea of settling it is a very complex proposition. Now, I'm not sure whether the commission has worked much better or not.

Meacham: You stated that obviously the question of native allotments is going to be a significant federal reserved right question. This may be a little premature, but has the Department of Justice or the Department of the Interior approached the question of whether there were any reserved water rights that went along with native corporate conveyances under ANCSA, and if so, what is the answer?

Landon: Someone asked me that earlier this morning and I hadn't given it much thought. Usually when I call D.C. and try to engage people on ANCSA questions, they plead a headache. I don't think that they had given, at least in D.C., very much thought at all to reserved rights in Alaska because there is so much action going on the drier states, certainly not as to the native corporations.

Stan Rybachek: Alaska has a prior appropriation right to water reservations. The placer mining industry is pretty heavily impacted, I feel, with the federal reserved water rights in regards to water quality. If there is enough water to go around in the some of these streams, its unappropriated...

Landon: The reserved right is generally a question of quantity. Very often with placer miners you have the water going out and being reinserted. You have quality problems; you have EPA administrative actions...

Rybachek: What I want specifically is set down standards like some of the conservation areas or recreation areas for water quality, and they are getting their authority, of course, from the federal reserved reservations, which is not yet quantified. So as regards water quality, we may be able to meet EPA or state water quality standards, but they may set water quality standards that would actually make these rights unuseable.

Landon: Is it your understanding that these quality rights are based on reserved water rights as opposed to some other provision in ANILCA? I haven't heard of this happening, so I can't ... Sometimes quantity will have an impact on quality, in other words, in Nevada in the Pyramid Lake case, the level of the lake was going down, and consequently the lake was getting saltier, so there was a direct relationship between quantity and quality. But usually with reserved water rights, you're talking more about quantity than quality.

Meacham: I can clarify that a little bit, and I'll plead guilty to the charge that I'm the one who did this. I wrote the water definition terms that are in ANILCA, and they say that for each of the wildlife refuges and national parks, the existing quality and adequate quantity of water are reserved, so I think there has been created a "quality" reservation as far as ANILCA reservations go. The real question will be to determine what the existing quality was in 1980. If it was a stream that was already impacted with a history of placer mining, then that is a situation that the reservations are going to be left with. But if it was a situation where placer mining, or other extractive, let's say gravel mining or something like that, has taken place since 1980 that would affect the refuge or the park, then the refuge or the park will have the right to ask for a quality which approaches that which existed in 1980 rather than something that has happened since then. So you might say in Alaska we have a situation that is a little different than usual reserved rights because we have a quality reservation now as well as a quantity reservation.

Randy Wanamaker: Mr. Landon, is there any binding authority, let's say there is an agency such as the Forest Service which negotiates on behalf on the federal government for an area to quantify for a compact reserved water rights, they are willing to enter into a compact under these certain circumstances, but is there any real foundation for people who are negotiating on the other side of the table to be able to rely on the Forest Service being able to keep that compact because Justice won't interfere saying, "No, we don't like those terms, and we will enter in and change those terms that the Forest Service has agreed to." The Forest Service are the experts, but Justice wants a different perception or use of the law. What's to prevent that from happening?

Landon: The Justice Department represents the agencies once things get to court. If you are talking about the Montana system, things don't get to court, they go to the state legislature and to Congress. When they get there, Congress will ask any agency that might be affected for their views on the legislation, and at that time, no doubt, Justice will have to report to Congress. I think, as a practical matter, one thing to keep in mind is that people can be talking in various parts of the country, but that the law on reserved rights affects a number of states, so there is going to be a lot of looking over shoulders. In other words, if you are talking about using a different methodology in Alaska from the one that is being argued and litigated in a court in Utah or Colorado, the Forest Service, at least in D.C. is going to say, "No, you can't take this totally different position." So there is going to be a lot of cooperation between the agencies in different states. They are not going to be able to give you a very different deal or theory than they are using in other states. But, in any event, either going through court or going through Congress, there is going to be someone besides the agency that's going to have to sign off on it.

Mike Niemeyer: Correct me if I'm wrong. My interpretation of the McCarren Amendment was that it was merely a waiver of sovereign immunity for the federal government to be sued and it wasn't a limitation on a federal agency to enter into a negotiation with a state...some kind of a negotiated settlement?

Landon: You can have the negotiated settlement, and the question becomes how you get that finalized. Do you have a court order so that settlement can't be overturned? Do you have an act of Congress so that it can't get overturned? But you do want to have someone's seal of approval on it so you can avoid an administration a few years down the road saying "We thought up a new use and we'd like to rediscuss this with you." Alternatively, there has been a problem in jumping into cases too quickly. This was particularly true 10 years ago when there was a doubt whether the McCarren Amendment allows the U.S. to be sued in state court, but there's nothing in the amendment itself that says you have to go to state court. There was quite a bit of doubt for a long time whether you could go to federal court as well. So there was kind of a race to the court house. The feds and the Indians would prefer to be in federal court, and the state and the appropriators wanted to be in state court, and suits were getting filed before they were totally thought out, it seems, just in this race to the court house. But pretty much now, irregardless of who gets to the court house first, the federal court is going to defer to the state court, so we will be in state court.

Niemeyer: I'd like to add one other thing, too. When Tom Meacham was talking about the possibility of an ANCSA reserved water right, I think there has been some kind of precedent set in the Lower 48 for reserved water rights on private Indian lands, and in New Mexico there was a case dealing with pueblos, which are patented lands rather than trust lands, so there is some precedent.

Meacham: I want to follow up on one suggestion you made that fits in with something Larry Dutton and I were discussing during the break. That is the use of instream flow reservation possibilities in Alaska, either in lieu of a basin-wide adjudication or to forestall the need for a basin-wide adjudication and still allow water planning to go on. I think this is a good way to go. I would encourage the state, if they follow that procedure, to make sure that the instream flow reservation was not seen as an alternative to basin-wide final adjudication of the federal right in that it would be superseded at any time a comprehensive basin-wide adjudication came along. One of the advantages of instream flow reservation by federal agencies at this point would be that you wouldn't have to deal with the whole basin, that you could deal with one stream, that you could deal where the problems are most acute or appear to be building up, and you could use that instream flow quantification for water planning purposes to put everybody else in the proper order and with the proper quantities so the stream wasn't overappropriated. Perhaps this could be used as a viable alternative to comprehensive basin-wide adjudication. I think some of the problems dealing with quantification, finding out how much water is there and how much is necessary to maintain the instream flow, would be quite similar to the same kind of quantification and measurement problems that you would have in the basin-wide adjuducation, except that you wouldn't have to do it on such a comprehensive basis. We might try to find out what has happened in Montana, whether any of the federal agencies have used instream flows as a means to avoid having to do a basin-wide adjudication for a number of years.

Landon: I think it hasn't been used very much because of the old date of the reservations, because the reservations again have the priority.

Meacham: There are no new reservations in Montana, while there are many here that you would only lose 5 years. If there hasn't been much appropriation on the stream to date, that wouldn't be a real problem.

Landon: That's right. Especially because this is a permit state. I didn't get a chance to study the Alaska Water Law too closely, but you have a better idea here who actually is appropriating than you might in other states where you don't have a permit system. It's easier to find the streams where the reserved water right is going to be equivalent to the reserved right because there just aren't any significant prior appropriators.

Dave Vanderbrink: You mentioned the Sierra Club entering into a case in Colorado in order to gain water in the wilderness area. What sort of a situation would give rise to that? It would seem that the waters start in wilderness areas in almost all cases, and how could you get more?

Landon: You can have downstream wilderness areas, I imagine, are fairly common in the Great Basin states. I think I have a copy of that case if you are interested. It's just out in the slip opinion right now. The argument was that Sierra Club asserted that there were reserved rights associated with certain wilderness areas, there was an adjudication for the stream that went through those wilderness areas, and that the federal government had not asserted any rights for those wilderness purposes. The argument was that that was an abuse of discretion on the part of the Forest Service. That was what was under review. The case is still ongoing, so it is unclear where it will go from here.

Vanderbrink: Would you repeat the mechanics of the Montana Commission system? How exactly does it work?

Landon: What Montana did was it set up a policy, a commission. Instead of filing litigation, we would give this commission a certain number of years, maybe 7 or 8 years, to try to come to negotiations all around the state, to knock out as many rivers as they could through negotiations. At the end of that period the state would go in and file adjudications on those river systems where they couldn't come to an agreement.

Vanderbrink: It's the same system that any other state would use except that all the details are agreed to beforehand, do I understand that correctly?

Landon: Instead of going to court and working through the attorney general's office and the state, they set up an independent body. One thing that might be an interesting question that you might want to explore with the Montana folks is how they think that worked as far as did the administration think that they had lost control of this somehow? It's got to be approved finally in a statute of the state, so the legislature is always going to be able to assert control at the end, but what they do is avoid going into court essentially.

Vanderbrink: Is there any case where that system has completed a cycle?

Landon: I think they are close in a number of areas.

Meacham: About the wilderness area situation--I think the Sierra Club was dismissed at one level of the proceedings, the court said that they didn't have standing to assert a federal right where the federal government itself hadn't asserted it, but I'm sure Sandy White will have some more information on that.

Where your question may come up, Dave, is that while the national forests in Colorado were created a number of years ago, some of the wilderness areas are only recently designated. If those wilderness areas can be implied to have purposes that were in addition to the original national forest purposes, there may be an increment in additional federal reserved rights that the feds might be able to claim that take priority over a subsequent appropriation downstream, and if they didn't assert those as part of the forest reserved right, then the subsequent appropriators downstream would be getting water that could have otherwise been claimed as part of the wilderness, even though they are upstream from the downstream users in some cases. But I think a lot of the problem may be these transmountain diversions in Colorado where they are taking water from the headwaters of one side of the divide and putting them through a tunnel and taking them to Denver and Colorado Springs, so that's intercepting the water before it flows through the wilderness.

Landon: You also have in a lot of those areas--BLM lands--that end up being wilderness. The wilderness system down below is more...if you've got an area of 5 square miles with no roads going through it, you consider it for inclusion in the wilderness, so you're not necessarily ...in ANILCA we're more familiar with instances where you've got a park or national forest and a certain part of it will be set aside as wilderness.

Meacham: BLM lands, of course, were never subject to a reservation, so once you've created wilderness out of BLM land, does that imply reservation? I assume that if Congress does it, it probably is.

Landon: Yes.

Meacham: I wanted to mention also, Dave, that we have a system in Alaska that eventually may be interpreted by the Alaska Supreme Court, if it ever is presented with the question, a system of state reserved water rights as well as federal, and that is because the state constitution in the water use section, states that all water appropriations in the State of Alaska are subject to the general reservation for fish and wildlife, and that's never really been quantified. One aspect of that has presumably occured in the opportunity to create instream flow reservations. I guess the authority to create instream flows for wildlife preservation purposes as well as for other purposes probably arises from that provision in the Alaska Constitution. When the governor considers creating a recreational

river system across Cook Inlet from Anchorage, one of the authorities he may be able to rely on to guarantee water quality and water quantity over there is this implied state reservation, that any time the state creates something like a reserved river system that it takes advantage of that state implied fish and wildlife reserved right that is in the constitution, so 10 years from now we may be talking about quantifying state reserved rights, as well as federal.

Rybachek: Section 13 indicates that all waters of the state are subject to appropriation, so that's something to think about. You mentioned the supremacy clause in the U.S. Constitution. Could you clarify that?

Landon: When there is a conflict between state law and federal law, federal law controls. In other words, if Congress says we want to reserve enough water for this park and we want this river to flow and to have fish in it, it doesn't matter if, under Utah law, you can't reserve water for fish. Here's another example, it occurs in a lot of instances, if you have allotments, Congress sets up a system for wills and intestacy for Indian allotments and it's inconsistent with the state law. If that Indian allottee dies, it's the federal law that is going to control.

Rybachek: Where does this come into the Constitution?

Landon: It's probably in Article IV, but I'm not quite sure.

Meacham: That was the basis for Federalism.

TRANSCRIPT

FEDERAL RESERVED WATER RIGHTS PRESENTATIONS

ALASKA WATER RESOURCES BOARD MEETING

March 5, 1985

Michael D. White, water law attorney, Denver, Colorado:

There are more unanswered questions than answered. We have about 75 years of experience with reserved rights. The thing to remember is that until about 1963, actually 1953, it was assumed that reserved rights were creatures of Indian reservations only. It's only been since the Pelton Dam case, the FPC v. Oregon, a U.S. Supreme Court case, that we had any conception at all that they applied to non-Indian reservations or withdrawals, so the non-Indian reserved rights game is a relatively young one. I have prepared an outline, called "Reserved Right Litigation, Pragmatic Perspectives from the State Viewpoint." You noticed my name is not on there. It's because I still am not courageous enough to hold myself out as an expert.

I was asked to compare the practical progress of two reserved right adjudications, one in Colorado and one in Wyoming. The Wyoming case is generally referred to as the "Big Horn Adjudication". The Colorado case is usually referred to as "Division 4, 5 and 6 case" or the "7 Courts case". It ended up being U.S. v. Denver or Denver v. U.S. It doesn't make any difference how you say it because both U.S. and Denver appealed and my familiarity with those cases is that I was court-appointed Master in the Colorado case, and I was the lawyer for the State of Wyoming in the Bighorn case, so I have some familiarity with the mistakes we made there. I suppose if I had to entitle what I have to say to you, it would be "Two Hours of Bad News." Whoever and whenever people get involved in reserved rights litigation they are going to make major mistakes. No way you can avoid mistakes whether it is litigation or negotiation. The only thing that you all ought to be anxious to do is to avoid the mistakes that we made. I'll try to cover those as I go along.

The two cases are basically diametrically opposed in the way they were handled. This is all from the state's viewpoint. Let me back up and say something about reserved rights themselves. I really have no major difference with the definition and description of reserved rights that was given this morning. It's really a question of what the syllable you put the emphasis on.

On the front page of the outline, the critical issue is amount in reserved right litigation. I think we agree that the amount of reserved right is that amount necessary to serve the primary purpose or purposes of the reservation. "Necessary" is a key word. But there are other key words

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which you ought to remember. Those key words are "meet the minimal needs." So "minimal" you might as well remember. Another one is make sure that the primary reservation purpose is not "entirely defeated." "Minimal" and "entirely defeated" are the words the courts use. Often we get spooked by reserved rights when we don't have to because they may not be the boogey man we think they are if we remember that they are only to serve minimal needs associated with the primary purposes of the reservation, and insure that the primary purposes of the reservation are not entirely defeated. What reserved rights are, in a broad conceptual way, is an insurance policy, to insure that where water rights are not provided by the federal government under state law, and where water is absolutely essential to the continued vitality of that land reservation, there is an escape--there is an insurance policy that provides that water under the reserved right doctrine.

These words are far better than the word "reasonable" that most lawyers love to use because they do have some practical definitions in the case law. There is no one place you can go and learn all about reserved rights because there is no statute that tells you about them, there's no one case that tells you about them. I have four green volumes that collect cases through 1983 in chronological order that we have used and had used against us during the last 12 or 15 years of reserved right litigation. I've got to say that two years ago when we bound those, I was absolutely certain that we had every case possibly involved, and not two weeks after they were bound, we found more cases that are in a supplemental notebook. But that gives you an idea of the magnitude and diversity of the kinds of authority you have to go to when you worry about reserved rights.

"Minimal" and "entirely defeated" are words of art, and they are words that you ought to remember because they impose a substantial limitation on the reserved right. Someone this morning said, "Please remember that the quantification of the reserved right may not be the end result of what the reserved right actually is in terms of an adjudication or settlement." These two words really create that difference between the claim and the eventual award or negotiated deal because quantification of reserved rights by federal agencies tend to optimize the functioning of the reservation, or to preserve the reservation in its natural condition, while what a court will award is not an optimal number, not a preservation number, but "minimal" needs, enough water to make sure the purposes are not "entirely defeated."

One of the things that spooks most of us in the reserved right business when we start the negotiation process and the litigation process is the remarkable nature of the claims that are made up front by the United States. You have to remember that the reserved rights litigation or negotiation is like buying a horse. The seller starts high and the buyer starts low. Somewhere you meet in the middle.

You need not be surprised or set off at the original offer by the seller. The United States is high. Let me give you an example. In the Big Horn Adjudication that we are going to talk about, the lower end of Boysen (?) Reservoir, the virgin flow of the Wind River was 1.6 million acre-feet.

The claims of the U.S. were about 2.4 million acre-feet. The amount of the reserved rights that were awarded by the court and arrived at through negotiations was about 400,000 acre-feet. Even there on the award the court didn't really apply the "minimal" and "entirely defeated" standards. That's one of the issues that is going up on appeal. So when you talk about quantification of federal reserved rights, remember standards and remember the effect of those standards, because when you apply those standards to the claims or the quantification by the agency, generally they are reduced substantially. Don't be surprised if the initial claims are originally high. Expect them to be high, because the agency folks wouldn't be doing their job if they weren't high.

One other thing--how the reserved rights are administered. Usually, at least in the western Lower 48, administration has been the province of the state, except with respect to Indian reservations. There the subject remains up in the air. That's really the result of what are called "disclaimer provisions" in state constitutions and was addressed in the Adson (?) case as a federal issue based on state constitutional law on a state by state basis. Adson (?) basically said the disclaimer provisions did not keep Indian reserved rights from being adjudicated in state court. Now the issue is going to be whether or not they can be administered by the state. That's being dealt with by the state supreme courts.

Now let's talk about these two cases. Colorado first...here we have two cases, the Colorado adjudication in which the state had very little involvement, and the Wyoming adjudication where the state had almost total control. For starters, I ought to compare Colorado, Wyoming and Montana. If you take the amount of state involvement and add the amount of private involvement, Colorado's involvement of the state was probably 5% or less. Private involvement was 95% or more. In Wyoming, state involvement was around 98%, private 2%. That was an important 2% because everything the state did was cleared with private parties. In Montana, the state involvement was 100% and private 0%. You may ask why did Montana go to the compact approach? I'm not in a position to say authoritatively, I think you'll find that the compact approach was designed to reach that precise result so that the private parties didn't mess up the deal, because if you subject the compact to court scrutiny with private parties coming in to defend their interest, the compact falls apart. The compact is only good when you have a deal between the United States and the state. When private parties come in, their interests may not coincide exactly with that of the state. That's one reason that Montana went to the compact approach.

In Colorado, how did this adjudication get started? You may be asking yourselves whether you even want to think about adjudication. In Colorado they didn't have that luxury. They had an interesting situation--the state is a rectangle with the continental divide going down the middle. Denver has 70% of the population and 30% of the water, so it has to go someplace else for water and what it did was develop a series of collection systems in the national forest in the 1920's, and collect water from the headwaters of these streams and shoot it under the mountains by tunnels. They had perfected water rights under Colorado state law with roughly 1920 and later priority dates. The folks on the western slope where these rivers come out were saying, "Denver has basically deprived us of our capital gain. We expect to have no water for our future development. How are we going to deal with this situation?"

A very clever lawyer by the name of Ken Malcolm in Glenwood Springs said, "There is a way we can use reserved rights generally to screw them. The national forest is located along the headwaters of these rivers. The national forest had priority dates 1907 and 1903. If we could have minimum instream flows in those national forests as reserved rights, they would have 1907 priority dates. They would call out Denver's transmountain diversions. The water would have to be left in the stream that comes out of the bottom of those national forests and that will allow the water that is there to be used by us on the western slope."

Denver obviously wasn't excited about the idea. The western slope was the delighted, so Malcolm joined the United States as a private party. He first joined the United States in a little (sic) water district here, and the United States, of course, squealed like a stuck pig. It didn't want to quantify the water rights and everybody else on the western slope said, "This is a good idea", so they joined with three more little water districts. And more folks said, "This is a great idea." The state, by the way, all this time is sitting on its hands. Within 8-10 months you have the area basically west of the continental divide, about half the state, involved in that adjudication. The state itself hadn't done a thing. It was all anti-Denver and an anti-eastern slope movement. You may have heard about the Colorado Big Thompson project that serves the northeastern part of the state, it was also a target. Then there was the Frying Pan-Arkansas project, another basically Bureau project that serves the southeastern part of the state which was also a target. So Colorado's litigation didn't begin by conscious decision by state policy makers. It was started basically as a tool to facilitate private and municipal water wars.

I think I'll deal with the Colorado case first. There are lessons to be learned from Colorado. Without state control, things get out of control and you end up with adjudications that make no sense from a state policy basis, which may make splendid sense from a private water user basis. And the state remained passive through two trips to the U.S. Supreme Court and two trips to the Colorado Supreme Court. It turned out to be an east slope-west slope fight in which the United States looked around for friends and found none. Needless to say it didn't cost the state very much money--at least yet. There are absolutely no benefit spinoffs to the state. We often talked about our national space program having spinoffs to our economy. The same thing is true in streamwide adjudication. It has a tremendous potential for spinoffs to the state, but in Colorado there is none because the state did nothing. It was tried at the leisure of the private lawyers involved. The case has been going on for 17 years and it is far from final resolution.

Let's turn to the Big Horn Adjudication. Let me tell you how that got started. It was started in reaction to the Indians on the Wind River Indian Reservation in Wyoming, the Arapahoe and Shoshone tribes. Two things happened...the joint tribal councils adopted a resolution in 1975 that said they claimed all the water that is on the reservation. Everybody thought they were just blowing smoke and we won't worry about it. Then in 1976, September, the city of Riverton decided to expand its municipal water

supply. It needed either federal funding or federal loan guarantees and had gotten them lined up for the expansion of their water system when the city council got a letter from the tribal council that said, "Expand the system at your own peril. We own all the ground water and if you drill any more wells you can pump them until we need the water but don't count on continuing availability of the water." As soon as that letter was received, the federal involvement in financing dried up and the mayor was on the phone screaming at the governor and you can imagine what happened then. The only question then was "How soon can we get things started?"

To his ever living credit, the attorney general as well as the governor and the state engineer sat down and said "Do we really want to start one?" The conclusion was yes. It was a thought out decision. The reason they decided to go was not just because of the federal reserved right claim, but because Water Division 3, the Big Horn Basin in which the Indian reservation is located, had been an administrative mess for years in terms of the water rights involved. This basin runs along the eastern edge of Yellowstone National Park and into Montana. One of the interesting questions to file away and remember that you heard it 10 years from now is, what effects are any compacts which Montana may ever get negotiated with the Indians and federal government going to have on interstate streams? It's not a problem that you have, but the states that surround Montana are sitting back and smirking, saying, "You guys go ahead and cut your deal with the Indians but its not going to affect the surrounding states."

That's the way the adjudication was brought to this discreet basin, where we have a federal reserved rights problem and where there were real problems with state water rights. The fundamental concern there was that the state had started a water development fund and had several million dollars programmed for that fund to develop the remaining water in that state. Until they figured out the federal reserved rights and got its own house in order in terms of water rights, it was impossible to spend that money with any degree of assurance that the projects that were funded would actually produce water. So the decision to go was a two pronged decision and it did go.

Wyoming had the problem similar to Alaska's. It has basically a permit system with the appropriation doctrine. Frank Trelease, who was Dean of Law of the University of Wyoming, helped draft the Alaskan statute, so there are remarkable similarities. So we sat down and thought, "We are going to start an adjudication. Do we have a statute that allows us to do it?" We came to the conclusion that we didn't and we had to have one. About November, the decision was made to go. We drafted three or four different alternative approaches, met with the joint leadership of the Wyoming legislature, discussed the alternatives. There were three significant pieces of legislation to pick from. Predictably, they picked the shortest one, and it turned out to be an amendment to the Declaratory Judgement Act that was signed on January 22, 1977, and we filed a 23,000 page complaint on January 24. The United States said that they had been sandbagged. So that's how the case got started. It was a calculated decision that took several months of discussion between the Governor, the

Attorney General, and the State Engineer whether or not that was the time to adjudicate. Part of that discussion was whether there was any reasonable probability that negotiations would pay off, at least prior to litigation. The conclusion was, "Litigate, we'll talk negotiations later." As it turned out that worked to the substantial advantage to the state.

So in summary, Wyoming thought out its position, and was very active in the litigation. There was continued coordination between the state and private lawyers, and the state and local political officials. There was substantial political involvement. That really became important when it came time to settle because we needed the support of elected state officials as well as the Wyoming congressional delegation to make the deal fly. In Colorado, they just sat on their hands during negotiation and nothing was settled except a few private deals that were meant to subvert the jurisdiction of the court. In Wyoming, the political process was in full sway and you got a remarkable settlement that we will describe. It was very expensive for the state. I think to date in the entire adjudication we spent about 7 1/2 million bucks extending from 1977 through 1985. You have got to remember that the Indian reservation absorbed at least 90% of that just because of some peculiar circumstances there. Within the remaining 10%, we settled all the non-Indian claims by the federal government. That wasn't really that expensive.

The state had a remarkable spinoff in terms of benefits. As part of the litigation we decided that we cannot even talk about litigation strategy, let alone negotiate, unless we know the impacts of the reserved right claims. We have to be able to respond to the "what if" questions. What if the national forest gets the instream flows claimed with the 1907 priority date? Who is going to be cut out of the system, if anybody? If nobody is going to be cut out of the system, do we really care? Is there any state water right that is going to dry up because of that claim? If not, why worry about it? There was a reason to worry. We will cover that later. As a result, the state developed a model which at that time, 1983, was the state-of-the-art. It was a model that incorporated the inflow of the system, all the state water rights, their use, which included depletions to the system, diversions and return flow to the system, and administrative assumptions, such as everyone being administered in inverse order of priorities. It was verified by checking against stream gages. We just kissed Wyoming goodby there. It ended up being an administrative model administration and planning. Colorado didn't get that. Colorado probably spent 1/10th what Wyoming did and got nothing for its money.

I'm on page 3 of the outline. Lets run through the chronology of these cases.

In 1967, the Denver v. U.S. case was begun. The United States was served in the case. The United States fought being brought into court. It went for writ of prohibition in the Colorado Supreme Court. The Colorado Supreme Court ruled that the state courts did have jurisdiction. The United States then took them to U.S. Supreme Court, who again ruled that

the Colorado state courts had jurisdiction. It was only in 1971 after the case had been up to the U.S. Supreme Court in two versions that the United States submitted its claims. If you begin a litigation process, you ought to expect a major portion of time, several years, in which the United States resists the jurisdiction of the state courts. After the state submitted its claims, a master referee was appointed. There was a trial that extended off and on over two years along with a number of pretrial conferences with about 170 parties involved. The state sometimes showed up. It turned out to be about 10,000 pages of transcript and about 70 lawyers actively involved.

In 1976, the master submitted a partial report on just the U.S. claims. There were lots of other water rights involved. This is a copy of the report. You'll get a kick out of it. There were objections to the master's report. There were hearings before the district court. The district court took about a year and a half. Remember at this time the U.S. v. New Mexico case--the Rio Mimbres case came out. Some of the awards that the master had made to the United States in terms of its rights to instream flows were no longer legally correct. The Supreme Court had decided that you didn't get instream flows for fish, wildlife, and recreation purposes in national forests, so that portion of the report was deleted. Basically the report was confirmed, went up to the Supreme Court and then in 1982 the Colorado Supreme Court ruled basically against the United States, but remember the United States got much of what it sought in the Colorado adjudication. No successful appeal was taken to the U.S. Supreme Court.

Now the matter has been remanded to the district court for hearings on certain things, the most significant of which is Dinosaur National Monument. The master suggested an award to maintain the natural conditions in that monument, maintaining the virgin flow. The district court and the Supreme Court said "no." The purpose of that monument was to preserve archaeological and fossil remains and allow a place to investigate those, and so only as far as the water was required to maintain endangered species or ancient species or the fossil situation, would it be allowed. So its back in the district court primarily dealing with that one matter.

Big Horn Adjudication:

Those first dates should be 1976 rather than 1972 on page 5. I'll describe how it got started, how the complaint was filed There were some problems with service; getting the litigation started w/ l describe later. The complaint got filed within 6 months after the problem arose. There the United States removed the case to U.S. district court--absolutely frightened of the treatment it would receive in state court. I suppose in some western states there may be some justification for that, but as it turned out, the Wyoming district court wanted no part - the federal district court wanted no part of that litigation and quickly remanded it back to state court. Again once it was back to state court, the United States challenged the jurisdiction of the court and it took a while to get that taken care of.

Finally, by 1979 there ws a master appointed and he got things rolling. The master, I should say did some interesting things. That was a case in which I wasn't the master so I can brag on him and complain about him both. The master got the idea, a good idea, that the water rights involved in the adjudications really ought to be categorized. So he divided the case into 3 phases: phase 1) Indian claims 2) United States claims of a non-Indian nature 3) the state awarded water rights. As a result, some of those phases were able to go on serially and some contemporaneously and things moved along pretty fast so that by 1981 we actually had a trial. It lasted 42 weeks of trial on the Indian claims and a year later we settled all the non-Indian claims without a day of trial except for a prima facie case in support of the stipulated decree. There may be a correlation there, between the state being willing to go to trial--willing to go to the wall with the United States--and the United States willingness to negotiate later. Depends on who you talk to.

In 1983, then, all the non-Indian claims to the United States were settled with only a half day of trial. I'll pass this around. This is a settlement decree on the non-Indian cases. The Indian claims remain in dispute, some negotiation efforts are ongoing on those and probably ought not to be discussed in public. The only issue, Indian claims, are on their way up on appeal and we'll talk about the details of those if we have time. Also, what remains to be dealt with are the claims based on state law. We have, in Wyoming Big Horn adjudication, about 20,000 parties who have interests in between 10-12,000 state awarded water rights. The adjudication of those state awarded water rights is a matter with which we've not yet dealt.

Let's compare in a more detailed way the two adjudications. Attached to your outline is something called a generalized comparison. I'm going to refer to that as we go through this.

The first issue is the area involved. In Colorado, we have about half the state. In Wyoming, we had only one portion of the state, one major drainage that was picked by the state. In Colorado, the adjudication was initiated by a conservation district. The state had absolutely no decision about whether or not to get it going. In Wyoming, litigation was started by the state to resolve a conflict between the Indian reservation and a municipality, as well as to straighten out the state situation on the rest of the basin. In Colorado, the state role was one of absolute passiveness. In Wyoming, they were very active and took the lead. In Colorado, they had nothing to say about the issues raised and the way it was dealt with. In Wyoming, the state had virtually total control over the prosecution, how the case moved along. In Colorado, there were no expressions of state policy, at least initially. Now the state is starting to get involved, but still has to describe, at least for itself, its litigation policy. In Wyoming, the state described that policy early on. The first policy was to get the reserved rights quantified. The second policy was to protect state awarded water rights. The state felt it had an obligation to the folks to whom it had issued water rights under the state system. So the number one state policy under negotiation and litigation was to protect the state system of water rights. It didn't protect any individual person, just to protect the system as the state had set it up.

Jurisdiction:

In Colorado it took two cases in the U.S. Supreme Court to define jurisdiction. Wyoming sat back and said, "Well, if the U.S Supreme Court will agree that the Colorado statutes are those which confer jurisdiction on state courts, then we ought to model our legislation after those Colorado statutes," which they did.

I need to say one word about jurisdiction. I would refer you all to the Pacific Live Stock Company case described on page 10 of the outline. There you start to worry about the jurisdictional issues. Remember in the Eagle County case, we started out in little Water District 37, and the United States said, "No jurisdiction, we haven't waived sovereign immunity. The McCarren Amendment doesn't apply." The McCarren Amendment requires general adjudication, requires everybody on the stream system to be joined as parties. Little Water District 37 just has a tributary, the Eagle River of the Colorado River. It doesn't include all the water users in Colorado, let alone all the water users on the Colorado within the United States. The U.S. Supreme Court said that may be over-technical, so it was decided that if you happen to have a hydrological unit, and if all users within that unit were joined, you've got a general adjudication.

The issue for Alaska is the word "suit". Remember the McCarren Amendment was enacted to waive sovereign immunity in any suit, and to allow the application of state law and state court jurisdiction to the United States in a suit. The question comes up, "What is a suit?" In Wyoming, we have the same problem I perceive you have here...we have a permit system. The question is whether or not that permit system in the administrative adjudications that are involved under that permit system satisfy the provisions of the word "suit" in the McCarren Amendment. Senator McCarren, who proposed that amendment as a rider to the appropriations bill for the Dept. of Justice in 1952, is from Nevada, which also has a permit system. He would probably roll over in his grave if he knew that the courts have said that the administrative system just didn't hack it for a suit. A suit requires some judicial involvement and that Pacific Live Stock case is the one that we ended up relying on in Wyoming saying, look, that U.S. Supreme Court case says that as a part of the adjudication there has to be judicial involvement, not an appeal under the Administrative Procedure Act, not the possibility of some other kind of appeal without the necessity of any action by any party of the case finally has to be resolved by judicial decree. Without that you don't have a suit. You can imagine what Senator McCarren would say today because he comes from a permit state. He didn't have that in mind, but that's what the courts have basically said. You want to make sure in Senate Bill 150 that you have the last step under any circumstances be a suit, a judicial involvement in the action.

Service:

That's a difficult one. The Schroeder case cited in the outline is a case that, of all things, came up out of New York. The Pacific Live Stock case came up out of Oregon. The City of New York was trying to condemn riparian water rights for their city water system. The question was how much notice is enough to allow due process to all the water users on the stream. The

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That's a difficult one. The Schroeder case cited in the outline is a case that, of all things, came up out of New York. The Pacific Live Stock case came up out of Oregon. The City of New York was trying to condemn riparian water rights for their city water system. The question was how much notice is enough to allow due process to all the water users on the stream. The

Supreme Court there in the mid 40's said, based on the tax records, "You have to make a reasonable effort to notify everybody. It doesn't require service by the sherriff. It could be registered mail--but it requires something probably more than publication," which New York did. New York published and also put signs up along the river saying, "Folks, we're going to take your water rights and we're not going to pay you anything for it unless you file a claim." Nobody saw the signs and nobody saw the publication which was probably buried in the obits someplace, so they didn't have to pay anything, and all of a sudden Mr. Schroeder who had a cabin up on the river said, "Hey, that's not fair," and the Supreme Court agreed. Out of Frankenstein cases come bad law, and I think we're all stuck now with the necessity of giving some sort of personal notice. Publication itself probably won't do.

That personal notice is one of the real surprises in the expense of a case. South Dakota started an adjudication several years ago knowing what the cost would be, but after a period of drought, (its an agricultural state and when you have a period of drought, state income drops), I thought for sure the service alone to start that adjudication--the Rippling Waters Ranch case--was going to bankrupt the state. They finally decided they were going to drop the adjudication. They couldn't even afford the service. So you have to look at the costs all the way along and the first big cost is going to be the service joining the appropriate parties to the adjudication. You might say, "Ah, that's something we might be able to avoid by way of negotiation," but let me tell you, there's no way the results of the negotations are going to be binding on anybody unless you get them served. The question is, do you serve them now or do you serve them later.

The master:

One of the most important decisions you can make if you decide to go the litigation approach is the master that you get. The master has to have a judicial temperament, he has to be thoroughly capable in the technical areas of water and water rights, he has to know the rules of evidence and the rules of civil procedure, and he can't have a conflict. If you sit down and think about the lawyers in the state of Alaska just as we sat down and thought about the lawyers in the state of Wyoming and people before us sat and thought about the lawyers in the state of Colorado, and figure out who knows the rules, who understands water, who has a judicial temperament, and doesn't have a conflict. Ha. Nobody. So one of the earliest disputes, once you dissolve the jurisdictional struggle, is the selection of the master.

I suppose nobody in either one of those adjudications was happy with the master that was selected. I was the master in one of them and I represented the state in the other, and I sure wasn't happy with the guy that got appointed in Wyoming and I know a lot of people weren't happy with me in Colorado. They got me as basically a raw rookie who didn't know up from down and we got a fellow at the other end of his career, who was retired in Wyoming, who didn't care if up was down.

If you want the practical aspects of this thing one of the most difficult things is going to be to find the master, and I suppose if we made a mistake in Wyoming, it was of saying, "We want to have a master from within the state, we want to have a master who can understand the impact that reserved rights can have." We finally ended up with a retired United States Congressman to do the work. It was clear that he did not understand how a trial worked even though he had been admitted to the bar for many years. At one time he told one lawyer in the case, "If I have to read the rules of evidence we'll be here for 6 months, so I'm not going to bother." It went from there.

Finding that master is going to be difficult, but I suspect that in Alaska as in Wyoming, your interests may be better served by going outside the state to find somebody who doesn't have a conflict but has the other criteria. Even that is going to be difficult because anybody that knows anything about it has been on one side or the other.

State litigation strategy:

In Colorado, there obviously was none, just sort of wait and see who thought up what next. In Wyoming, it might have been a mistake. We took a very hurry up approach. We thought that we could out-gun the United States. It was true. Whenever we had to, we could. The United States is a sleeping giant, the most powerful litigant on earth, but then when you think about Von Klauswitz had to say about war, "Mass is the critical principle of war...it doesn't depend upon how large your army is, it depends on how many folks and what force you can focus on a particular spot." That is a constant weakness of the United States. It cannot quickly bring a lot of experts and a lot of lawyers to bear on a specific point at a specific time, and that's something the state can do. We thought to ourselves, "We'll take advantage of that; we'll run these guys ragged." Well, it worked, at least at first. And then, after the third extension of the trial when the United States came in and said, "We're not ready", the judge said, "Why not?" "We promise to be ready in two years or two months." Finally the master got tired after the third extension and said, "You're going to trial whether you're ready or not." We thought we'd have a tremendous advantage by pushing the case, but as a practical matter that advantage was negligible except with respect to the later negotiations where we thought that the earlier litigation really paid off.

Consultants:

You're not going to try one of these law suits without technical consultants. We'd tried to do that. Colorado didn't even bother. Every expert witness that was..reserved rights are a battle of expert witnesses. You have a few legal issues that may get taken care of earlier, but it turns out to be a battle of expert witnesses. In Wyoming, the case was made to have a mix of experts. There were going to be some experts for political reasons from within the state, and some experts that could come from anywhere. As it turned out, our very best experts and our very worst experts were from within the state. The folks from outside the state were adequate to very good. One of the things I would caution you about if you

can avoid the problem--I don't know if you can, under your state statutes--is when you get to litigation, when it's that important, don't go local just for the sake of going local. I grew up in Wyoming, it is basically my home even though I happen to resid in Denver, and I've got to admit that was one of the biggest mistakes we made, going local, and they were some of my friends.

One thing we did as the litigation got along is to require personal service contracts. We had started by having contracts with individual consulting firms, whether it was our agricultural engineer, our hydrologist, our computer modeling guy, or terrestrial ecologist, our dendrochronologist, whoever, we had contracts with their firms. I don't know how it is in this neck of the woods, but the concept of free agency has come to the consulting world. Consultants float from firm to firm and we found that we had grown to rely on Mr.Jones with the XYZ firm, the contract was with the XYZ firm, but all of a sudden Mr. Jones was with the ABC firm. Boy, if yo don't think that caused some tightness! So we eventually decided the heck with this. We no longer are going to deal directly with the firms themselves. We picked up the individual consultants so that we knew we had those rascals, at least until one guy went to Saudi Arabia.

Among the consultants, once you have them hired, its absolutely imperative to have a coordinator. We didn't figure that out. I thought, by golly, I'm a graduate engineer, I can coordinate these guys. I soon found out how wrong I was. We needed to have somebody who is a full time coordinator of all these experts. Once we did that, life became a lot more simple because, as you will see from these flow charts, running one of these litigations is not simple. It's not impossible, but it's not simple because you have a large number of experts doing a lot of different things that are interrelated. For example, until your hydrologists figure out the virgin flow of the stream, there's not much you can do with your model. Until you get some things done with your model, you can't decide where to focus you effort. You don't know what claims are hurting you.

In each of the cases I've been involved with, the first thing we've done is set up little flow charts--who does what when, and who's relying on what. The half life of a flow chart is about one month. These things do not stay current very long, but you've got to have them. No consultant is going to show you these flow charts because they aren't very pretty and there's no point in making them pretty because they change so fast.

This is a flow chart from the early days of the South Dakota adjudication outlining the way the lawyers were going conduct their affairs. There was a team of outside special council and folks from the Attorney General's office, and it was important to split up the responsibility and make sure everything got done. We ended up dropping out and adding here as other experts: fisheries, wildlife, aesthetics, recreation, agricultural economics, history, socio-economics, dendrochronology, survey and mapping, and water quality. Those we just said the heck with it. We finally said, "We want each one of you to come up with this so we can figure out where we're going," and this is where that coordinator becomes important. This flow chart is the most important of them all--a flow chart of the Wyoming model, without which we would have been absolutely helpless. I'll leave a copy with you.

This is the end product, what is now being used in Arizona. It is a consolidation of all those other flow charts plus the various editions of how the system is supposed to work from the state's viewpoint. I can't leave it here.

Jurisdiction:

When you start worrying about reserved rights cases, the first issue is jurisdiction. You are going to fight about jurisdiction. If you don't fight about jurisdiction, you're foolish. The reason is that nobody has ever figured out whether or not you can agree on jurisdicition in a reserved rights case. There are two kinds ofjurisdiction--lawyers will tell you that--personal jurisdiction--over the party, and the subject matter jurisdiction--jurisdiction over the controversy. Since water adjudications are quasi (unintelligible) actions, almost like a quiet title action, the issue may not be personal jurisdiction over the United States. They can waive personal jurisdiction. You can stipulate personal jurisdiction. You can't stipulate subject matter jurisdiction unless you...that can be raised any time. You can have an agreement on jurisdiction, get all the way to the appellate level and somebody can raise it for the first time or the appellate court can raise it itself, and if you don't have subject matter jurisdiction, you are lost. Until we get a definitive case from the McCarren Amendment whether it is subject matter or personal jurisdiction that's involved, you ought not to even consider for a minute stipulating jurisdiction. You want to get that as an issue before the court and take it up as an issue before the court so it doesn't get raised later on.

Reservations, priority dates, and purposes:

The first thing you do in an adjudication is identify the reservations, what reservations are you going to have to deal with in that particular drainage. Here we had an Indian reservation, a couple of national forests, some power site withdrawals, a recreation area, a whole bunch of BLM reservoirs and wells, stock driveways, instream flows within the national forest, plus the public lands instream flows that were claimed.

Wyoming started out to be an adjudication not just for reserved rights, but federal non-reserved rights. You may have heard of the federal appropriative rights doctrine that was adopted during the Carter administration and finally killed during the first term of the Reagan administration. This case was responsible for its death. The problem arose out of the U.S. v. New Mexico case in which it was said the reserved rights exist only for the primary purpose of the reservation. All other uses, secondary uses or traditional uses were to be acquired under state law. Some of those traditional uses were not called "beneficial" under state law, like instream flows. Some would end up with priority dates very junior if they got the priority date of the adjudication, which happens in most states. So the United States not only filed reserved right claims, but also filed claims for non-reserved rights, and said that regardless of the fact that they hadn't adjudicated the water rights previously, they are entitled to a priority date for the uses that they made as of the time the

use was begun. That sort of blew everybody's mind. Part of the negotiations leading up to the settlement on the non-Indian claims was a decent burial for the federal appropriate right doctrine. It was just an attempt to skirt state law with respect to secondary uses.

So the first thing you do is decide what reservations you have and where they are. We were surprised at how difficult it was to figure out what reservations existed within the basin and exactly where the boundaries are. We finally convinced the master that the very first step in the litigation ought to be the judicial definition of those reservations. We called them "The boundaries and dates file". Everybody submitted evidence of where they thought the reservations were and what the date of their priority was. Remember, however, that most of these national forests in the Lower 48 are a patchwork quilt. You have reservations that have been made throughout history, ever since the turn of the century.

Once you decide what reservations are involved you can make a good guess at what the court is going to decide are the primary purposes, and within those primary purposes you can make a fairly decent guess as to what the eventual claims of the United States will be. Having done that, if you have a model, then you ask youself what uses of water do we have under state laws? That is possible a fairly early decision.

The model:

These are all the irrigation rights in the basin. What if claims for the Indian reservation totals the virgin flow of the stream? It turned out the claims of the United States in total were for 1.6 times the virgin flow. The claims turned out to be worse than we thought they would be if we take virgin flow in average years. Water rights in red are going to be knocked out. These are going to be dry areas. What about dry years? In dry years the red areas start to look like that. So all of a sudden the pucker factor got way high, we decided we better get serious about federal reserved rights. It blew out completely the reclamation project, destroyed basically everything upstream from the reservation, and started a consumptive use on the Indian reservation that had a dramatic effect on everything downstream. This was just based on claims of the Indian reservation. We did a similar thing in respect to the national forest. We identified the water rights that would be affected by each one of those.

Then we did a consolidated run where we added all the claims together and said, "OK, who is going to be hurt"--every place there is a red dot. Then we asked the model, "What particular claim causes this injury?" With one general exception, if the claims of the United States did not affect any water rights, we said, "We won't fight you on it." That was the general strategy. That is why having a model is so important.

Models are not cheap. For that basin which is about 125 miles long and 70 or 80 miles wide, an informed guess is that we spent about 2 1/2 million bucks on the model. The results were fairly worth while because we found that we had over 200,000 acres of land that would be going out of irrigation because of the claims the United States had made. If you figure conservatively at $1000 an acre, all of a sudden you recognized the economic impact it would have on the state.

Claims involved in the two adjudications:

In both adjudications there were more than federal reserved rights involved. That's because under the McCarren Amendment we've got to have all the users on the stream involved. It creates a very sticky problem. If you've got water users out there that have already got their water rights based on their permits or license, and you tell them they've got to go back in and readjudicate their water rights, they get a little feisty.

I noticed that in your bill you did the same thing we did, and that was a provision that the document itself--the permit or license--is prima facie truth of the content. In Wyoming, we came to the pretrial conference--all parties were invited to submit exhibits ahead to time to get their admissibility ruled on--with three or four carts of state certificates and permits all marked and indexed, and said, "Judge, we want them admitted as prima facie truth of contents." The judge said, "OK". The United States was not happy but that's the way the statute read. One advantage you nad in state court, you control the evidentiary rule. If you have to have a short cut to deal with existing state rights, it gives you a chance to do that. I think you have approached that just right in your proposed legislation.

In each of these cases the master did the same thing, he separated the claims into different categories. You can read the type of claims involved there. In Colorado, there were no Indian reserved rights involved. In Wyoming, there are lots of non-Indian claims involved, but the real expense in the case was dealing with the Indian claims because of the tremendous impact it had on the state.

The resolution:

In Colorado, virtually everything was litigated. The private parties wouldn't agree on a thing. As a master that really made me happy--no time off to go fishing. In Wyoming a lot of issues just fell by the wayside. The question of whether or not they were important was did they affect anybody? We took numerous trips up the Big Horn Basin to talk with the private counsel. If we hadn't gone up there, if we had tried to cut them out like is being done in Montana, they probably would have cut us up and fed us to the coyotes. We did keep them involved and as a result they were pretty passive during litigation, although every now and then when we needed a little sex appeal, some of the lawyers, clients, and experts would come down out of the basin and give their testimony. It was very helpful to have that resource available.

In the Colorado case, there was virtually no negotiation with one exception--the BLM claimed instream flows for off-reservations, basically a precursor of the federal appropriative right. Everybody fought those as a legal matter until they discovered the size of the claims: they were 1/100 of a cfs, 5/100 of a cfs. I wouldn't say this in public but one of the experts testified that one of the claims was less water than could be produced by a bull elk, so as a result everybody said, "You've got to be kidding. We don't want to fight about that." The private party said, "The cost/benefit approach is not worth fighting about", so those are the only

things that didn't get litigated. In the Wyoming case, the only things that got litigated were the Indian claims. The non-Indian claims, the national forest, national parks, recreation areas, didn't get litigated, they got negotiated. This is basically how that story works.

During the Indian trial, we realized that we had a problem...that we probably couldn't afford to have the kind of litigation on the non-Indian claims that we had on the Indian claims. Not only could we not afford it, we probably didn't have the energy to do it. Lawyers peeled off that case like skin off an onion. They just got worn out after awhile. The same thing happened to experts. I said that one went to Saudi Arabia, I'm fully convinced, just to escape that case.

We thought maybe we could settle on the non-Indian claims, and there had been discussion of settlement. Finally we just up and asked, "Are you guys interested in settling?" And the answer came back, "Yes". We had made a decision to fight about things that weren't important during the Indian case, just make sure that the United States is interested in settlement because prior to the trial on the Indian claims there wasn't much interest in settlement. We thought maybe we can get their attention. The way we did it was to adopt a hedgerow to hedgerow approach in defending against those claims. There wasn't anything that didn't go by without substantial discovery and cross examination and opposition at trial. After the Indian trial was over, we said, "We'll reinforce the pattern." We set up an intensive series of depositions on the non-Indian claims. After the third week of that we then said, "Would you like to settle?" And sure enough, with the trial about three weeks away the answer was, "Yes". So there has been a been a complete turn around in about a year and a half. During 1982 we talked settlement.

It's hard to guess how much that settlement cost. In terms of absolute direct costs, it probably cost $500,000-700,000. Contrast that with the cost of the Indian litigation which must be in the neighborhood of $6 millon. You can see that negotiation certainly does have benefits. But there has to be footnotes there. One of the things we did in the negotiation was use the model. We knew where we had to have victories in the negotiation to make the deal fly. Without the model we wouldn't have. The total cost of that model was absorbed in the Indian resolution. None of those costs were ascribed to the non-Indian settlement.

In addition, a great deal of the impetus for settlement on the non-Indian version claims came from the very hard line approach the state took to litigation on the Indian claims. As a result, whatever the causes were, we cut a deal. I think you ought to compare the claims stated by the United States and those awarded by the court. For the non-Indian reserved right claims, two small wells were given a reserved right. There were no other reserved rights in the state of Wyoming. The federal government was given a water right which expressly was not called a reserved water right.

The United States got water rights which were a) junior to all state water rights b) they were junior to all waters which had been identified for potential development by the state. (We started calling it a state reserved

right.) Each one of those had a little fudge factor attached to it to make sure we had a little slack in the system. Only after that, in the third general priority came federal reserved rights. We saw that as a major victory for the state.

Remember, down there, the state has for years struggled with the issue of instream flows, whether or not the state ought to encourage instream flows. The answer there, unlike Colorado, was no. Never could get the legislature to adopt an instream flow bill. As a practical matter, all the senior water rights are down at the mouth of the streams, so they call water down to their headgates from the upper reaches of the streams, and instream bills aren't needed. As a general matter, the senior water rights are low on the stream and call water to themselves and preserve the instream flow.

We have real problems in the national forest. The original claims for the United States were for quantification points at the boundary and at the mouths of each one of these tributaries. We were quite certain that they'd take the approach that was taken in Colorado and say, "We want a minimum flow in cfs throughout a stream reach." We didn't see any claims for reaches. We saw claims for quantification points. But those quantification points did have cfs attached to them. Our biggest problem was that upstream of these quantification points, there were state awarded water rights--diversions--which would be cut out sort of like Denver's transmountain diversion. We had to do something.

The original claims of the forest were for 78% of the natural flow. Now this is after the New Mexico case where it was decided that there were no instream flows for fish, wildlife, and aesthetic purposes. This was for production of timber and protection of watershed. One of the biggest surprises of the Rio Mimbres case was when the Supreme Court said that national forests were not created for recreationl purposes--they were created for commercial purposes, to provide timber supply and to provide water for downstream municipalities and users. The United States said, "We need 78% of the virgin flow" to do that. We thought that was a little much. We started negotiating. Soon that was down to 22%--the amount necessary for flushing flows to maintain the integrity of the channels. Once we had the 22%, we went back to the model and said, "Where are the red areas?" All of a sudden the tributaries started turning up with red areas--diversions above quantification points. We eliminated this quantification point right here on the mainstem. With that eliminated, this fellow was no longer red. He was blue--he was irrigated. And we can't eliminate this one--the United States started to get a little antsy with all these zeros. Their quantification points kept disappearing. We just moved them all upstream of the diversions. And when we couldn't agree to moving them upstream, and we couldn't agree to deleting them, we just assigned them a streamflow value of zero. That negotiation process took a long time. The United States got to the point where they said, "We can't accept any zeros. It doesn't look good. The Sierra Club might sue us." And we finally agreed that every place there was a zero, we'd just move it upstream above all the major diversions.

So the final result was there were no reserved rights for non-Indian purposes in the Big Horn Basin. The water rights of the United States were just called "water rights of the United States" based on state law, subordinated to all existing state water rights. We also identified all potential storage programs and potential water development projects on each of these streams, and subordination was made to those as well, and after that subordination was made and the quantification points moved basically above every significant diversion and storage facility, we had a deal. That deal we took to district court. The United States asked that the state put on its prima facie case in support of the deal and the deal went to bed. It took about twenty years and three quarters of a million bucks. As you can tell, the progress of it was a little different from the negotiations you might expect. It was all due, basically, to the model. The lawyers like to say, "Hey, it was the lawyers who won the case," but, in that case, the model did.

QUESTIONS:

Keith Bayha (USFWS): Question on flushing flows (unintelligible)

White: It was originally set up so that the quantification of these various points were made in acre-feet per year and cfs during particular months. (Remarkable similarity to habitat preference curves.) We got rid of all the cfs and we thought we were going to get just acre-feet per year on those quantification points until somebody wised up. And we ended up getting, if you look at that stipulated decree, we got total acre-feet per month. So, that instream flow, according to the deal, could all be satisfied in one day. If during January there were 12 acre-feet at the quantification point, if it came in one day, the deal was satisfied. That's the basic national forest claim that's being made now. I think we've dropped from 78% to some lesser number. We're just in the middle of discovering Colorado to find out what that current number is.

Wanamaker: In the books there, I didn't really see anything dealing with mining properties. Did I miss them? It seems to me that the mining community--and I know there is some in Colorado--have a great deal of concern over how this was developed. There would be advantages and disadvantages to either side prevailing or settling something that was unsuitable for (unintelligible).

White: The mining industry was very active in the Colorado ca e until the Supreme Court ruled that there were no instream flows for national forests based on the original Organic Act purposes. The mining industry is very concerned. But since the additional purposes came into existence in the 1960 Multiple Use and Sustained Yield Act, they assumed that if there were reserved rights for those additional purposes they would be from 1960 and later. Most of the significant mining water rights predated 1960. They weren't worried. Then when the Supreme Court said, "You don't even get water rights for 1960 act purposes", the Colorado court said, "You have no instream flows at all for national forests in Colorado."

Part of the problem was the United States had failed to claim instream flows for the original Organic Act purposes. They claimed instream flows only for the 1960 act purposes. Part of the requirement for a general adjudication is that if you are served and made a party to the adjudication, you file all your claims or you lose them. What the United States failed to do was to assert claims for the original purposes of the forest. They asserted instream flow claims only for the 1960 act purposes. Therefore they lost the chance to make those claims. Later they came in and tried to make amendments to include those other purposes, and the court said, "Forget it." That issue now is on appeal to the Colorado Supreme Court. Basically how many years after the final decree can you amend your claims? This amendment issue is going to be a real barn burner. All the private parties have blood pressure through the roof, and the feds, Department of Justice folks, find it may be the only way to escape some pleadings that were drafted in the early days of reserved rights before anybody had any reason to understand the way it was going to go.

Rybachek: Under the 1872 Mining Law, has anybody addressed the reservation for water that goes with the federal claim?

White: That's a section 497 argument. It was raised in Colorado, and was ruled on by the lower court favorable to the mining industry. The Colorado Supreme Court, as I recall, either dealt with it in sort of a back handed way, or else said, "There aren't any instream flows, we aren't going to worry about it." It is one of those issues that dropped out because it was no longer important.

Wanamaker: Two chief concepts of "minimal" and "entirely defeated", who decides what are minimal needs, and if the purpose is not entirely defeated? If I were an Indian, I would be very worried. Is it the national forest or state court?

White: The Forest Service decides what it is going to claim. The state court or the federal court makes the eventual decision.

Meacham: We've had an ongoing concern in Alaska about the state being the only agency that can bring about a basin-wide adjudication. I know Charlie Roe in Washington state has complained about the fact that a lot of private parties have brought basin-wide adjudication on basins that are not very important from the state standpoint, but the state gets drawn into the litigation and spending a lot of money. Are you aware of any state legislation that absolutely precludes anybody but a state agency to adjudicate basin-wide?

White: Wyoming has. It's fairly explicit. It says, "The Attorney General acting upon the direction of the governor shall...". That's the kick-in clause in that particular amendment to the Declaratory Judgements Act.

Meacham: The Senate Bill 150 that has been introduced here says, "The Commissioner of Natural Resources shall initiate...". If it is discovered there are fed ral reserved rights within that basin, then it moves into judicial mode.

White: I wonder if you have an administrative adjudication, and later the United States comes up with a reserved rights claim, you are going to have to go back and do a judicial anyway, because the administrative adjudication in the Pacific Live Stock case isn't going to be one of those things the United States is bound by. It's not a suit. So I would worry about the necessary judicial character of the suit under the McCarren Amendment in your drafting on 150.

Meacham: I think it's designed so that as soon as there are any federal reserved rights identified that it would go judicially. There may be some smaller discrete basins in Alaska where there wouldn't be a federal reserved right identified at all.

White: Let me say something about the Sierra Club case, the Block case. I think you have a copy of Judge Kane's decision. He has a pretty good feel for reserved rights legislation. What happened was the Sierra Club came in to state court and asked they be allowed to intervene in the adjudication of the United States claims. The state court said, "Go away, you're too late, even if you had standing." Then they brought the action to the federal district court against the United States for failure to assert the claims to the wilderness area. The interesting question is, let's assume that the U. S. district court said, "Yes, the federal government should have asserted those claims." The Colorado court said, "It's too late to assert those claims," what's the net result? That's the probable outcome.

Meacham: I can see that happening also in the context of Indian rights where the federal government may fail to assert rights on behalf of an Indian or native. I assume the remedy there, if the state court adjudication has been completed, would be a court of claims money damages.

White: The tribes tried to come in and reopen Arizona v. California to assert additional claims. The U.S. Supreme Court said, except for some issues that were expressly left open the first time around, "Go away." So I suppose that court of claims approach may be the approach. That's been rumored in the Wyoming case. In the Wyoming case, the Indians received state water rights in 1905, which would give them the most senior priority on the stream to irrigate 150,000 acres of land. Those basically were surrendered by the United States. They were obtained with money derived from sale of Indian lands. They sold Indian lands, took that money, acquired state water rights to irrigate 150,000 acres, senior most water rights in the stream, then abandoned those water rights to seek federal reserved rights. They got federal reserved rights to irrigate 100,000 acres. The suggestion has been that the tribes do have a court of claims claim.

Now if you want to find some interesting reading, take a look at the United States briefs in the court of claims on these kinds of cases. All of a sudden where the United States has been claiming pretty substantial amounts of water in the adjudication, when they are defending, all of a sudden "minimal needs" and "entirely defeated" and "moderate standard of living" pop up and they say, "Look, these guys weren't entitled to any water anyway." It's fun to take the court of claims briefs and use them in the adjudication.

Meacham: What was the strategy behind abandoning the senior appropriative rights and planning federal reserved rights?

White: I don't know. They started out with about 150,000 acres worth of water rights. Then about 1965, which was two years after Arizona v. California, they abandoned about 60,000 acres worth of water rights. Those were water rights which had never been developed. The State Engineer of Wyoming had granted a series of 5-year extensions to keep those water rights alive. In the Wyoming system, you obtain a permit and make your appropriation, and after you actually divert the water and apply it to beneficial use, you get a certificate. Permits had been issued in 1905 but never certificated. So 5-year extensions have been given. In 1965, the United States refused them to extend them. The State Engineer wrote them a letter saying, "Please extend, they are going to be abandoned if you don't extend them." The United States just didn't answer. They abandoned them. They had roughly 90,000 acres left under state rights for which they claimed only 50,000 acres of reserved rights, and the rest of the reserved rights claims were for future projects. They left out about half of the actual use on the reservation, and then the district court cancelled all the state water rights that were overlapped by federal reserved rights.

Meacham: Sounds like some of the federal lawyers are cutting their water law teeth on that case.

White: It's easy to jump on the Dept. of Justice lawyers, but they are in an impossible situation; they get very little cooperation from the agencies sometimes, especially the BIA. The state has all the advantages. When talking about a well coordinated litigation effort and negotiation effort, the state has the advantages. It's an impossible situation for the feds. That's why you will hear time and time again, let's negotiate.

Montana is a wonderful example. Somebody asked this morning how many actual settlements had come out of the Montana negotiation? The answer is zero. The way that was set up, when Montana started their adjudication process, everybody had to file their claims by a certain date. Excused from that filing requirement were claims by the United States and the Indians as long as there were negotiations going on. So they began negotiations, were excused from that, but the negotiations had to be finished by a certain time. If the negotiations weren't finished, that time was extended. It's about to run out. I think its been extended yet again. The great question asked after the Western States Water Council meetings, "How many water rights have you got quantified by negotiation?" I think it's fair to say that among the ongoing activities, only Wyoming for the non-Indian claims got any quantification by negotiation.

Christopher Estes, ADF&G: While the status of the basin is unknown, what happens to the people that haven't appropriated water that are standing in line? Is there a moratorium on appropriations?

White: What happens to those people in the state system that are trying to get into the system? A good question that also applies to SB 150. In Wyoming, we desperately tried to get the Board of Control, which is the

senior state agency--it's a constitutional agency for adjudication of water rights--to be the master, because the State Engineer issues permits, and the Board of Control, which is made up of all the division engineers plus the State Engineer, issues certificates. We wanted that state system to keep going, so there wouldn't be the kind of interruption that you have suggested by your question. We suggested to the court that the state Board of Control be the master. The United States and the tribes came absolutely unglued. We tried it four times before we learned that we weren't going to get any state agency as the master. The latest was about two months ago.

It's absolutely clear that in terms of politics of litigation we are going to have complete agreement on the advantages of the master or its going to be a real fight, and we're not going to have a state agency as a master. If you don't have a state agency as a master, how do you deal with continuing business under the state system? We concluded that it was an adjudication and therefore any changes in permits and certificates need not be brought before the court. The state administrative apparatus could continue to deal with those. Then the question came up whether the State Engineer could issue new permits. We said, "Yes, he can do that because the adjudication doesn't take place until you get a certificate." Under Wyoming law you can divert water without going to jail if you have a permit. It's not necessary to go on to the certificate. So as a practical matter we let the system go on but we just never let the Board of Control deal with certificates in the adminstrative adjudication of water rights. We said all adjudication issues are before the court. Extensions were freely given.

Estes: (paraphrase) Can I get a copy of the transcripts of these presentations on federal reserved rights?

White: I want to make it clear that it was John Hill from the Dept. of Justice that was speaking this afternoon.

Commissioner Wunnicke: (paraphrase) Yes, our staff can supply you with copies...(unintelligible)

White: Yes, there were that kind of inholdings. The reservation was originally shaped like a big square. The river comes through like this, the Wind River, and the Little Wind comes in like that. In 1905--remember I said the Indian lands were sold--those Indian lands were everything north to the river, the big lands, and everything east to the Little Wind. The tribe essentially ceded those lands to the United States and the U.S. then sold some of those lands and gave the money to the Indians. The lands that were not sold in about 1940 were restored to the reservation. The red and blue dots on those maps are water rights obtained by non-Indians under state law after the session. In addition, once this became Indian reservation through the Birch Act, individual Indians could obtain their own lands and deeded allotments. Those allotments ought to have ....(unintelligible).

Ross Cavanaugh, NPS: (paraphrase) What is the history of the expressions "minimal needs" and "entirely defeated"? I'm wondering whether those words and phrases have been set in concrete.

White: I plagerized those words from the U.S. Supreme Court. This line of cases started in 1976 or 1977 with the Cappaert case that Bruce mentioned this morning. Whether its labor law or whatever field of law you think about, the pendulum swings back and forth, and by the mid 70's, the pendulum swung about as far as it was going to go, at least in current history on behalf of reserved rights.

(unintelligible) The Cappaert case was the turning point. As Bruce described in the Devil's Hole National Monument portion of Death Valley...(unintelligible). Some people by the name of Cappaert put in a well over here on their land. They had a state water right and what made it particularly frustrating to the Cappaerts, they had only just acquired that land that the well was on, they had made a trade with the federal government. As they began to pump water out of that well, the cone of depression began to spread and pretty soon the water level in that limestone cavern began to drop to the point where it affected the vegetation on this little ledge that was the spawning ground for those fish. Without the vegetation, the fish wouldn't spawn and they'd disappear. As a matter of fact, Harry Truman's executive order setting aside the land, in 1952 or 1956, said it was not only the land but the water that was set aside so they had an expressed reservation.

Everybody was surprised by what the court did. The United States came in and got an injunction against the Cappaerts. The district court says "Thou shalt not pump". It got to the U.S. Supreme Court and something different happened that meant a lot. First of all the U.S. Supreme Court says, "We never before held and we're not holding now that the reserved rights applies to ground water." If that isn't ground water, what the hell is? The Supreme Court says, "It's a surface pool, it may be a subterranean cavern but its a surface pool." Everybody laughed and giggled about that. The United States cites it as a case for reserved rights applied to ground water and now everybody else points out the language and says, "No, it doesn't apply to ground water." It's one of those laughers in the area of law.

The most important thing was that the United States sought to totally curtail pumping so long as it had any effect on the water level in that limestone cavern and the Supreme Court said, "No." It said that there is a little copper washer on the side of the cavern and as long as the water level is a certain distance from that washer there is going to be enough plant growth there for the fish to survive. So the injunction was modified to read that the Cappaerts were enjoined from pumping only if their pumping resulted in the water level dropping below a certain point..."minimal needs". The United States wasn't entitled to maintain the pool in the cavern, only enough to keep that vegetation growing for the fish.

That's why when you throw up your hands in despair over national parks or whatever as may be requiring a pristine environment, think about Devils Hole, because there the United States tried that and they didn't get it. They got just a minimal amount, enough necessary to preserve that breeding ground. If the breeding ground had been much further down there wouldn't have been much water required.

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The catch to your materials are, as Larry kindly provided, the executive order statutory provisions applying to the Kenai National Wildlife Refuge. It's interesting to compare the purposes there. On the executive order you see that it's reserved for the purpose of protecting the natural breeding and feeding range of the giant Kenai moose. That was set aside to protect the pup fish. Lest you get excited when you are told that wildlife refuge has to be maintained in its natural condition, remember the pup fish.

Meacham: There's another point there...I suppose you could argue that the preservation of moose habitat dates from 1941, preservation of dall sheep and other habitat dates from 1980...

White: That's exactly right. If you didn't make that argument you should be disbarred. Here's the 1941 reservation by executive order, and another 250,000 acres was added to it in 1980. We got a portion of this reservation with a 1941 priority date, a portion with a 1980 priority date, and compare the purposes in the executive order and the purposes set out in the 1980 statute and you'll see that they are different. The purposes set out in the 1980 statutes get a 1941 priority date only if there is exact correspondence between the 1941 and the 1980 purposes. Otherwise if the new purposes don't correspond with the old purposes, they get a 1980 priority. One of the things I was going to do if I had time was sit down and go through this thing.

Craig Lynd: A question on this subterranean water thing. Did the court make the distinction between the amount of water to protect every last fish, or to protect a portion of the population?

White: They didn't talk about it in terms of what portion of the population they were going to protect, just in terms of protecting that spawning area. I suspect if there had been evidence that there were other lichens lower down, then the court might have dealt with it. But this is the only one, so really it was a double or nothing issue for the Court. The only way that ..(unintelligible)..that impact was that the pool doesn't have to remain full. It can drop down till it's just about to the critical point.

Meacham: I assume its also significant in that case that the Devil's Hole pupfish was an endangered species and this was the only place it is known to inhabit, that if any of them died, it would have a material effect on the viability of the remaining population.

White: What the Court did was say we have an expressed reservation of water here to maintain this population of fish. We are going to honor that reservation but only to make sure it is not entirely defeated, give it minimal amount of water necessary.

Vanderbrink: Does any of this affect the National Park Service, expanding the Kenai National Wildlife Range to include the Tustamena Lake and are they about the close down the ADF&G enhancement hatchery there because things have to be left in a pristine condition?

White: I don't know. (Unintelligible comment)

Estes: (Unintelligible question re Wyoming and Colorado water rights systems.)

White: Remember there are two versions of the prior appropriation doctrine in the American west. One is called the mandate version where it is strictly a court operated activity, and the other is called the permit version where it is a state administrated entity. In Colorado (this is a lie, but it's about 99 % true) administrative agencies have absolutely nothing to do with granting water rights. You get a water right by going out and diverting and using the water and then you go to court and get a confirmatory decree of your appropriation. The system of water courts continue in business. Each year is a new adjudication. Business continues as usual. Each year water rights that are granted based on applications filed in that year are junior to applications in previous years, so the United States really doesn't care. The traditional general adjudication that used to occur in Colorado and now is occurring in Wyoming, so long as you file your claim during the tenancy of that adjudication, you take your place depending on your date of appropriation and then everybody that files a claim on the next adjudication, if there ever should be one again, God forbid, will be junior regardless of their date of appropriation. The problem in Wyoming is that the first adjudication stayed open so long that it had chilling effect on state administrative action. In Colorado you didn't have the same problem.

Dutton: In Alaska there are many areas where there are basins involving federal reservations (unintelligible). Do you see any particular advantage in being hasty in adjudicating those reserved rights?

White: No. The one exception to that is where the state has identified a major water development project that is going to require quantification of all water rights before you can decide whether you want to go ahead with it. There may not be any water right associated with that future project. That was the big bugaboo in Wyoming that we worried about and had to create a state reserved water right for.

Dutton: We know that a number of federal agencies are either quantifying or thinking about quantifying instream flow reservations. Under Alaska law, instream flow may be reserved for recreation, navigation, wildlife habitat, and water quality purposes. Can you offer any precautionary guidelines in adjudicating applications from federal agencies for instream flow reservation under state law where instream flow reservations needed for reserved rights under the purposes of the reservation are involved? In other words, we are not adjudicating federal reserved rights. We have an obligation for, say, habitat when that's not the purpose of the reservation.

White: The question is when you have an opportunity, should the state create an instream flow water right rather than forcing the federal government to do it? I think that's a question of state policy. If the state wants to encourage instream flows for specific purpose, it should go

ahead and do that and not figure that the United States ought to do it's dirty work for it. On the other hand if it doesn't, it ought not to be doing the United States work for it.

Dutton: Is there anything we could do that would protect the state down the road when we get to the point of having to adjudicate the federal reserved rights where we have already managed instream flow reservations for other purposes to that particular agency?

White: Under state law?

Dutton: Yes.

White: I guess I'd answer it the same way. State policy to encourage, do it yourself instead of depending on the feds to do it. If later on you get in a bind you can't point to the feds though.

Dutton: This is what we were getting at this morning. Am I confusing the issue?

Meacham: One advantage would be you if could give the federal government some assurance of protection and at the same time you wouldn't have to be adjudicating basin-wide and you wouldn't have to involve other appropriators except to the extent they might have priority over the instream flow if they previously filed.

White: Under normal circumstances is it an administrative process for state reserved stream flows?

Meacham: Yes.

White: If I were the federal government I'd say, "I appreciate your motives but what have you done for me lately?" Because administrative procedure isn't going to have any lasting effect. If push comes to shove down the road you've got to have an decree. An administrative order is utterly worthless vis a vis the United States.

Meacham: Unless in this situation the instream flow granted in 1985 is really not materially different than what we have been granted by a reserved right claim as of a 1980 priority.

White: There's another aspect of that which we ought to speak of privately.

Rybachek: That's very nice that we should take concern for the federal interest here. You've mentioned lots of money here and the state is always coughing up the money. It's a federal reserved right and it seems appropriate to me that if the federal government wants the reservation, they should foot the bill. There hasn't been any discussion along that lines.

White: Litigation isn't free for the feds either. They had a tag that's roughly comparable to the state in Wyoming. The question came up earlier in the Wyoming litigation about who was going to pay for the master. I don't know how it is in Alaska, but in Wyoming, retired Congressmen don't come cheap. We had to pay that rascal by the hour-- not only him but his 18 assistants. The best we were able to do was to get a court order that the United States pay half the master's fee. They paid it under protest.

Rybachek: Seems like they're only paying half of the bill because it's a federal issue. There was no problem in the areas prior to the federal reservation and the adjudication is required due to the reservation. If this reservation delineated out for the purpose of the withdrawal, they should pay for it. Or the users of the withdrawal should pay for it through a user's fee. Somehow the taxpayers of the state shouldn't be footing the bill for the federal government.

White: There are two problems. First, the McCarren Amendment prohibits the assessment of costs against the United States. They said, "You can make us a party, but don't expect us to pay for the refreshments." The question comes up, what are costs? Colorado, under the old approach, each party had to pay a prorata portion of the cost of the adjudication depending on how much water they received. The United States was assessed with costs based on roughly that approach. Costs may apply to experts' and attorney's fees, but it doesn't apply to the fundamental cost of administering the adjudication. Unless you have a process by which every water right claimant is tagged for a portion of the cost of adjudication, you are not going to be able to stick the United States for that under the McCarren Amendment.

Vanderbrink: I hate to stop this, but if I don't we'll be in trouble down the road. This has been one of the most interesting testimonies I have heard in a long, long while.

Alaska Water Resources Board
Recommendations for changes to
SB 150 "An Act making miscellaneous
amendments to the Alaska Water Use Act."

Although the following proposed changes to SB 150 may not be procedurally correct, the Alaska Water Resources Board requests that the Senate Resources Committee review the substantive changes requested in this document.

The State of Alaska is in need of a workable and systematic water adjudication system. This Board therefore supports the basic principles espoused in SB 150. We do, however, have some reservations about the present draft as it relates to notice requirements and water appropriation abandonment. The Board makes the following recommendations:

I. Delete Section 46.15.140(d) and replace it with Section 46.15.145(g) which would read:

> "A state agency may not abandon or forfeit an instream flow certificate in whole or in part except after public notice."

II. Add a new subsection to AS 46.15.165 to read:

> "AS 46.15.165(c)(c) serve The Alaska Native Village and Regional Corporation whose lands fall within the adjudication area."

III. Add a new sub-section to AS 46.15.166 to read:

> "AS 46.15.166(a)(3) by any person or party asserting a federal reserve water right."

Although these are the only recommended changes of the Board, we would like to point out one section of SB 150 that may have the potential to create future problems. This section is AS 46.15.165(d) as it applies to native allotees served under AS 46.15.165(c)(3).

This board recognizes that one of the primary purposes of SB 150 is to create an adjudication system which satisfies the requirements of the McCarren Amendment 43 U.S.C. Sec. 666, thereby providing for state adjudication of federal reserve water rights. Federal agencies have the resources and responsibility to assert and defend their reserved water rights. This state should not be responsible for a federal agency's failure to assert its rights.

The Bureau of Indian Affairs (BIA), as trustee, has the primary responsibility of protecting a native allotee's property interests in a native allotment. It has been suggested, however, that because of any number of reasons, such as the vast number of allotments in the state, other BIA priorities, the failure of the BIA representatives to properly judge the significance of a water adjudication to the allotment holder, inadvertent ommissions, etc., federal reserve water rights which may be a legitimate property interest of the allottee may be forfeited due to BIA failure to assert water right as required in this subsection.

If a pattern of forfeitures of federal reserve water rights on native allotments does emerge as a result of this subsection, it is this Board's recommendation that the state's position should be flexible enough to assure that the necessary amendments will be made to protect any legitimate rights of the native allottees.

We wish to make it clear, however, that this Board does not take the position that the state is responsible for asserting a federal reserve water right for a native allottee. Furthermore, we are not suggesting that the state is responsible for affecting any repairs that are necessary to correct an injury created by a federal agency's failure to perform its responsibilities.

The point that we wish to make is that native allottees are state residents. Any federal reserve water rights that they may be entitled to as an appurtanence to their real property, acquired pursuant to the Native Allotment Act, is a valuable and necessary property interest. Forfeiture of real property interests should not be taken lightly. The forfeiture of a legitimate property interest for a failure to respond to service in a timely manner as required by this subsection is a drastic action and should not, therefore, be taken lightly.

Although we are not suggesting any changes to this subsection at this time, we do wish to demonstrate to the Senate Resources Committee that this subsection may have serious consequences to an identifiable group of longtime Alaska residents and not just to the myriad federal agencies which manage numerous and vast federally withdrawn lands.

Meeting Summary
ALASKA WATER RESOURCES BOARD
Juneau, Alaska
March 5-8, 1985

The Alaska Water Resources Board held their spring meeting March 5-8, 1985 in Juneau at Centennial Hall.

Board members in attendance were:
David Vanderbrink, Chairman, Homer
Peg Tileston, Anchorage
Wayne Westberg, Anchorage
Tom Meacham, Anchorage
Alan (Mike) Neimeyer, Anchorage
Stan Rybachek, North Pole
Cyril (Randy) Wanamaker, Juneau

March 5, 1985

David Vanderbrink, Chairman, called the meeting to order.

Esther Wunnicke, Commissioner of the Department of Natural Resources and the Board's Executive Secretary, summarized the status of Resolutions 85-3 through 85-8 which were drafted at the October 1984 Water Board meeting:

°85-3 Village Safe Water Program: The commissioner is requesting DNR's Water Management Section to draft a Memorandum of Understanding to the Department of Environmental Conservation by April 1, 1985 requiring recipients of grants under the village safe water program to apply for water rights in accordance with AS 46.15.

°85-4 Water Board's Budget: The resolution requested that the Governor place the Board's budget in the Governor's budget and include $20,000 for travel and per diem for FY 86. The FY 86 budget request was too far advanced for this change to be considered, but the Governor may want to consider it for FY 87. The DLWM budget for FY 86 includes $12,500 for Water Resources Board and staff travel.

°85-5 Dam Safety Program Funding: The DLWM has requested $134,000 for 20-25 dam safety inspections in the Department's FY'86 budget proposal.

°85-6 Western States Water Council Representatives: DNR has sent a memo to the governor proposing the designation of DEC and DNR commissioners and the Attorney General as Alaska's official representatives to the Council. The Governor has also been requested to present the welcoming address at the 79th quarterly meeting in Anchorage.

°85-7 Water Resources Planning and Data: The Water Management Section staff is participating in DNR's land and resource planning efforts, and will be meeting with local planning staffs and zoning commissions. Contractual agreements between DNR and USGS have been reviewed for the collection and dissemination of water use data for 24 communities statewide.

° 85-8 Fritz Creek Watershed Proposal: The DLWM's Southcentral Regional Office has rejected the University's application for grazing leases in the Fritz Creek drainage, and will convey the land to the Kenai Peninsula Borough for the purposes of protecting fish and wildlife habitat and future municipal water supplies. Thirty-one appeals have been filed against DLWM's Regional Office's decision requesting habitat and watershed protection. A public hearing is scheduled in April.

Other opening business included scheduling Board member elections for Thursday, March 7.

L. A. Dutton, Chief of the DNR Water Management Section, summarized DNR's recent efforts to address water related issues. The Board expressed concern in the following areas in response to Dutton's presentation:

1) The number of residential and non-residential water rights applications received during 1984;

2) The role the state is taking towards adjudicating federal reserved water rights;

3) The number of valid appropriations which may be affected by federal reserved water rights.

Bruce Landon of the Department of Justice addressed potential conflicts arising from federal reserved water rights, and briefly outlined an approach Alaska may follow for their adjudication. Two major conflicts associated with federal reserved water rights are: 1) uncertainty in evaluating available water resources due to the presence of unquantified federal reserved rights; 2) inconsistency between state law and the purpose of federal reserved water rights. Senate Bill 150 provides the state with a mechanism for adjudicating federal reserved water rights in the state court under the procedures established by the McCarren Amendment. The steps recommended by the Department of Justice for the adjudication of federal reserved water rights are:

° Establish a mechanism where the state court can utilize the McCarren Amendment to adjudicate federal reserved water rights,

° Clarify the lines of jurisdiction,

° Determine and define the primary purpose(s) of the federal withdrawal,

° Gather the information necessary to quantify the federal reserved right.

Michael D. White, water law attorney, Denver, Colorado, opened his discussion regarding federal reserved water rights by defining a reserved right as being the amount of water necessary to meet the "minimal needs" of the reservation so that its primary purpose is not "entirely defeated".

White stated that this definition will be used by the courts as the criterion in determining the magnitude of a federal reserved right. He also stressed the value of developing a model based on water resource data and existing appropriations to evaluate the impact of reserved right claims submitted by the federal government. White made the following recommendations for facilitating the adjudication of federal reserved water rights in state court.

1) Make sure you have an adequate statutory basis with which to utilize the provisions in the McCarren Amendment.

2) Determine both personal and subject jurisdiction; and clearly define all issues.

3) Decide on a state litigation strategy.

4) Hire individual consultants rather than consulting agencies for technical assistance; and appoint a coordinator to manage all consultants.

5) Identify existing reservations, their priority dates, and their boundaries within the affected basin, and their primary purposes.

6) Develop a model that incorporates inflow of the system; all the state water rights; existing water use patterns, including depletions to the system, diversions, and return flow; and administrative assumptions.

7) Serve personal notices to all indviduals who may be affected by the adjudication; and keep private parties involved throughout the litigation.

(Complete transcripts of the presentations on federal reserved rights are available upon request.)

Paula Burgess, Regional Manager of DNR's Southeast Regional Office, briefed the Board on the Indian River basin-wide adjudication.

The original request for basin-wide adjudication was submitted in September of '83, followed by a review of DLWM's procedures and legislation proposed for adjudicating federal reserved water rights by the Attorney General's office. The Assistant Attorney General responded in March of 1984, with these findings:

1) The existing procedures for handling federal reserved water rights were inadequate;

2) The proposed legislation addressing basin-wide adjudication was sound, and should be introduced at the next legislative session;

3) Although existing policies and procedures were inadequate and legislation on basin-wide adjudication had not yet been passed, the DLWM should initiate basin-wide adjudication in state court. The Alaska Declaratory Judgement Act would provide the basis for state court adjudication of federal reserved water rights under the McCarren Amendment.

At the request of the DLWM, the DGGS and the USFWS initiated hydrologic and instream flow studies, respectively, in 1984. The DGGS completed the hydrologic investigation in January, 1985, and the USFWS instream flow study is scheduled for completion Fall, 1985.

All water users and parties to the adjudication will be notified of a public meeting pending the completion of the USFWS instream flow study.

Bill Ross, Commissioner of the Department of Environmental Conservation briefed the Water Board on DEC's role in addressing water quality problems in Anchorage as well as those resulting from placer mining statewide. Ross emphasized DEC's efforts and intentions to work with the municipalities and miners on water quality issues.

Specifically, DEC personnel will be collecting water quality samples in Anchorage and Eagle River, and will work closely with the municipalities in identifying pollution sources and planning for water and sewer needs. DEC is focusing on the water conflicts caused by placer mining, and plans to review EPA's permit effluent guideline process and revise DEC's enforcement policies. These will be presented next month at the Placer Mining Conference.

Jerry Madden of the Fisheries Rehabilitation and Enhancement Division (FRED), DF&G, briefed the Board of the progress and problems encountered in developing fish hatchery sites in Alaska. In response to the low salmon runs that occurred in the early 1970's, the Alaska State Legislature enacted legislation to promote and encourage fishery enhancement. Provisions of this legislation included:

- Private non-profit corporations could obtain permits from the State to run hatcheries.
- Regional aquaculture associations, private non-profit corporatons comprised of representatives of fisheries user groups, were allowed to raise funds for fishery enhancement projects.
- Comprehensive planning teams, comprised of members of aquaculture associations and representatives from state agencies, were established to assess fishery needs and to create fishery enhancement plans.
- A loan fund was established to assist private non-profit corporations in building hatcheries.
- Aquaculture associations were given preference rights to hatchery sites.

Under this program, 22 permits for hatcheries have been issued, 24 applications have been denied, and nine are pending. There are currently 14 hatcheries operating and having return runs.

In developing plans for hatchery sites, one common mistake that has been made by private corporations and state agencies is an inadequate evaluation of the available water resources. This problem has been exacerbated in recent years by the increased economic pressure to produce "money" fish,

such as coho, sockeye and chinook salmon, which require large amounts of water for rearing; and by political pressure to get projects on line as quickly as possible. Conflicts inherent in the state law have also produced difficulties in setting up hatcheries. Three case histories from Southeastern Alaska were discussed to illustrate these points:

- Salmon Creek Hatchery, Juneau (Northern Southeast Aquaculture Association) -- This hatchery project had to be abandoned when deals with prior appropriators to utilize some of their water fell through and adequate water supplies could not be obtained.

- Armstrong-Keta, Incorporated Hatchery, Port Armstrong (private non-profit group) -- This hatchery project developed in an environment of strong political pressure; thus there was an inadequate assessment of available water resources and the instream flow requirements of the native fish population. The native fish may suffer as a result.

- Medvedjie Hatchery, Sitka (Northern Southeast Aquaculture Association) -- A success story. Instream flow requirements were considered early in the planning process; and an extensive hydrologic data collection program was undertaken to define the virgin flow. Negotiated agreements on hatchery requirements vs instream flow needs are being arrived at cooperatively by agencies and the Association.

PUBLIC COMMENT SESSION

David Vanderbrink called the Public Comment Session to order, and invited members of the public to comment on water related issues and on the Board's activities. The following is a summary of the major points presented by the public, and is not a verbatim transcript of the testimonials received.

Ray Renshaw, President, Alaska Miner's Association, Juneau Chapter, requested the Water Board to do everything possible to address and resolve water issues affecting placer mining before the industry is wiped-out.

Del Ackels, placer miner, addressed the Board regarding proposed amendments to 18 AAC 70.020. Generally, Ackels requested review of the "acceptable" dissolved solids standards and "water supply" definitions for consistency between statutes. He also sited inconsistencies between stream classification and management. For instance, Ackels suggested that not all water be arbitrarily implied as drinkable. If water is drinkable, it should be certified and managed as such. Likewise, recreational waters should be identified and managed to accommodate recreational uses. Ackels also requested the Board use its influence to eliminate turbidity as a water quality criteria in EPA's Placer Mining Standards, and suggested that settleable solids criteria be used instead.

Phil Holdsworth, the first Commissioner of the Department of Natural Resources, pointed out that EPA is the agency enforcing water quality standards, and DEC is the agency which establishes those water quality standards. Therefore, if water quality standards are to be changed, it must be done through DEC -- not EPA.

Bob Cacy, placer miner from Circle, stated there are many arsenic and turbidity problems associated with streams in the Interior, and that all streams are set at drinking water standards, implying they are of drinking

water quality. Not only does this jeopardize public safety, but it also precludes any type of industrial use of those streams. Cacy expressed the need to change existing turbidity standards to reflect uses other than drinking water, and to identify streams having drinking water quality.

Rose Rybachek, President of the Livengood-Tolovana Mining District, said that the placer mining industry is in danger of being regulated out of existence. She urged that the State consider a basin management approach, promoting accelerated mining in certain districts and then reclaiming the mined areas and affected streams after the gold resources are extracted.

Christopher Estes, Department of Fish and Game, put in a plug for interagency cooperation on water resource data collection programs. He also stressed the importance of having the Department of Fish and Game actively involved in the Western States Water Council.

March 6, 1985

Chairman Vanderbrink called the meeting to order.

The first scheduled speaker was Bob Martin, Special Assistant to the Commissioner of DEC, who was to give opening remarks. He was unable to attend the meeting, however, due to last minute scheduling conflicts. Instead, L. A. Dutton requested that Gary Prokosch, Water Officer of the Southcentral Regional Office, give the Board an update on Southcentral Region water related operations.

Gary Prokosch briefed the Board on the activities of the Anchorage Waterways Council, a committee composed of Federal, State, local officials, and representatives of private and community organizations. The Council was formed by Mayor Knowles to address the growing water quality problems within the Anchorage Bowl. Mayor Knowles requested the Council to provide recommendations for pollution prevention and mitigation by March 31, 1985. The Council:

- Has identified and prioritized the streams within the Anchorage Bowl by current water use patterns and by susceptibility to water quality problems.
- Has recommended appropriate water quality sampling strategies.
- Is training volunteer "stream walkers" to collect water samples for water quality testing.
- Has recommended strengthening Title 21--the Municipal Planning and Zoning ordinances.
- Is advocating the designation of a Clean Water Day to promote community awareness and involvement.

Gary promised to keep the Board informed as to the final recommendations of the Council.

Randy Bayliss, Department of Environmental Conservation, discussed DEC's efforts in studying the effects of placer mining on water resources. Mr. Bayliss opened by summarizing the following:

- Proposed regulations to address the problem of two drinking water standards;

- DEC is currently involved in a turbidity review study; 3) DEC is working towards establishing an enforcement policy on priority streams;

- DEC is working on updating the Triagency application; and

- DEC will be accepting proposals for the utilization of 205J grant monies for placer mining research projects.

Also discussed were state turbidity standards which were adopted in 1972, and their impact on fish, recreation and industrial development. Bayliss stated the state's standard for placer mining is 25 NTU, which is one of the least stringent standards in the country. Reclassification of the state's waters does not promise much relief from stringent standards and may cost between $5,000-35,000 to reclassify each stream. However, the state is hoping technological improvements, placer mining demonstration grant programs, and site specific management and planning will help minimize negative impacts of mining on water resources. The EPA's proposed new effluent guidelines for placer mining are scheduled to be released in mid- April for public comment and to be finalized by April, 1986.

Don Finney, Project Manager at the Quartz Hill Project, Ketchikan, for U. S. Borax, and **John Paulsen,** Principle Engineer provided the Board with a brief history of the Quartz Hill Project and an overview of environmental studies done to date. When the mine is in full operation, it will produce 80,000 tons of ore per day and be operated 365 days per year, 24 hours a day. A work force of about 800 people will be required. These will be housed in Ketchikan. The expected lifetime of the mine is about 55 years.

There have been three major logistical hurdles in developing the deposit:

1. Power supply: Currently, the favored power option is an intertie to British Columbia hydropower projects. U. S. Borax and APA are exploring the idea of bringing in power to Quartz Hill, Ketchikan, Petersburg, Wrangell, Juneau, and perhaps Whitehorse.

2. Waste Disposal: The mining operation will produce an open pit approximately 1 1/2 mile long, 1 mile wide, and from several hundred to about 3600 feet deep. Waste rock will be disposed of in two nearby drainages. Settling ponds will be utilized to treat runoff from tailing piles and groundwater pumped from the pit. Ore will be conveyed through a four mile tunnel to a concentrator plant. Mine tailings will be disposed of either in Boca de Quadra Fjord or in Wilson Arm. Studies are ongoing to:

   - Determine the volume of tailings
   - Determine the impact of tailings disposal on biological resources
   - Run computer simulations of tailings behavior
   - Complete oceanographic surveys of the proposed disposal sites

   Reclamation of the site folowing closure of the mine will include revegetating the tailings piles and allowing the pit to fill with water forming a lake.

3. Water Supply: The water requirement for the mine when it is in full operation will be 30,000 gpd. Some of this water can be recycled, reducing the demand to 17,000 gpd. Several water supply options are being investigated. Currently the favored options include construction of a water supply reservoir on Tunnel Creek and supplementing this with a well field on Wilson River.

An instream flow study has been conducted by the U.S. Fish and Wildlife service under the auspices of the U.S. Forest Service to determine the impact of the well field (infiltration gallery) on salmon incubation in Wilson River. A report summarizing the results of U.S. Borax's water supply studies will be available in April. The Board requested that copies of the report be provided to them through L. A. Dutton.

Ned Farquhar, Special Assistant to the Commissioner of the Department of Natural Resources, spoke for Neil Johannsen on HB 93, the proposed Recreational Rivers Bill. Passage of the Bill will enable special management of rivers having high recreational values by creating a statewide recreational river system. The intent of the Bill is to retain specified rivers and their corridors in public ownership so they can be managed primarily for the protection and maintenance of fish and wildlife habitat and recreational values. Other compatible consumptive resource uses such as timber harvesting, sand and gravel extraction, and provisional access are also allowed under HB 93 — providing such consumptive uses are compatible with the intent to protect fish and wildlife, water resources, and recreational values.

HB 93 is currently being revised to accommodate objections from the Matanuska-Susitna Borough regarding the inclusion of priority rivers as part of the state park system. In response, Governor Sheffield has agreed to dedicate the rivers under the management authority of the Division of Land and Water Management. Under the proposed special management system, the following policies will apply.

- No land disposals or future mineral entry will be allowed within the designated river corridors; (Note: Directional drilling may be permitted from outside the river corridors.)

- The state must quantify and apply for minimum instream flow reservations necessary to maintain the management intent of the designated rivers.

The original bill includes specific management proposals identified through the Susitna Area Plan:

- Legislative designation of the following rivers to be managed as part of the Recreation River System:

  Lake Creek
  Little Susitna
  Talachulitna
  Talkeetna
  Moose Creek
  Kroto Creek

- The proposed legislative designation includes a mile wide corridor along the identified streams which encompasses a total of 220,000 acres of state owned land.

- The Matanuska-Susitna Borough has agreed to dedicate Borough owned lands lying within the specified corridors to management similar to that outlined in HB 93.

Liz Baron, Natural Resources Officer, Division of Land and Water Management, presented the Water Management Section's approach to developing a comprehensive water management program which encourages the consideration of water resources in land use planning and decision making processes.

The approach outlined calls for improving inter-agency coordination, and focusing existing water inventories and planning efforts to better assist state and local governments in water resource planning and management decisions.

The proposed comprehensive water management program consists of three parts:

1) Data collection - prioritizing and coordinating federal/state water resource inventories to provide state and local governments with information necessary for wise resource management decisions;

2) Data integration - organizing and managing collected data in a format which is readily available for analysis and integration into the decision making processes;

3) Planning Processes - participating in planning efforts to ensure consideration of water resources in land planning and water management decisions.

Liz summarized how each phase can be implemented through Water Management's participation in existing state, federal, and local government programs. Such an approach directly addresses the Board's Resolution 85-7 which requests the Water Management Section to:

1) Develop a program to establish regular contact with planning staffs and planning and zoning commissions of Alaskan cities.

2) "Sell" its water data system and structure special studies so that they will be most timely and useful to the local decision makers.

Bill Long and Larry Dearborn, Division of Geological and Geophysical Surveys, gave a joint presentation. Bill started by pointing out that a reoccurring theme in the presentation to the Board during this meeting has been the need for data. He then gave the Board an update on the status of the Aware Plan. He attributes the cost effectiveness of DGGS programs to:

- Use of computer modeling,
- Use of state-of-the-art data pod technology,
- Cost sharing with Federal agencies,
- Efficiency and effectiveness of DGGS personnel.

He suggested that the Board should pass a resolution to the Governor emphasizing the importance of water management and data collection and urging that funding for these programs not be cut.

Larry Dearborn then gave the Board an update on the investigation of salt water intrusion at Auke Bay. Cooperative investigations with the U.S.G.S. were started in 1979, and two areas of salt water intrusion were identified. On the basis of these studies, DNR's Southeast Regional Office (SERO) began limiting the number of water rights permits issued in the troubled areas. In 1983, Auke Bay developers challenged SERO's authority to limit permits saying they didn't have sufficient data to support taking that stand. At SERO's request, DGGS started an update of the Auke Bay studies. Their objectives were to:

- Add to the data base,
- Determine well locations accurately,
- Visit key wells and run water quality tests,
- Collect water level data from wells throughout the area,
- Interpret the data to determine how much saltwater intrusion has taken place, where it's taken place, and where to expect future problems.

On the basis of these studies, DGGS has been able to make recommendations to DNR water managers concerning the potential for salt water intrusion with continued water extraction in the area. These studies are ongoing.

Larry then provided the Board with a summary of one specific study in the area--Indian Cove. The water table in the area has experienced approximately 100 feet of decline since settlement. DGGS has concluded that its bedrock aquifer is highly susceptible to salt water intrusion.

March 7, 1985

WORK SESSION

Resolutions: The Board drafted and passed the following resolutions:

- 85-09 - EPA National Placer Mining Standards
- 85-10 - Clean Water Act Field Laboratory
- 85-11 - Administration of Water Appropriation Permits and Instream Flow Application
- 85-12 - Recreational Rivers Bill: HB 93
- 85-13 - Water Management Staffing
- 85-14 - Dam Safety: SB 95
- 85-15 - Alaska Water Resources Board Funding

Letters: The Water Resources Board prepared two letters -- one proposing amendments to SB 150, and one requesting that the Office of the Governor urge the active involvement of the Alaska Departments of Natural Resources, Environmental Conservation, Law, and Fish and Game in the Western States Water Council.

Elections: Dave Vanderbrink's term as Chairman expired, and Randy Wanamaker was unanimously elected as Chairman, and Dave Vanderbrink as Vice Chairman.

Bylaws: The existing bylaws were adopted with an amendment of Paragraph 3 which now stipulates that a reasonable attempt must be made to reach each Board member when a meeting of the Board is to be held by means of telecommunications.

MEETING WITH GOVERNOR SHEFFIELD

Governor Sheffield met with the Board and discussed three issues: 1) Western States Water Council representation; 2) EPA placer mining standards; and 3) stream reclassification. Dave Vanderbrink opened the meeting by stating the importance of Alaska's continued involvement with the Western States Water Council, and requested a permanent representative be appointed to attend meetings. Tom Meacham raised the issue of the inconsistency between the EPA placer mining standards currently being developed and existing state placer mining regulations. The Board expressed the need for all concerned state agencies to review and prepare a unified response to EPA regarding the proposed placer mining regulations. The closing issue discussed was stream reclassification of those streams classified as drinking water quality [illegible]everal Board members expressed a concern that natural resource develop[illegible] may be pre-empted due to the minimum quality standards. Sheffield [illegible]owledged the Board's concerns by siting an ongoing study which is ev[illegible]g water quality standards; and sited water availability with regard to land disposals and community expansion as a water management issue also needing attention.

March 8, 1985

SENATE RESOURCES COMMITTEE MEETING

Arliss Sturgulewski, Chairwoman of the Senate Resources Committee, called the meeting to order. **Esther Wunnicke,** Commissioner of the Department of Natural Resources, introduced **Randy Wanamaker,** Chairman of the Alaska Water Resources Board, who presented a brief summary of the issues addressed at the March Water Board Meeting. Arliss Sturgulewski requested copies of the resolutions drafted by the Water Resources Board; and asked the Board to respond to SB 95. Wanamaker indicated that DNR will propose regulations intended to minimize the potential impacts of SB 95 on mining operations. **Bettye Fahrenkamp,** Vice Chairwoman of the Senate Resources Committee, expressed concern over state vs federal jurisdiction over dam safety regulations; and if DNR could handle the work load of dam safety inspection under current budget cuts. **Peg Tileston,** Water Resources Board member, explained SB 95 provides legislature authorization of the existing dam safety program which is presently funded. **Larry Dutton,** Section Chief, Water Management Section, DNR, emphasized the cost savings incurred by DNR prioritizing and conducting dam safety inspections as compared to average inspection costs of dams nationwide. (DNR spends approximately $7,000, on the average, for each dam inspection vs $10,000/dam average inspection costs for other states.)

Randy Wanamaker and **Stan Rybachek,** Water Resources Board member, briefly addressed water policy and the effects on placer mining. Mr. Wanamaker suggested stream reclassification may help resolve mining and water quality conflicts by establishing water quality standards which accommodates acceptable levels of mining activity. Mr. Rybachek referenced the upcoming Seventh Annual Conference on Alaskan Placer Mining to be held March 27-30, 1985, in Fairbanks which may address revision of the state's water [illegible]uality

standards. P. Tileston testified to the Resources Committee that EPA is "rule making" national placer mining standards which will affect Alaska more than any other state. Ms. Tileston sited a recent Water Board Resolution which calls for a unified, multi-agency response to EPA proposed standards. **Senator Sturgulewski** stated her staff will submit a resolution to the Resources Committee regarding EPA proposed standards. Ms. Tileston indicated the regulations are scheduled to be available for review mid April, and public comment will be solicited April 25th. **Senator Coghill** suggested there be a public hearing prior to April 25th.

Senator Sturgulewski requested comment from the Water Resources Board regarding the proposed Recreational Rivers Bill. **Dave Vanderbrink,** Water Board Vice Chairman, stated the clause addressing control of firearms and public safety is vague and may be subject to abuse; but Resolution 85-12 adopted by the Water Resources Board supports HB 93 which establishes a system of state recreational rivers. Mr. Vanderbrink also testified in support of Alaska's membership and participation in the Western States Water Council. Esther Wunnicke announced that Alaska is hosting the next Western States Water Council in Anchorage, July 18-19; and requested members of the Committee to participate.

Note: For purposes of clarity, the summary discussion below regarding SB 150 amendments to the Alaska Water Use Act (AS 46.15) is organized by issue.

SB 150

Issue 1 - Cost of Implementation:

Sen. Sturgulewski: Although there's a zero fiscal note associated with SB 150, its adoption will require funding for data collection and enforcement. Do we want this?

Ned Farquhar, Special Assistant to the Commissioner of the Department of Natural Resuorces: SB 150 is a mechanism which would not be used much; and when adjudication is necessary, a cost savings from litigation in a state court vs federal will be realized.

Issue 2 - Authority of Determining Water Rights Abandonment - Sec. 3:

Sen. Fahrenkamp: Sec. 3 may grant DNR's Commissioner too much authority in determining abandonment of water rights.

Ned Farquhar: This authority enables reduction of water appropriations when necessary, at the administrative level.

Issue 3 - Revocation of Water Permits

Sen. Fahrenkamp: Need to assure water right holders have time to use (develop) water rights. Need to modify the bill so it can not revoke an individual's water rights as a result of project or permitting delay.

Dutton: The 4th line reads, ". . . with the intention to abandon." This means, if the individual intends to use the water, but economic or permitting circumstances have precluded its use, the water right will not be revoked. But, if the appropriator is not using water, DNR must have a mechanism to revoke.

Farquhar: DNR will work with Fahrenkamp's staff to insure that delays occurring which are out of the appropriator's control will not result in a loss of appropriation.

Issue 4 - DNR's Authority to Remove Unsafe/Unpermitted Works of Apprioriation, Section (b)

Sen. Sturgulewski: Sec. (b) provides DNR with enforcement responsibility. Why was such a broad approach taken re: DNR's authority; does DNR need this much? We need clarification.

Dutton: DNR needs authority to remove unsafe and unpermitted structures to ensure public safety. "We will research."

Issue 5 - Intent of Providing Water Rights - Section 1

Sen. Fahrenkamp. Is Section 1 of SB 150 necessary if the state cannot guarantee water quality or quantity in its appropriation process?

Ned Farquhar: The state isn't knowingly over appropriating water rights in areas of proven water shortge. The state is obligated to issue rights, but ...

Sen. Halford: What protection does the user have if state over appropriates his water source?

Dutton: Issuance of water rights grants the appropriator the right to defend his water right from junior appropriators based on a priority date. The state cannot guarantee the quantity or quality of water due to insufficient data.

Issue 6 - Alaska Water Resources Board Proposed SB 150 Amendments

Mike Neimeyer, Water Resources Board member, testified to the Committee regarding proposed amendments to SB 150. Generally, the Water Board supports the intent of SB 150, but has drafted specific amendments addressing notice requirements and water appropriation abandonment. (Please refer to the enclosed memo written to Arliss Sturgulewski, March 1985, for specific amendments.)

Issue 7 - Placer Mining: Proposed SB 150 Amendments

Rose Rybachek, President of the Livengood-Tolovana Mining District, briefly presented amendments to Sections 2 and 5; and indicated the need for procedure for the court to validate adjudications under Article 8. Details of the proposed amendments will be worked on by Senator Sturgulewski's staff and Ms. Rybachek.

The Senate Resources Committee meeting closed with testimony from **Phil Holdsworth** and **Stan Rybachek** clarifying SB 150 regarding the following points: 1) Section 1 addresses subsurface water, not open flow water; 2) SB 150 calls for establishing a mechanism whereby federal reserved water rights may be adjudicated in state court; and does not deal with resolving non-federal appropriation conflicts between senior and junior appropriators.

Meeting Summary
ALASKA WATER RESOURCES BOARD
Anchorage, Alaska
September 12-13, 1985

The Alaska Water Resources Board held their fall meeting September 12-13, 1985, in Anchorage at the Bureau of Land Management Anchorage District Office and at the Municipality of Anchorage Pioneer School House.

Board Members in attendance were:

Cyril (Randy) Wanamaker, Chairman, Juneau
Peg Tileston, Anchorage
Wayne Westberg, Anchorage (Work Session only)
Tom Meacham, Anchorage
Alan (Mike) Niemeyer, Anchorage
Stan Rybachek, North Pole
David Vanderbrink, Homer

September 12, 1985

This summary paraphrases what was said unless otherwise noted.

Randy Wanamaker, Chairman, called the meeting order.

Esther Wunnicke, Commissioner, Department of Natural Resources and the Board's Executive Secretary, gave a brief report on the Western States Water Council's 79th Quarterly Meeting held in Anchorage on July 18, 1985. Governor Bill Sheffield told the Council about the proposed $130 million Susitna hydropower project on the Susitna River, and Anchorage Mayor Tony Knowles addressed the Council regarding the challenge of providing water for the largest city in Alaska. Committee meetings of the Council included discussions about a number of important issues including "compacts" as a method for dealing with federal reserved water rights.

The Commissioner then summarized the status of Board Resolutions 85-9 through 85-15, adopted at the March 1985 meeting:

° Resolution 85-09 - EPA National Placer Mining Standards

Deferred discussion to Commissioner Ross.

° Resolution 85-10 - Clean Water Act Field Laboratory

Deferred discussion to Commissioner Ross.

° Resolution 85-11 - Administration of Water Appropriation Permits and Instream Flow Applications

DLWM has begun drafting regulations to establish a permitting process for instream flow applications. This will allow an applicant for instream flow to receive a priority date when the application is filed, in advance

of quantifying the instream flow reservation. Regulations are also being drafted to set time limits for permits for the various types of water appropriations. Initial drafts are currently being reviewed by DNR's regulations specialist. They will subsequently be revised and circulated for review.

- Resolution 85-12 - Recreational Rivers Bill: HB 93

  This bill was not passed by the Legislature. It was significantly modified to allow multiple use management in these special use areas, including such uses as access to mining, timber harvest, and other resource uses; access for oil, gas, and geothermal exploration and development; and for land settlement.

- Resolution 85-13 - Water Management Staffing

  All of the positions in our water resources programs, including the Water Management Section, are now filled and we are fully staffed. There have been some recent staffing changes and promotions which we believe will produce positive results for our water programs.

- Resolution 85-14 -Dam Safety: SB 95

  This bill was passed out of the Senate Resources Committee with a "Do Pass" recommendation. It is now in the Senate Judiciary Committee.

- Resolution 85-15 - Alaska Water Resources Board Funding

  Funding for the Board is once more being included under DNR's budget for FY'87. Budget requests for FY'87 will be held to the FY'86 adjusted base.

The Commissioner discussed the analysis of the Department project to increase efficiency in light of declining revenues.

In light of declining revenues, the Water Resources Board will not be able to meet twice a year in the future. The Board will be able to meet in the Spring of 1986, and possibly by teleconferencing at other times.

A question and answer period between Board members and the Comissioner followed the Commissioner's remarks.

QUESTIONS AND COMMENTS:

David Vanderbrink suggested that the Department of Fish and Game conduct a departmental analysis project like that done by DNR.

Peg Tileston stressed the significance of the Water Resources Board and its long running acknowledgement of problems now coming to fruition.

Mike Neimeyer asked the Commissioner concerning her remarks about getting the private sector to perform some of the functions of the department. A: The Commissioner stated that functions would be analyzed to see if they could be done effectively by the private sector.

Tom Meacham asked the Commissioner about a Memorandum of Understanding between DNR and DEC concerning Village Safe Water Projects. The document in the meeting packet held a signature by Commissioner Wunnicke but none by the Commissioner of DEC. A: A response to the MOU from DEC was included in the packet.

Stan Rybachek asked if any water issues between the western states and Alaska were similar. A: The Commissioner discussed some of the major water issues in the western states. Tom Hawkins added that generally our water issues are dwarfed next to theirs.

Tom Hawkins, Director, Division of Land and Water Management, discussed DLWM's efforts to address water-related issues.

Federal Reserved Water Rights: DLWM held two meetings within the past two weeks, one with state agencies, and one with federal agencies. The purpose was to discuss cooperation efforts regarding federal reserved water rights (FRWR). It was quickly discovered that everyone (federal and state) favored administrative adjudication of FRWR. The Director gave a rundown on the Indian River basin-wide adjudication. He described the process as glacial (slow) with all things considered.

The Director also discussed the Bradley Lake hydropower project. A present stumbling block in the project is the National Park Service, who would like the Nuka River to flow into the Kenai Fjords National Park every year rather than one year in ten as it presently does naturally.

The DLWM issued a new fact sheet on federal reserved water rights that has been circulated to Legislative Information Offices and a variety of agencies.

Legislation: Senate Bill 150, the basin-wide adjudication and Alaska Water Use Act housekeeping bill, did not pass, but it did receive a couple of hearings. The Division is now exploring the possibility of dealing with the housekeeping measures as separate legislation.

Senate Bill 95, the Dam Safety legislation, vaulted through the Senate Resources Committee with a "Do Pass" recommendation, but stalled in the Judiciary Committee, probably because it was at the end of the legislative session. It may encounter some difficulty in gaining passage due to concerns by certain legislators over duplication with FERC licensed dams.

Dam Safety: Since the inception of the dam safety inspection program in 1984, we have inspected 28 dams; 22 by consultants, 6 by Water Management staff. Three new contracts have been awarded, which will result in inspections of 27 additional dams during FY'86. The cost of contract inspections this year is considerably less than last year, perhaps because of the growing hunger among consulting firms these days.

Water Planning: Data is complete and available on water use in 19 cities in Alaska. The focus of this project next year will be adding new data, but with particular emphasis on uses such as fisheries and industry.

The AWARE program has been updated and DGGS should get double credit for their efforts.

Water Elements in Area Plans:

1. Copper River Area Plan
2. Kuskokwim Area Plan
3. Hatcher Pass Plan
4. Matanuska Valley Moose Range Plan

Water Rights: DNR created a Critical Water Management Area in the Auk Nu/Indian Cove area because water problems there are extreme.

The U.S. Borax project contains a large volume water appropriation. The instream flow on Wilson and Tunnel Creeks is about done. The second draft Environmental Impact Statement is due in November.

Well monitoring in the Fairbanks area has been an activity of DLWM and DGGS.

North Slope water use for oil and gas development continues high, although drilling has slowed down.

The Southcentral Region has been processing a number of new water rights applications for micro-hydro sites throughout the region, as well as the bushel baskets-full of other uses.

The big excitement in Southcentral Region's Water Unit this summer is the Anchorage Hillside water problem. Basically, we are starved for information from the Hillside. Staff spent the summer there measuring water level changes.

Frank Mielke, Acting Deputy Director, Division of Land and Water Management, discussed FY'86 budget allocations and FY'87 budget strategies.

In FY'86, DNR got a 10 percent cut to meet budget reductions. This was one of the smallest cuts of all the departments. In spite of this, the Dam Safety program got funded at the Governor's request, the Water Resources Development budget got a $20,000 cut from $389,000, and Water Rights Adjudication lost a little over $68,000 and one position. Compared to the rest of the department, Water was treated very well.

According to Mielke, we can anticipate at least a 10 percent drop in revenues for next year. This leaves two possible alternatives: 1) cut the level of services, or 2) look for some other method of funding, such as application fees and program receipts.

QUESTIONS AND COMMENTS:

Tom Meacham asked Mielke if it wouldn't be helpful to present a case for more demands on services to the public and expansion of services. A: Mielke responded that he did not think it would work because it is the argument everybody uses. The legislature says "You are going to have to do less because there are less revenues." The legislature feels that it is DNR's job to produce money, so DNR is not necessarily rewarded for doing a good job.

L.A. Dutton, Chief, Water Management Section, Division of Land and Water Management, described the Water Management organization. He described the numbers of water resources staff in each of the DLWM offices and further noted the chain of command between each of the offices and the director of the division. He discussed casefile adjudication production, compared production numbers between the regional offices, giving an explanation and interpretation of the numbers relative to each office.

QUESTIONS AND COMMENTS:

Peg Tileston noted the equal number of employees in Water Management at Southcentral and Northern Regional offices and the great difference in casefile load at each. She asked why. Dutton explained that there are many reasons for the situation, among them:

1. The department's reluctance to transfer people
2. The different nature of case types between the regions
3. The amount of field presence in each region.

Chris Landis, Regional Water Officer, DLWM Southeast Regional Office, briefed the Board on the Auke Nu/Indian Cove groundwater problem by a detailed timeline of events.

QUESTIONS AND COMMENTS:

Stan Rybachek asked if, in talking about water quality, are we talking about saltwater intrusion? A: "Yes." Q: Is there a problem with sewage discharge? A: "That does not seem to have been a problem."

Tom Meacham asked about the National Park Service land at Indian Point--what function they have there and do they have a well there? A: The location is used in support of Glacier Bay National Park and they do have a well there. Q: Has the Park Service exerted any overriding federal interest in the area? A: "No, they strictly made an appropriation."

Mike Niemeyer asked about the earliest priority use in the area and how the neighborhood feels about people getting equal cuts in water somewhere down the road. A: It is hard to determine how they feel, but they did testify at the hearing that they are used to rationing water and they are willing to continue in the future.

David Vanderbrink asked if any of the area people use roof catchment systems. A: Yes, absolutely, Yes. Most of the Indian Cove Water Company users have cisterns used as backups. Q: Are those water quantities used in the area water use figures? A: Basically, No.

Randy Wanamaker asked if there has been some kind of analysis on the authority that can be used to create and implement such a management plan? A: Couldn't really answer, but assumed that Mike Frank did some sort of an analysis.

Gary Prokosch, Regional Water Officer, DLWM Southcentral Region, and **Jim Munter,** Hydrologist, Division of Geological and Geophysical Surveys, briefed the Board on the Anchorage Hillside groundwater problem by illustration of the problem and what DNR is doing in response.

Points covered included:

-Water levels are declining throughout the Hillside at a rate of 1-5 feet per year.
-A significant number of domestic wells have low tolerance to water level decline.
-Some wells have failed and have been deeped.
-There is potential for much greater consumption in the area.

The objective of fieldwork in the summer of 1985 was to determine the magnitude of the problem. The fieldwork consisted of measuring water levels in wells of known water depths at time of drilling. In the survey area, it was surprisingly the deeper wells that had lost water, while more shallow wells often gained water.

Alternatives for remedying the situation were presented and discussed.

QUESTIONS AND COMMENTS:

Peg Tileston asked if any studies dealing with brush fires on the Hillside had been done. A: Munter said he was not the person to ask. He had not done any and did not know of any.

Mike Niemeyer asked Jim Munter if he had an estimate of the number of wells in the Hillside area. A: "Not a very good one." There are probably thousands. Prokosch called attention to a sheet of data in a handout with 1984 figures from the municipality. There were 8,095 structures within the study area.

Tom Meacham asked for clarification of municipal wells in the Hillside. The question was cleared up by Prokosch and Munter.

Stan Rybachek suggested to Prokosch that conservation measures be explored. A: Prokosch responded by saying that the golf course was looking at alternatives for conservation.

Tom Meacham made the comment that the study should be a socio-economic study as much as a water study because of the semi-rural life flavor desired by the area residents. A: Prokosch acknowledged, and reiterated alternatives to relieve the problem without changing the semi-rural life flavor of the area.

Peg Tileston asked if homeowners trying to sell had experienced any problem in selling due to water problems in the area. A: Prokosch replied that he had not heard of any problem, however, he heard that in some lending institutions, they were not lending money on homes without water rights.

David Vanderbrink asked about the date on the water right. A: Prokosch answered that it is dated as it is received. If they don't submit an application, they have no legal right to take water.

Conrad Christianson, Project Officer, Department of Environmental Conservation, briefed the Board on SB 461, the Placer Mining Grant Program. This Bill authorized DNR and DEC to develop the grant program, which aimed at decreasing environmental damage from placer mining operations. The main goal of the pro-

gram was to clean up Alaska's streams. But it should also provide information to help government agencies in regulating the placer mining industry and the information should help the EPA in developing new standards for the industry in 1987. Another goal is to increase gold recovery efficiencies. Grants could be used for the following:

1. To purchase and test new equipment.
2. To test innovative methods using present equipment.
3. To test methods already used in other areas or fields.

DNR grants were to focus on innovative gold recovery and water use reduction, and DEC grants were to focus on innovative waste disposal and water pollution control. The applicants were required to show a successful history of mining in Alaska and an ability to test and report on the results.

There were several questions dealing with administration of the grant program, which Christianson answered.

Bill Ross, Commissioner, Department of Environmental Conservation, briefed the Board on DEC's water related activities. Ross emphasized DEC's strong activity in water quality concerns. The main points that he covered include:

205 J Funds (federal funds): Water Quality activities
1. Delta Agriculture Project - pesticide runoff
2. Log transfer facility study in Southeast - dealing with bark accumulation on bay bottoms
3. Placer mining monitoring on specific streams
4. Placer Mining Advisory Group

Review of Subdivisions
1. Wastewater/Drinking Water
2. On-site review

Particulate Criteria Review: A study for settleable solids and turbidity on placer mining activities

Triannual Review: A look at water quality standards in light of federal law to see what revisions may be needed.

Use Inventory Study: A contract with Dames and Moore to gather data on drainages with regards to their historical and current uses and to get background information on stream quality and biological parameters and how to manage.

LUST Project (Leaking Underground Storage Tanks): A nationwide attempt to inventory all underground storage tanks and a handle on whether or not they are leaking.

Anchorage Stream Pollution: This is becoming a real local issue of concern. Has evolved into the Mayor's Water Quality Task force.

Wetlands Management in Juneau: Anchorage faced this several years ago and developed its Wetlands Management Plan; it is hoped Juneau will go along this way also.

Alyeska Ballast Water Treatment facility: DEC is engaged in a very extensive oversight and review process of this facility.

Bureau of Mines Flocculation Project: A process developed in Florida to take turbidity out of the water. It seems to meet all of the needs that Alaska has. It seems to be ideal under Alaskan condition' Testing will be done in Alaska if funding is given.

Forecast for 1987: It's hard to predict, but it's likely the same issues will continue on in 1987 and that the platter of work will be full.

QUESTIONS AND ANSWERS:

Tom Meacham asked the Commissioner if he could forecast any water management or water quality legislation that DEC would seek during the next legislative session. A: The Commissioner did not think there would be any, but did mention two areas where there could be legislation. These include 1) Placer Mining Standards and Recreational Rivers Bill; 2) Hazardous Waste

Mike Niemeyer asked how much money the flocculation study would need in Alaska. A: The Commissioner thought a round figure would be $250,000.

Tom Meacham asked about an RFP to examine the Clean Water Act. A: This was a DNR contract to assess where the state was currently at regarding stream classification, water standards and the Act.

Tom Meacham asked about DEC on-site AHFC-financed homes where they have individual water and sewer and related with DNR-DEC Memorandum of Understanding dealing with Village Safe Water Project Grants for Public Water. A letter was sent from Gary Hayden, DEC, to DNR regarding the MOU. **Tom Meacham** asked if this letter was DEC's position. A: Yes, (with an explanation).

Al Ewing, Assistant Regional Administrator, EPA, discussed the background of the authority that the EPA has for what they are doing in terms of development of regulations, the public review process and the schedule for finalizing effluent guidelines for placer mining.

Federal Water Pollution Control Act of 1972: The EPA authority for regulating placer mining. Regulations for placer mining did not meet deadlines in the 1970's so Best Professional Judgment ("BPJ") guidelines were issued. These standards were challenged by industry and environmental concerns as well.

Effluent Guidelines soon to be proposed: currently in review by OMB at the President's level. Will be signed off on probably in October 1985. To develop the guidelines, the industry was divided into four categories.

1. Less than 20 cubic yards per day - recreational accessment mining - no guidelines for effluents, left in realm of BPJ.

2. More than 4,000 cubic yards per day - large dredges operating in a self-contained pond. Proposed effluent guideline is 0 discharge, 100 percent recycle.

3. Greater than 20 and less than 500 cubic yards per day. Effluent guideline for this category is .2 milliliter per liter instantaneous daily limit and 2,000 milliliters per liter for 30 day average for total suspended solids.

4. All mining methods except group 2 with a mining rate greater than 500 cubic yards per day. Guidelines are: no discharge, all recirculation.

Goal of one year for final regulations. The worst case for regulations would be May-July 1987. Judging from the way things can go, he would not be surprised if this happened.

QUESTIONS AND COMMENTS:

David Vanderbrink asked what standards have been proposed for mining in Cook Inlet. A: Not covered under these guidelines and he would not be able to answer at this time. It would be a BPJ kind of thing. David further asked about coal mining an entire basin. A: Again, not covered by these guidelines. Coal is a completely different category. Again, it would be a BPJ kind of thing.

Peg Tileston asked about BPJ and what kind of criteria is used, since professional judgment can vary. A: F uses the information they have to operate on and make the best professiona judgment they can.

Mike Neimeyer asked if special consideration is given to guidelines in Alaska due to special characteristics of Alaska. A: Very definitely so. Neimeyer responded that Ewing had said these were national standards. A: "That's definitely the case, yes."

Stan Rybachek reiterated the point that there didn't seem to be any difference between Alaska standards and the national standards. A: The technology base is the same, and beyond that are state water quality standards, which affect the standards.

Randy Wanamaker asked about hardrock mining and whether or not he knew about it. A: Ewing said he was not prepared to talk about hardrock mining. Wanamaker requested an EPA review of hardrock mining regulations and guidelines for the next meeting.

Bob Martin, Department of Environmental Conservation, addressed the Board about "drill muds" and the issues associated with drill muds and the approach tht DEC is presently pursuing with disposal of drill muds and waste products of the oil and gas industry.

Martin discussed the components of drill muds and why drill muds are used. Basically, the drill muds alone are environmentally benign. It's the additives that cause the problems. Additives are used for a variety of purposes.

Drill muds, even though they are runny, come under the solid waste disposal regulations. An inhouse study was done between 1983 and 1984 as to how drill muds are handled in Alaska and other states. The results were pretty well received by industry people. Policies are in draft now for DEC people to use in reviewing industry waste disposal plans.

QUESTIONS AND COMMENTS:

Stan Rybachek asked if any thought had been given as to what it will cost for industry to implement the waste disposal standards. A: Certainly, the industry has given a lot of thought to it and DEC has given thought to not developing regulations that are not financially or technically feasible, but DEC's primary concern is protecting public health; so it's not primarily DEC's job to be developing cost estimates for disposal practices. These standards are not out of line with other states, so it's not out of line with what industry is used to doing in other states, and in fact, in some cases, in Alaska.

Stan Rybachek asked if there have been any complaints from communities about drilling muds going into the environment causing health problems. A: There have certainly been plenty of complaints from residents on the Kenai Peninsula.

Tom Meacham asked, following up on Stan's question, if there has been any evidence of drinking water supplies being contaminated with substances from drilling muds. A: DEC monitoring on the Kenai Peninsula has found contaminants escaping drill mud pits. Water supplies have been found essentially clean.

Public Comment Session

David Vanderbrink introduced **Tom Mears** from the Cook Inlet Aquaculture Association (CIAA). Tom briefed the Board and the public present on the background and goals of the CIAA. Mr. Mears then presented a slide show on the Paint River, which discharges into Kamishak Bay in southern Cook Inlet. Studies by the ADF&G and CIAA show that the Paint River would be an ideal salmon fishery. Planted salmon fry have grown in the Paint River drainage, gone out to sea and returned. The River is ideal except for one rocky problem -- a 40-foot waterfall the fish cannot jump. A tunnel fish ladder is proposed to solve this problem.

The CIAA requests the Alaska Water Resources Board to seek the Governor's support for the Paint River project.

Joann Richter of the Anchorage Waterways Council briefed the Board on the concerns and dedication of the Council.

The Council asked the Board to use whatever influence it has to facilitate the necessary flow of information and technical services between the municipality and the various state and federal agencies. Further, the Council encouraged all people to support the upcoming bond measure that will appropriate $10 million toward various water quailty improvements. Vote Yes on Proposition 8.

The remainder of the public comments meeting centered on two discussions; the Anchorage Hillside groundwater decline and placer mining.

A number of Anchorage Hillside residents spoke on the problem of wells going dry and the overuse of the Hillside acquifers. DNR personnel discussed current groundwater research efforts, the significance and validity of water rights, and possible solutions to the Hillside problem. Two people from the

Anchorage Water and Wastewater Utility discussed the Municipality's water development plans and possible solutions to the problem. Board members entered the open discussion with questions of the speakers and answers to questions. A feeling of consensus was reached that a solution needed to be worked out.

Key comments in the Hillside water discussion included:

- Presentations by several Hillside residents whose wells have gone dry since last spring and had to deepen them. Some of these people have had their wells for 30 years or more and had no trouble with their wells prior to recently, other than the 1964 earthquake.
- A USGS research paper of 1975 predicting Anchorage Hillside water shortage by 1985.
- The value of water rights was questioned. Several people responded in affirmation of the water rights program. **Randy Wanamaker** posed the question: What harm will it do to have water rights? It can't hurt! He stated that people working together can carry weight and solve problems and people standing alone generally can't. **L.A. Dutton** said water rights would not in themselves solve any problems, but would give valuable information in determining the extent of the problems. **David Vanderbrink** stated that had all the people on the Hillside gotten their water rights when they moved there, they would see the value of them.
- A passionate plea to get the Municipality to stand behind its moral commitment to protect the zoned lifestyle of the Hillside as it said it would over 10 years ago. **Tom Meacham** responded by saying that a new Anchorage Municipal Administration probably should not be bound to a commitment of a previous administration without allowing it to look at its options first. A moral commitment would not carry much weight in court.

Placer Mining

The second discussion focused on the current plight of the placer miner. The speaker discussed how the times and attitudes have changed toward mining in Alaska. He called for any actions involving mining to have the participation of mining engineers and environmental engineers - the experts. He called for careful consideration of all regulations and standards.

Rose Rybachek briefed the Board on the mining situation in the Livengood-Tolovana Mining District. She stated that a number of miners did not go into the field this year for fear of what might happen (with regard to water quality standards). A number of other miners are facing further action by the EPA. She also discussed the need for a Clean Water Act Field Laboratory in Alaska and support for continuation of the Placer Mining Demonstration Grant Program.

September 13, 1985
Work Session

Resolutions: The Water Resources Board drafted, passed and finalized the following resolutions:

- 86-1 - EPA National Placer Mining Standards
- 86-2 - Re-Affirmation of Administrative Order No. 67
- 86-3 - South Anchorage Groundwater Decline

- 86-4 - Department of Natural Resources Fees for Water Rights Applications
- 86-5 - Federal Reserved Water Rights Adjudication
- 86-6 - Advisement of Legislative Action
- 86-7 - Filing Fee Advertisement

Letters: The Water Resources Board prepared five letters - four to the Governor and one to the Mayor of Anchorage.

- To the Governor - Flocculation Study Funding
  - Clean Water Act Field Laboratory
  - Paint River Aquaculture Project
  - Placer Mining Demonstration Grant Program

- To the Mayor of Anchorage - Anchorage Hillside Groundwater Decline

KGH:kmb

SB 150

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

BILL SHEFFIELD, GOVERNOR

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

September 26, 1985

Boyd Evison
National Park Service
2525 Gambell St., Room 107
ANchorage, AK 99503-2892

Dear Mr. Evison:

Enclosed is a summary of the August 29, 1985 meeting of federal and state agencies, convened by the Alaska Department of Natural Resources, to initiate discussion of quantification and adjudication of federal reserved water rights in Alaska. The meeting was very well attended and, we believe, very productive in exchanging information and state and federal concerns about federal reserved water rights. We applaud both the state and federal agencies who participated in this meeting for the enthusiasm and cooperative attitudes that were expressed.

Several areas of general consensus were apparent during the meeting. It was the consensus of the group that administative adjudication of federal reserved water rights by the Department of Natural Resources followed by a consent decree in state court, as envisioned in proposed Senate Bill 150 (copy enclosed), is the best alternative to pursue in Alaska, rather than lengthy court adjudications or compacts. It was also agreed that it would be useful to cooperatively develop an inventory of federal land reservations and their associated federal reserved water rights, and subsequently to prioritize specific basins for quantification and adjudication of water rights.

We believe that identifying and adjudicating federal reserved water rights is an activity we should actively pursue in Alaska in order to systematically allocate water resources in our state. Since your agency will likely be directly involved with federal reserved water rights, we would like your assistance in cooperatively working out the procedural rules for identifying and adjudicating federal water rights. It was the consensus of the agencies present at the August 29th meeting to establish a staff level working group representing agencies with major responsibilities for water rights to work on these issues. Your agency is one of those identified. I am therefore asking you to designate one staff person, who is familiar with administering water rights as well as the application of techniques for identifying and quantifying instream and out-of-stream water requirements, to represent your agency in this work group. Resources, in the form of staff time, will be required for participating in the Working Group.

We envision most meetings of this group to be held in Anchorage; therefore, travel monies may be required for some agency representatives.

We have scheduled the first meeting of the Work Group for November 7, 1985 in the eighth floor conference Room, Room 800, Frontier Building, Anchorage. The meeting will convene at 9:00 a.m. with two major topics to address: inter-agency review of Senate Bill 150, and review of our proposed inventory of federal reserved water rights in Alaska. Enclosed is a copy of Senate Bill 150, which would establish procedures in the Water Use Act for administrative and judicial adjudicaton of water rights. It was introduced last session and is still in the Senate Resources Committee. We would like your agency to review the legislation and for your representative to bring any comments or recommendations to the Work Group meeting on November 7th. Also enclosed is a draft copy of the proposed format and information elements for our Inventory of Federal Reserved Water Rights in Alaska, which we would like your agency to review and have your representative be prepared to discuss, and hopefully, finalize at the Work Group meeting.

If you have questions or scheduling difficulties concerning the Work Group, the November 7 meeting, Senate Bill 150, or the proposed inventory, please contact L. A. Dutton, Chief of Water Management at Pouch 7-005, Anchorage 99510, 762-4317. We look forward to being notified of your staff representative to the Work Group and meeting with your agency representative on November 7, 1985. We thank you again for your participation in this effort.

Sincerely,

Esther C. Wunnicke

Esther C. Wunnicke
Commissioner

Enclosures

cc: Tom Hawkins
Senator Arliss Sturgulewski
Representative Adelheid Herrmann
Representative Richard Shultz
Molly McCammon

Stan Ponce

FEDERAL RESERVED WATER RIGHTS
STATE-FEDERAL AGENCY MEETING
ANCHORAGE, AK - August 29, 1985
MEETING SUMMARY

Twenty-eight people attended and participated in a meeting of state and federal agencies concerning federal reserved water rights at the BLM training room in the Federal Building. A list of attendees is attached.

Frank Mielke, Deputy Director of the Division of Land and Water Management for the Alaska Department of Natural Resources (DNR), opened the meeting and welcomed those present to the "first" federal-state meeting on federal reserved water rights. He said this was the beginning of a continuing effort by these agencies to determine federal water rights within Alaska.

L. A. (Dutt) Dutton, Water Management Section Chief for Alaska DNR, provided an introduction concerning the need for federal-state action on reserved water rights. He referred to a fact sheet that had been distributed to the group explaining federal reserved water rights. Dutt talked about the "formidable" task for both the state and federal agencies because of the estimated 250 federal reservations within the state.

Dutt discussed reserved and secondary water rights and how each is determined. He noted that there is increasing contacts between federal agencies and the state because of increasing developments such as Indian River and Ship Creek and asked that the state and federal agencies work together on a federal reserved water rights inventory and priority of adjudication of water rights.

Mary Lu Harle, DNR Water Management Section, discussed the need for each agency to give an overview of what they are doing in regard to reserved water rights and how they thought we could best meet the challenge of adjudicating federal reserved water rights. She asked the agencies to review and comment on proposed state legislation, Senate Bill 150.

Mary Lu discussed the ongoing water quantification study and upcoming adjudication of Indian River at Sitka. She talked about state review of conservation system unit plans and said that this effort is a high priority of DNR Commissioner Wunnicke. Alaska DNR is asking that a standard water rights statement appear in all CSU plans.

Bill Edwards, U.S. Forest Service, discussed what the Forest Service is doing in regard to water rights. He stated that he would like to see Alaska keep "but in front" on water rights instead of getting behind like some of the other states have done. He said the Forest Service has been working and will continue to work cooperatively with Alaska DNR on water rights.

Bill said the Forest Service has been developing policy and procedures for dealing with water rights. They have been working on a water rights inventory system which will include an inventory map. He said Forest Service water rights work so far has been mainly for consumptive uses by the Forest Service, private land owners, and permittees. He said the Forest Service is highly supportive of DNR efforts to resolve federal water rights.

Stan Ponce, National Park Service, said he would support an administrative adjudication of reserved water rights if it is possible to go that route. He said he agreed with DNR to pursue reserved water rights and NPS will work cooperatively with DNR. Stan said he sees little difference in attitudes between Alaska and other states. He said the Park Service is mostly a non-consumptive user of water and will probably be asking for "natural flow" for streams within national parks.

Ron Huntsinger, U.S. Bureau of Land Management, discussed BLM plans to quantify water rights for the Gulkana River and Beaver Creek, two of the designated Wild and Scenic Rivers in Alaska. He said results of the Gulkana quantification should be available to DNR by early 1987, and that BLM is looking at enhancement of the fishery for the Gulkana River as well as maintaining the other recreational values of the river.

Ron was supportive of administrative adjudication of federal reserved water rights and thinks there will be little conflict of uses. He would like to see standardized adjudication methods. Ron also gave an overview of other wild and scenic rivers within the state on which BLM will be doing instream flow studies in the future.

Keith Bayha, U.S. Fish and Wildlife Service, said that about 50 percent of the federal reserves in Alaska are under USFWS administration. He said the FWS is also providing technical assistance to other federal agencies for instream flow studies on Alaska streams that are not on wildlife refuges.

Keith explained the training in instream flow provided by his agency at Ft. Collins, Colorado, and said such training is available to other agency personnel and may be available in Alaska by 1986 or 1987.

Keith said he would support the approach DNR is taking on cooperative efforts for adjudication of federal reserved water rights. He also said he favored an approach to prioritize adjudications with use of a map.

Philip Emery, U.S. Geological Survey, said there were about 7,200 creeks and 1,200 rivers in Alaska which have been named, and that only 11 percent of the rivers and six percent of the creeks have water flow measurements for more than one year duration. In Alaska there is one stream gage for each 5,700 square miles compared to one stream gage for each 400 square miles in the lower 48 states.

Phil said that the USGS is trying to improve the stream gaging network for Alaska, and recommends that this network be partially designed around the priority for federal reserved water rights adjudications.

Bruce Landon, U.S. Department of Justice, said he supports interagency negotiation on water rights and notes that there has been more coordination between federal agencies in recent months.

Jack Wilcock, Alaska Department of Natural Resources, discussed plans by the state to complete an inventory of federal reservations in Alaska and list water rights reserved with the land. He estimated that 25 to 40 percent of the reservations will not have need for water, as they are mountain-top radio relay sites or military target areas.

Jack stated that DNR had determined that this inventory should serve as both a permanent file and as a computer file, and that he has designed a preliminary format using the IBM PC and the Wordstar software program. He stated that both the format and the computer program are open to review by the group.

It was suggested by members of the group that if a "work group" is to be formed, that this work group review and define the purpose of the inventory, and determine the format and computer program to use for the inventory so it will best serve the needs of all agencies involved.

L. A. Dutton, DNR, suggested that the group develop some action recommendations and also suggested that a work group be set up.

Keith Bayha, USFWS, agreed, and suggested two groups be set up on different levels: one at the decision making or management level, and one at the working or staff level. He also suggested that these groups produce a package that would assist agencies with their budget requests.

L. A. Dutton said that his agency would follow up with a meeting summary and a request for the agencies to make appointments to the work group. He asked if a written agreement between the state and the federal agencies was needed. He was assured by several agency people that a written agreement is not needed as long as cross-expenditure of state and federal funds is not involved.

Ann Puffer, U.S. Forest Service, recommended that objectives for the Work Group be established. The following were listed and discussed:

1. Prioritize river basins for adjudication
2. Reach agreement on an inventory
3. Review State Senate Bill 150
4. Determine method of notification of state for claimed federal water rights
5. Cooperative review of procedural methods

It was recommended that the request to the federal agencies to make appointments to the Work Group come as a letter from the DNR Commissioner setting up the goals and objectives of the Group.

Discussion followed, centering mostly on how to set priorities for adjudication and the need for funds by the agencies to complete work on reserved water rights. Portions of a letter from the Secretary of Interior were read, which stated that all requests from states to the federal agencies for quantification of water rights would be responded to promptly.

It was pointed out that the federal agencies must compete for funds with other states where conflicts with water use and water rights may be more pressing than in Alaska. It was also noted that requests for funds may be based on a desire to have quantification of water rights accomplished without adjudication.

ATTENDEES

1. Mary Lu Harle	Water Resource Manager	DNR/DLWM/Water	762-4317
2. Keith Harding	Natural Resource Officer	DNR/DLWM/Water	762-4317
3. Chris Landis	Natural Resource Officer	DNR/DLWM/SERO	465-3400
4. Frank Mielke	Deputy Director	DNR/DLWM	762-4355
5. Ann Puffer	Regional Hydrologist	US Forest Service Juneau	586-7847
6. Bill Edwards	Acting Director, Lands, Minerals, & Watershed	US Forest Service Juneau	586-7847
7. Christopher Estes	Statewide Instream Flow Coordinator	DF&G-Sportfish	267-2142
8. Ron Huntsinger	Hydrologist	BLM	267-1318
9. Jules Tileston	Deputy State Director	BLM-ASO	271-5069
10. Larry Wright	Outdoor Rec. Planner	NPS	261-2636
11. Stan Ponce	Chief, Water Rights Br.	NPS-Ft. Collins, Colorado	(303)221-5341
12. Nancy Deschu	Water Quality Tech	NPS, Anch/Denali	683-2294
13. Ron Hyra	Outdoor Rec. Planner	NPS, Seattle	(206)442-5366
14. Dick Nadeau	Regional Instream Flow Study Coordinator	USFWS	786-3350
15. Keith Bayha	Deputy Asst. Reg. Dir.	USFWS	786-3537
16. Philip A. Emery	District Chief	USGS/WRD	271-4379
17. David Dorris	Chief, Br. Bio. Res.	BLM-ASO	271-3349
18. Bruce Landon	Trial Attorney	U.S. Justice Dept.	271-5452
19. Sandra Rabinowitch	Planner	NPS	261-2480
20. Jack Mosby	Planner	NPS	261-2480
21. Al Lovaas	Natural Resources	NPS	261-2612
22. Keith Goltz	Attorney	SOL	271-4131
23. Carl Yanagawa	Regional Supervisor	DF&G - Habitat	267-2283
24. Gary Prokosch	Regional Water Officer	DNR/DLWM/SCRO	762-2277
25. Jack Wilcock	Natural Resource Manager	DNR/DLWM/Water	762-4317
26. L.A. Dutton	Chief, Water Management	DNR/DLWM/Water	762-4317
27. Laura Davis	Asst. Attorney General	DOL - Juneau	465-3600
28. Mike Frank	Asst. Attorney General	DOL - Anchorage	276-3550

SB 150 cont'd

Governor's transmittal letter dated February 12:

Dear Senator Bennett:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the adjudication of water rights and making miscellaneous amendments to the Alaska Water Use Act (AS 46.15). The bill comes as a result of the Alaska Water Resources Board resolution 84-5, dated March 14, 1984, recommending the adoption of specific statutory procedures for the administrative and judicial adjudication of water rights, particularly federal reserved water rights.

A federal reserved water right is one created by implication when the federal government withdraws land for a specific purpose, such as for a national forest, Indian reservation, or national monument. The United States Supreme Court first recognized federal reserved water rights in Winters v. United States, 207 U.S. 564 (1908), an Indian reservation case. Since that time, court cases have extended the doctrine to many other types of federal withdrawals. Since a federal reserved water right is created by implication, no specific quantity of water and no priority date for the water right is established until the court does so by decree. To facilitate the ascertainment of the existence of a federal reserved water right, its quantity, and its priority date, Congress passed the McCarran Amendment, 43 U.S.C. sec. 666, allowing water adjudication suits to be brought against the federal government in state courts. The statute requires the adjudication of all rights within a hydrologic basin where a federal reserved water right may exist. This has created lawsuits involving literally thousands of defendants in some of the western states, where there are many appropriators and not enough water. The complexity and expense of such litigation has prompted many western states to enact specific adjudication legislation to facilitate the determination of water rights. The attached bill accordingly draws from the experience of other states and their adjudication statutory schemes.

Section 1 of the bill amends AS 46.15.040 to add a disclaimer to the Water Use Act, asserting that a right to appropriate water which the state grants is not a state guarantee of a particular water quality, volume, or pressure, or that water may be withdrawn at a particular cost. Appropriators in adjudications in other western states have raised this "guarantee" argument. While courts that have reached the issue have rejected the argument, nonetheless it would serve the expeditious resolution of water disputes in Alaska if the lack of guarantee were specified in the Water Use Act.

SB 150 cont'd

Section 2 of the bill adds a new subsection to AS 46.15.065, the current statute setting out the procedures for handling individual declarations of water rights existing before July 1, 1966. Under AS 46.15.065(b)(1), the commissioner of natural resources set the deadline for filing those declarations, and approximately 15 are pending. This new subsection makes clear the relationship between the procedures for handling those declarations and the proposed procedures (AS 46.15.165 and 46.15.166 in the bill) for handling basinwide water rights adjudications.

Section 3 of the bill amends AS 46.15.140 to clarify the existing abandonment and forfeiture provisions and to create a rebuttable presumption that if an appropriator does not beneficially use the water covered under a certificate for a period of five successive years, it is the appropriator's obligation to prove to the commissioner that the appropriation has not been abandoned.

Section 4 of the bill clarifies how the commissioner may terminate an in-stream flow reservation.

Section 5 contains the body of the adjudication provisions. It first creates a new AS 46.15.165, which would allow the commissioner of the Department of Natural Resources to initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a particular hydrologic basin. Under AS 46.15.165, the commissioner would give notice to all relevant appropriators and landowners, including governmental agencies. When the hydrologic basin includes land or water held in trust by the United States for Alaska Natives, such as the Annette Island Reserve, notice would also be sent to relevant authorities in order to protect the Natives' interests, if any, in a federal reserved water right. A person or entity claiming a federal reserved water right who is served with notice, but who fails to consent to an administrative adjudication, would be excluded as a participant. Under AS 46.15.165 the commissioner would have authority to adopt procedural regulations and to appoint a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; and to make recommendations to the commissioner. Any final determination of water rights the commissioner makes would be subject to an administrative appeal to superior court. Section 5 also creates a new AS 46.15.166 providing that when a federal reserved water right may be involved, and the claimant refuses to consent to an administrative adjudication, the commissioner could initiate the adjudication in superior court, consistent with the McCarran Amendment, 43 U.S.C. sec. 666. In that instance, the bill gives the superior court authority to appoint a designee of the commissioner as a master to perform the same functions a master would in an administrative adjudication, but under the court's supervision.

SB 150 cont'd

While the design of the adjudication bill is to provide a procedure for the adjudication of both non-federal and federal reserved water rights, a new AS 46.15.165 makes clear that nothing in the Alaska Water Use Act is to be construed as an admission against the State of Alaska that a federal reserved water right exists in any particular context.

Section 6 of the bill adds a new AS 46.15.255 and 46.15.256, to clarify the Department of Natural Resources' authority to take action to remove unsafe, as well as unpermitted, works of appropriation if the appropriator refuses to do so, and to inspect records of an appropriator pertinent to the permitted or certificated use of water under the Water Use Act.

Given the experience of states other than Alaska in adjudicating water rights and the large number of federal reservations in Alaska, a sound statutory system for adjudication is imperative. Therefore, I urge your prompt action on this bill.

Sincerely,

Bill Sheffield
Governor

SB 151

SENATE BILL NO. 151 by the Rules Committee by request of the Governor, entitled:

"An Act amending the controlled substance, imitation controlled substance, and forfeiture laws."

was read the first time and referred to the Health, Education and Social Services Committee and the Judiciary Committee.

Department of Corrections fiscal note is zero. Department of Law fiscal note is zero with analysis: "This bill would streamline and standardize forfeiture procedures, making it easier to execute forfeitures. The bill would also slightly increase the number of controlled substances and imitation controlled substance cases the department can successfully prosecute by correcting omissions, ambiguities, contradictions, and an overbreadth problem which exists in portions of our current laws. Although there will be a slight increase in the number of cases handled, this increase will be more than offset by the efficiencies that will be realized by streamlining current laws."

SB 151 cont'd

Governor's transmittal letter dated February 12:

Dear Senator Bennett:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill which makes several changes in Alaska's laws regarding controlled substances and imitation controlled substances. These changes are needed to eliminate ambiguities, contradictions, omissions, and an overbreadth problem which exist in current law, and to improve the state's ability to forfeit property which has been used in violation of the drug laws.

A section-by-section analysis of the bill, explaining in detail the effect of and reasons for the proposed changes, appears at the end of this letter. In brief summary, sec. 1 of the bill consolidates most state forfeiture procedures in a single new article added to AS 09. This consolidation of state forfeiture procedures will minimize the possibilities of unintended inconsistencies in coverage and reduce the volume of laws that are required whenever forfeiture is authorized.

Section 2 of the bill provides that anyone who attempts to obtain possession of a controlled substance through fraud or other deceptive techniques commits the same class of crime and faces the same penalty as someone who successfully obtains possession of a controlled substance through fraud or other deception.

Section 3 adds the commissioner of corrections to the nine member Controlled Substances Advisory Committee. Sections 4 and 7 add necessary cross-references to other statutes. Section 5 is a minor amendment which clears up a drafting oversight and potential overbreadth problem in the existing definition of an "imitation controlled substance."

Section 6 of the bill broadens the description of property which is subject to forfeiture to the state, and will eliminate some difficult proof problems caused by the language of the current law. Section 8 defines "violation" of the drug laws to include attempts and solicitations to violate the law. Section 9 repeals statutes replaced by the provisions contained in sec. 1 of the bill.

In order to allow more effective enforcement of our criminal and civil laws against drug abuse in Alaska, I urge your prompt and favorable action on this bill.

Section-by-section Analysis of Bill

Section 1:.

This section of the bill has two related purposes. First, it specifies the procedures applicable to the forfeiture of property authorized by AS 11.71.060 and AS 17.30.110.

EW → BA → file

cc MV
D. Hor
Jim H

Introduced: 2/12/85
Referred: Resources and Judiciary Land & Water Mgmt.

FEB 19 1985

Director's Office

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

IN THE SENATE

SENATE BILL NO. 150

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section, which is pending before the commissioner on the effective date of this Act, is to continue under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under the procedures set out in AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

2/19/8

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation in whole or in part if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

(c) Failure to use beneficially, for five successive years, all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water, and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 4. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section

still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to insure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. sec. 334 (Indian General Allotment Act of

February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. sec. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. secs. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. sec. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water of the reserve, or hydrologically interconnected water, is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) -- (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting any objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (i) of this section.

(e) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights; and to take other action the commissioner decides is necessary. The

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purposes of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(i) If the commissioner has initiated the adjudication, and the federal government or a private person who has been served under (c)(2) -- (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner shall exclude the federal government or that person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(j) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(k) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. sec. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems. The commissioner may initiate an adjudication under this section only if a federal reserved water right has been or might be asserted

(1) by the United States or any of its component agencies;

(2) by or on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4), or whose land is held in trust by the United States.

(b) Venue is proper if a complaint under this section is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In an action brought under (a) of this section, the court may initially appoint a designee of the commissioner as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. The master may be an employee of the state. In managing the action, the master may, with the court's permission, take such action as the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in any order or judgment any final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section are conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. A final order of the commissioner under AS 46.15.165, or a final judgment of a court under AS 46.15.166, is binding on all parties to the adjudication and on all persons who subsequently make an application for a water right. The court or the commissioner may retain continuing jurisdiction for the periods of time necessary to implement any adjudication order or judgment and to provide for any subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165.

(c) The commissioner may enter into arbitration with a private person or the federal government to resolve a water rights issue.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any federal court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. Nothing in AS 46.15 is an admission by the State of Alaska that a federal reserved water right exists in the state.

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty that may be imposed under AS 46.15.180 for violation of an order issued under AS 46.15, the department may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation, and for any related court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the department may

(1) inspect books; records; meters; gauges; well logs; works of appropriation, diversion, impoundment, withdrawal, or

control; and any other relevant information or physical condition;

(2) enter private property at all reasonable times, after first obtaining a search warrant from an appropriate judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by an administrative subpoena signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 7. This Act takes effect immediately in accordance with AS 01.-10.070(c).

FEDERAL RESERVED WATER RIGHTS INVENTORY

The attached inventory form is designed to provide basic information about each federal reservation within the State of Alaska. The information provided will assist the Alaska Department of Natural Resources and the federal agencies to determine what the existing and future water needs may be for that reservation.

In addition to identifying the administrative office for each reservation, this data will help to locate the reservation and cross-reference it to a map showing the geographical location of each reservation within the State. The map will help to prioritize the need for water rights adjudication.

The legal history of the federal legislation or executive action creating the reservation will provide the purposes for which the lands were withdrawn from the public domain, describe the explicit or implied water rights, and provide the priority dates for the water rights.

The second section of the inventory will consist of information on existing water rights and actions planned or underway to determine the amount of water needed for the reserved water rights for each federal reservation. This data will be entered into the inventory as the information becomes available.

The Alaska Department of Natural Resources, Division of Land & Water Management, will prepare and maintain the inventory with information provided by the federal agencies. The data will be computerized and maintained as a permanent file for use by DNR and the federal agencies.

FEDERAL RESERVED WATER RIGHTS INVENTORY - ALASKA DNR - L&WM

SECTION ONE

I. Name of Federal Reservation Index No:_____

A. Current Name:

B. Previous Names:

II. Agency Administering the Reservation

A. Dept. & Bureau:

B. Contact Office Address:

Telephone:

C. Individual to contact:

III. Legal history of the Reservation

A. Original Reservation

1. Authority:

2. Date:

B. Primary Purposes of Reservation:

C. Subsequent Revisions

1. Authorization:

2. Date:

3. Primary Purposes:

IV. Location and Boundary

A. Geographic Location:

1. DNR Region:

2. River Basin or
Major Drainage:

B. Latitude & Longitude:

C. Size (acres):

D. Boundary Revisions

1. Authority:

2. Date:

V. Water Needs Listed
in Reservation Enactment:

FEDERAL RESERVED WATER RIGHTS INVENTORY

SECTION TWO

I. Activities underway or planned with reguard to Federal Reserved Water Rights for this Reservation:

II. Quantification of Federal Reserved Water Rights

A. Status of Claim:

B. Quantity Claimed:

C. Place of Use:

D. Source:

E. Claimed Priority Date:

F. Claimed Purpose:

G. ADL/LAS Numbers:

III. Information Available

A. Location of Filed Data:

B. Other Information Sources:

Alaska State Legislature

ARLISS STURGULEWSKI, Chairman
BETTYE FAHRENKAMP, Vice Chairman
JACK COGHILL
DICK ELIASON
VIC FISCHER
RICK HALFORD
FRED ZHAROFF

POUCH V
JUNEAU, ALASKA, 99811
(907) 465-4907

Senate
Committee on Resources

MEMORANDUM March 7, 1985

TO: All Members
Senate Resources Committee

FROM: Staff FH
Senate Resources Committee

RE: SB 150 "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing a procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

SB 150 establishes procedures for the administrative and judicial adjudication of water rights and make miscellaneous amendments to the Alaska Water Use Act (AS 46.15).

The bill is an attempt to clarify and simplify the procedure for the adjudication of water rights. In many western states, thousands of lawsuits have arisen where there were more appropriators than water available. The conflicts arose where federal reserves existed and as a result of the McCarran Amendment those cases against the federal government could be heard in state courts. This placed a tremendous burden on the court systems of the various states. SB 150 is designed to try to avoid those problems.

Substantial differences, however, exist among interested parties as specified in the attached correspondence received by the committee. A brief overview of those portions is outlined below:

Governor's Bill	Alaska Miners Association Comments	Livengood/Tolovana Mining District Comments
Section 1		
Disclaimer section asserting that water rights are not guarantee of quality, volume, pressure or cost.	Not Necessary	Not Necessary

Governor's Bill	Alaska Miners Association Comments	Livengood/Tolovana Mining District Comments
Section 2		
Clarifies relationship of pending declarations to proposed procedures.	No Comment	No Comment
Section 3		
If water rights not used for five years may be declared abandoned.	Should not be changed from present statutes.	Should not be changed from present statutes.
Section 4		
Clarifies how commissioner may terminate an in-stream flow reservation for best interest of state.	Opposed to words "best interest of state."	Opposed to words "best interest of state."
Section 5		
Allows commissioner of DNR to initiate an administrative adjudication for state and federal water rights.	Federal reserved water rights should be in separate statute.	An administrative adjudication of federal reserved water rights only after a complete hydrology study.
Section 6		
DNR has authority to remove unsafe or unpermitted works of appropriation.	Not Necessary	Should be deleted.

Included in this packet are:

1. Governor's transmittal letter;
2. Department of Natural Resources fiscal note which is zero;
3. Letter from the Alaska Miners Association;
4. Letter from the Livengood/Tolovana Mining District;
5. Letter from the Alaska Court System.
6. Alaska Water Resources Board Resolution 84-5.

BILL SHEFFIELD
GOVERNOR

SB. 50

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

2/12/85

The Honorable Don Bennett
President of the Senate
Alaska State Legislature
Pouch V
Juneau, AK 99811

Dear Senator Bennett:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the adjudication of water rights and making miscellaneous amendments to the Alaska Water Use Act (AS 46.15). The bill comes as a result of the Alaska Water Resources Board resolution 84-5, dated March 14, 1984, recommending the adoption of specific statutory procedures for the administrative and judicial adjudication of water rights, particularly federal reserved water rights.

A federal reserved water right is one created by implication when the federal government withdraws land for a specific purpose, such as for a national forest, Indian reservation, or national monument. The United States Supreme Court first recognized federal reserved water rights in Winters v. United States, 207 U.S. 564 (1908), an Indian reservation case. Since that time, court cases have extended the doctrine to many other types of federal withdrawals. Since a federal reserved water right is created by implication, no specific quantity of water and no priority date for the water right is established until the court does so by decree. To facilitate the ascertainment of the existence of a federal reserved water right, its quantity, and its priority date, Congress passed the McCarran Amendment, 43 U.S.C. sec. 666, allowing water adjudication suits to be brought against the federal government in state courts. The statute requires the adjudication of all rights within a hydrologic basin where a federal reserved water right may exist. This has created lawsuits involving literally thousands of defendants in some of the western states, where there are many appropriators and not enough water. The complexity and expense of such litigation has prompted many western states to enact specific adjudication legislation to facilitate the determination of water rights. The attached bill accord-

ingly draws from the experience of other states and their adjudication statutory schemes.

Section 1 of the bill amends AS 46.15.040 to add a disclaimer to the Water Use Act, asserting that a right to appropriate water which the state grants is not a state guarantee of a particular water quality, volume, or pressure, or that water may be withdrawn at a particular cost. Appropriators in adjudications in other western states have raised this "guarantee" argument. While courts that have reached the issue have rejected the argument, nonetheless it would serve the expeditious resolution of water disputes in Alaska if the lack of guarantee were specified in the Water Use Act.

Section 2 of the bill adds a new subsection to AS 46.15.065, the current statute setting out the procedures for handling individual declarations of water rights existing before July 1, 1966. Under AS 46.15.065(b)(1), the commissioner of natural resources set the deadline for filing those declarations, and approximately 15 are pending. This new subsection makes clear the relationship between the procedures for handling those declarations and the proposed procedures (AS 46.15.165 and 46.15.166 in the bill) for handling basinwide water rights adjudications.

Section 3 of the bill amends AS 46.15.140 to clarify the existing abandonment and forfeiture provisions and to create a rebuttable presumption that if an appropriator does not beneficially use the water covered under a certificate for a period of five successive years, it is the appropriator's obligation to prove to the commissioner that the appropriation has not been abandoned.

Section 4 of the bill clarifies how the commissioner may terminate an in-stream flow reservation.

Section 5 contains the body of the adjudication provisions. It first creates a new AS 46.15.165, which would allow the commissioner of the Department of Natural Resources to initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a particular hydrologic basin. Under AS 46.15.165, the commissioner would give notice to all relevant appropriators and landowners, including governmental agencies. When the hydrologic basin includes land or water held in trust by the United States for Alaska Natives, such as the Annette Island Reserve, notice would also be sent to relevant authorities in order to protect the Natives' interests, if any, in a federal reserved

ch 50

water right. A person or entity claiming a federal reserved water right who is served with notice, but who fails to consent to an administrative adjudication, would be excluded as a participant. Under AS 46.15.165 the commissioner would have authority to adopt procedural regulations and to appoint a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; and to make recommendations to the commissioner. Any final determination of water rights the commissioner makes would be subject to an administrative appeal to superior court. Section 5 also creates a new AS 46.15.166 providing that when a federal reserved water right may be involved, and the claimant refuses to consent to an administrative adjudication, the commissioner could initiate the adjudication in superior court, consistent with the McCarran Amendment, 43 U.S.C. sec. 666. In that instance, the bill gives the superior court authority to appoint a designee of the commissioner as a master to perform the same functions a master would in an administrative adjudication, but under the court's supervision.

While the design of the adjudication bill is to provide a procedure for the adjudication of both non-federal and federal reserved water rights, a new AS 46.15.169 makes clear that nothing in the Alaska Water Use Act is to be construed as an admission against the State of Alaska that a federal reserved water right exists in any particular context.

Section 6 of the bill adds a new AS 46.15.255 and 46.15.256, to clarify the Department of Natural Resources' authority to take action to remove unsafe, as well as unpermitted, works of appropriation if the appropriator refuses to do so, and to inspect records of an appropriator pertinent to the permitted or certificated use of water under the Water Use Act.

Given the experience of states other than Alaska in adjudicating water rights and the large number of federal reservations in Alaska, a sound statutory system for adjudication is imperative. Therefore, I urge your prompt action on this bill.

Sincerely,

Bill Sheffield
Governor

STATE OF ALASKA 1985 LEGISLATIVE SESSION

FISCAL NOTE

Revision Date:

REQUEST

Bill/~~Resolution~~ No.: SB 150

Title: Water Use Act

Sponsor:

Requestor:

Date of Request:

FISCAL DETAIL

Agency Affected: Natural Resources

Program Category Affected: NRMEC

BRU, Program or Subprogram(s) Affected:

Land and Water Management

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90
OPERATING						
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 SUPPLIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS						
800 MISCELLANEOUS						
TOTAL OPERATING		-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL		-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: Attach a separate page if necessary

No fiscal impact.

Prepared By: Ned Farquhar Phone: 465-2400

Division: Commissioner's Office Date: January 31, 1985

Approved by Commissioner: Date: January 31, 1985

Agency: Natural Resources

Distribution (by Agency preparing fiscal note):

Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

7/1/84

FEB 27 1995

ALASKA MINERS ASSOCIATION
Fairbanks Branch State Oversight Committee
P.O. Box 73069
Fairbanks, Ak 99707

RE: SB 150

Dear Resource Committees;

We are concerned about the implications of SB 150. We agree with the Alaska Resources Boards findings that the current statutes and regulations are adequate to implement basinwide adjudication of federal reserved water rights. We feel that SB 150 addresses issues that should not be addressed, while not adequately addressing the issues that should be addressed.

We are also concerned about the reported Department of Natural Resources estimate that the fiscal note is zero. The bill, as currently written, contains at least two sections that will be very costly to manage. These two sections are contained in Section 6 and deal with "Enforcement" and "Data Collection Authority". Several other sections will certainly carry a high price tag if implemented. We fear that the Department of Natural Resources will be forced to shift their work load from other areas that are critical to orderly development of the State.

The following comments are addressed to specific sections of the bill:

SECTION 1: Since this specific "disclaimer" wording has never been upheld in a court of law, according to the Governor's transmittal letter, we feel that it is not necessary to include it in our statutes. It could lead to costly court battles that are extremely unnecessary.

SECTION 3: Sec. 46.15.140 (c) states that the Failure to use beneficially, etc. The word beneficially is a buzz word that is hard to define, and should be deleted from that section. We believe that the entire section should remain as it currently appears in the Statutes, and the proposed change should not be considered.

SECTION 4: The term "in the best interests of the state" is one that has been difficult to define. It leaves room for arbritrary and capricious decisions. We suggest that this term be deleted and the term "in accordance with AS 46.14.140(b)" be left in that section.

SECTION 5: We feel that the federal reserved water rights should be properly adjudicated. However, we believe that by adding the federal reserved water rights to the water use act, the Governor has only confused issues. We would suggest that the federal reserved water rights be addressed in a seperate statute. Thus Sec. 46.15.165, Sec. AS 46.15.166 Sec. AS 46.15.167, Sec. 46.15.168, and Sec. 46.15.169 could all be incorporated into a seperate statute dealing only with federal reserved water rights, and not infringe upon the current Water Use Bill and the rights and priviledges granted under it.

SECTION 6: This entire section should be deleted. Other agencies have enforcement powers, and the addition of this power to DNR would only be a duplication of effort.

LIVENGOOD/TOLOVANA MINING DISTRICT

P. O. BOX 73069 - FAIRBANKS, ALASKA 99705

February 23, 1985

Dear Legislator:

The Livengood/Tolovana Mining District expressed concerns to you regarding SB 150 in a Public Opinion Message on February 19. This bill would have an impact upon the General Public of Alaska, as there are many different type of water appropriations issued for the State. We would like to submit the following comments on SB 150.

In the opening paragraph of the Governor's letter of transmittal dated February 12, 1985, he stated, "The bill comes as a result of the Alaska Water Resources Board resolution 84-5, dated March 14, 1984, recommending the adoption of specific statutory procedures for the administration and judicial adjudication of water rights, particularly federal reserved water rights."

In the minutes from the Alaska Water Board dated March 13-14, 1984, the following comments are made:

> Resolution to the Commissioner of DNR to propose legislation for basinwide adjudication. Current statutes and regulations are adequate to implement basinwide adjudication of federal reserved water rights. However, more explicit statutes are needed to establish the Superior Court's duties and responsibilities and to set the limits of the court's authority, since this type of case has not previously occurred in Alaska.

Although the Governor has the authority to introduce legislation resolving perceived problems such as the Water Board indicated, the proposed legislation goes far beyond the recommendations of the Board. The Board found that current statutes and regulations are adequate to implement a basinwide adjudication of federal reserved rights, and requested statutes only to establish the Superior Court's duties and responsibilities. We believe the recommendations of the Water Resource Board are valid, and SB 150 should only address the Superior Court's duties and responsibilities.

The February 12, 1985 Senate Journal, page 279, regarding SB 150 reads: "Department of Natural Resources fiscal note is zero." We are concerned that if the fiscal note is indeed zero, the Department of Natural Resources will be forced to shift their work load from critical areas into administration of the bill. We therefore feel the bill should be submitted to the Finance Committee for appropriate budgetary appropriations. Section 6 AS 46.15.255 (ENFORCEMENT) and 256 (DATA COLLECTION AUTHORITY) are extremely costly sections to administer.

The bill seriously amends the Water Use Act in established areas. The following comments are addressed to specific sections of the bill.

SECTION 1: In the letter of transmittal Governor Sheffield admitted that this concept had never been upheld in a court of law. Why waste the courts time with an indefensible law? If Section 1 is amended as suggested by SB 150, it makes an appropriation of a specific amount of water meaningless. How can a developer of any type proceed with engineering and funding a venture under such circumstances?

SECTION 3: This section does not appear to recognize that a water right is a property right that can be leased or sold. This section, by regulation, would divest the property owner of his entire water right, or an unused portion, if that appropriation, or portion thereof, were not used over a 5 year period. (See Sections 46.15.255 and 256). AS 46.15.140 as it currently appears in the Statutes is appropriate without change.

SECTION 4: We feel that by the addition of the words "best interests of the state" and deletion of "in accordance with AS 46.15.140 (b)" this section provides for arbritrary and capricious decisions.

SECTION 5: We feel that water should be adjudicated, especially with respect to federal reservations. We suggest the following change of wording:

> Sec. 46.15.165 ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of (ALL) Federal Reserved water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems following a complete hydrology study.

SECTION 6. This entire section should be deleted. Article VIII Section 16 of the Constitution of Alaska states, "No person shall be involuntarily divested of his right to the use of waters, his interests in lands, or improvements affecting either, except for a superior beneficial use or public purpose and then only with just compensation and by operation of law."

We sincerely appreciate your consideration of these comments. If we can be of assistance to you in any manner, please do not hesitate to call on us.

Sincerely yours

Rose Rybachek

Rose Rybachek, President

Burden of proof — abandonment — & statutes
Voluntary
Sec 5.
not pipeline

MAR 4 1985

Alaska Court System
State of Alaska

OFFICE OF ADMINISTRATIVE DIRECTOR

KARLA L. FORSYTHE
General Counsel

303 K Street
Anchorage, AK 99501

February 26, 1985

Senator Arliss Sturgulewski
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Sturgulewski:

I am writing to bring to your attention a minor concern with SB 150, an act establishing procedures for administrative and judicial adjudication of water rights under the Alaska Water Use Act.

Proposed Sec. 46.15.166(c) (page 7, lines 4- 14), provides that in an action, the court may initially appoint a designee of the commissioner as a master. The master may be an employee of the state.

If the master is a state employee, I assume that the costs of the master will be absorbed as part of the employee's regular salary. However, it would be helpful if the legislation provided that if the master is not a state employee, the costs of the master and any related expenses incurred by the master shall be paid by the parties to the adjudication.

Thank you for your consideration of this comment. If there are any questions, I will be glad to provide further information.

Sincerely,

Karla L. Forsythe

Karla L. Forsythe
General Counsel

KLF:smh

cc: Arthur H. Snowden, II
Art Peterson

Resolution No. 84-5

**FEDERAL RESERVE WATER RIGHTS —
BASIN-WIDE ADJUDICATION**

The federal government is vested with reserved water rights on numerous federal land withdrawals in Alaska. Federal legislation establishing the reserves specifies the purposes of the reserved water rights and the enacting date establishes their priority date. These water rights include both diversionary and instream uses.

Of the 367.7 million acres in Alaska, federal reserve water rights exist on almost 60 percent of the land mass or over 215 million acres. From a miniscule 2.5 million acres of military land, to 50 and 75 million acres of land for national parks and fish and wildlife refuges respectively, federal reserve water rights issues and problems have the potential to be large as well as complex.

In order for DNR to adequately manage the state's water and adjudicate water rights, it will ultimately be desirable to integrate federal reserved water rights with state adjudicated water rights. The federal government has indicated it will await requests from the states before initiating quantification of federal reserved water rights. Adjudication of claimed federal reserved water rights must be undertaken pursuant to the requirements of the McCarran Amendment (43 USC 666(a)) which requires that the adjudication be basin-wide and judicially determined. The Water Use Act, AS 46.15 does not specifically provide for basinwide court adjudication for federal reserved water rights.

THE ALASKA WATER RESOURCES BOARD, therefore, urges that the Commissioner of the Department of Natural Resources propose legislation for basin-wide adjudication. Current statutes and regulations may be adequate to initiate a basinwide adjudication of federal reserved rights using a declaratory judgement suit in Superior Court. However, more explicit statutes are needed to establish the Superior Court's duties and responsibilities and to set the limits of the Court's authority. This type of case has not previously occurred in Alaska. In addition, the Department of Natural Resources should review existing provisions of the Water Use Act and propose any needed amendments to improve and update the Act.

ADOPTED this 14th day of March, 1984

ALASKA WATER RESOURCES BOARD

David Vanderbrink

David Vanderbrink, Chairman

Alaska Department of
NATURAL RESOURCES

ESTHER WUNNICKE,
COMMISSIONER

Fact Sheet: FEDERAL RESERVED WATER RIGHTS

JULY, 1985

WHAT ARE FEDERAL RESERVED WATER RIGHTS?

- Federal reserved water rights are created when federal lands are withdrawn from entry (by Congress or other lawful means) for federal use.
- Federal reserved water rights:
  - apply to both instream and out-of-stream use
  - may be created without actual diversion or beneficial use
  - are not lost by non-use
  - priority dates are established as the date the land is withdrawn for the primary purpose(s)
  - are created for the minimal amount of water reasonably necessary to satisfy both existing and reasonable foreseeable future uses of water for the primary purpose(s) for which the land is withdrawn
- Water rights for secondary purposes must be obtained under state law, AS 46.15.

WHY ARE FEDERAL RESERVED WATER RIGHTS IMPORTANT TO YOU?

- Water users in areas where there are federal land withdrawals should file for water rights with DNR in order to protect their use of water. If a basin wide adjudication is started for your river basin, you can then be assured of being included in the adjudication.
- Holders of water rights with priority dates established before the withdrawal of federal lands within a basin will have water rights senior to the federal government. Water users filing for water rights after the withdrawal of federal lands within a specific basin will have water rights with priority dates later than those of the federal government.

HOW ARE FEDERAL RESERVED WATER RIGHTS ADJUDICATED?

- Federal reserved water rights are a judicial creation. The United States Supreme Court first recognized federal reserved water rights in *Winters v. United States*, 207 U.S. 564 (1908), an Indian reservation case. Since that time, court cases have extended the Winters Doctrine to other types of federal land withdrawals.
- Federal law, the McCarren Amendment (43 U.S.C. 666), allows judicial adjudication of federal reserved water rights in state court.
- The McCarren Amendment requires that state court adjudications include all water rights in a river basin, including all claimed federal reserved water rights and state administered water rights.

WHY ARE WE CONCERNED ABOUT FEDERAL RESERVED WATER RIGHTS?

- Because federal reserved water rights are unquantified, DNR does not know how much water is needed or used for the primary purposes of federal land withdrawals in Alaska. Because the unappropriated water available from a water source and the amount of water reserved by a federal withdrawal is unknown, water resources cannot be effectively managed.
- Alaska's growing population and development pressures have caused water supply and water rights conflicts in several areas of unquantified federal reserved water rights. Examples include Sitka's Indian River and Anchorage's Ship Creek.
- For DNR to effectively manage and allocate the state's water and adjudicate water rights, it is necessary to have the federal reserved water rights in Alaska inventoried and quantified by the appropriate federal land management agencies in cooperation with the State of Alaska. The state can then integrate federal reserved water rights with state administratively adjudicated water rights and manage water sources with greater certainty.

HOW MUCH LAND IN ALASKA HAS FEDERAL RESERVED WATER RIGHTS?

- Of the 367.7 million acres in Alaska, almost 49 percent, or more than 178 million acres are reserved federal lands which may have federal reserved water rights:

These federal lands are made up of:

Military land - 2.5 million acres
National Forests - 23.2 million acres
BLM lands - 26.1 million acres
National Parks - 51 million acres
Fish and Wildlife Refuges - 76 million acres

For more information about federal reserved water rights and application forms for water rights, please call, write, or come to one of the following Offices:

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

SOUTHEASTERN REGIONAL OFFICE
400 Willoughby Avenue
Suite 400
Juneau, Alaska 99801
465-3400

NORTHERN REGIONAL OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHCENTRAL REGIONAL OFFICE
Frontier Building
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
561-2020

Mat-Su Area Office
Century Plaza, Suite 202
Pouch 874008
Wasilla, Alaska 99510
376-4595

DIVISION OF FORESTRY

HAINES AREA OFFICE
Room 6, Gateway Building
Main Street
Post Office Box 263
Haines, Alaska 99827
766-2120

KETCHIKAN AREA OFFICE
318 NBA Building
Post Office Box 5220
Ketchikan, Alaska 99901
225-3070

PETERSBURG AREA OFFICE
Petersburg State Office Building
215 Sing Lee Alley
Box 1580
Petersburg, Alaska 99833
722-3236

DELTA AREA OFFICE
Mile 267.5 Richardson Highway
Post Office Box 1149
Delta Junction, Alaska 99737
895-4225

TOK AREA OFFICE
Mile 124.1 Glenn Highway
Post Office Box 10
Tok, Alaska 99780
883-5134

SOUTHWEST (McGRATH) AREA OFFICE
McGrath Airport
Box 130
McGrath, Alaska 99627
524-3010

KENAI PENINSULA AREA OFFICE
Mile 92.5 Sterling Highway
S.R. 2, Box 107
Soldotna, Alaska 99669
262-7559

COPPER RIVER AREA OFFICE
Mile 110 Richardson Highway
Post Office Box 185
Glennallen, Alaska 99588
822-5534

Alaska Department of
NATURAL RESOURCES

ESTHER WUNNICKE,
COMMISSIONER

Fact Sheet:
WATER RIGHTS IN ALASKA

SEPTEMBER 1985

WHAT ARE WATER RIGHTS?

A water right is a property right for the use of surface and subsurface waters by the public as provided by the Alaska Water Use Act (Alaska Statutes 46.15). This water right allows specified amounts of water from particular water sources to be diverted, impounded and withdrawn for specified uses. When a water right is granted, it becomes attached to the land where the water is being used for as long as you use it. If the land is sold, the water right goes with the land to the new owner, unless it is separated from the land with the approval of the Department of Natural Resources.

HOW DO I OBTAIN WATER RIGHTS?

To obtain water rights in Alaska you submit an Application for Water Rights to the Alaska Division of Land and Water Management. You are issued a permit to develop a water source and construct the means to use the water. Once you prove you are beneficially using the water, a certificate of appropriation is then issued. This is a legal document which conveys water rights once the water is being used. In Alaska, there are no automatic rights to ground water because of ownership of overlying land and there are no rights to surface waters because of ownership of adjoining or surrounding land. Use of water without a permit or certificate does not give the user defensible legal rights to the water, no matter how long the water use continues.

WHAT COSTS ARE INVOLVED?

To insure that the public is notified of the proposed water use, you are required to pay the cost of legal advertisement in at least one issue of a local newspaper in the vicinity of the proposed appropriation. However, if the proposed use will not exceed 1,000 gallons of water per day in a single-family domestic household there is no requirement to publish an advertisement. If there are more potential users than the source of water can supply, the Department may require legal advertisement of all types of water rights applicants.

WHY SHOULD I APPLY FOR WATER RIGHTS?

1. If you have established water rights, you have a legal standing to assert those rights against conflicting uses of water with people who do not have water rights.
2. A person with established water rights has priority to the use of water over persons who later file for water rights from the same water source.
3. Anyone who constructs works for the taking of water (an appropriation), or uses a significant amount of water without a permit or certificate of appropriation is guilty of a misdemeanor. (Alaska Statutes 46.15.180)

A significant amount of water as defined by regulation (Alaska Administrative Code 11 AAC 93.970(14)) is the:

- use of 5,000 or more gallons of water in a day from a single source, or;
- the regular daily or recurring seasonal use of 500 or more gallons of water per day for 10 days or more per year from a single source, or;
- any water use that may affect the water rights of other users or the public interest.

4. By filing for water rights, you provide valuable information about water use and consumption in Alaska. This is essential in estimating the present uses of water, predicting future withdrawals, protecting the rights of prior appropriators, and providing for proper management for this important resource.

WHAT OTHER WATER RESOURCES PERMITS MIGHT BE NEEDED FROM THE DEPARTMENT OF NATURAL RESOURCES?

A certificate of approval is required if you want to construct or modify a dam of 10 feet or more in height, or if the storage capacity exceeds 50 acre-feet. A separate application form along with a sliding filing fee applies for various size dams as set forth in the regulations (11 AAC 93.200).

An application for reservation of water may be filed to maintain a specified flow or level of water in a water body at a specified point for specified times. By statute, an instream flow reservation can be made to ensure sufficient water is maintained for protection of fish and wildlife, recreation and park purposes, navigation or transportation purposes, and sanitary and water quality purposes.

HOW DO I OBTAIN AUTHORIZATION FOR SHORT-TERM WATER USE?

Temporary authorization may be required for significant short-term water uses such as construction projects. This authorization does not establish a water right but may help avoid problems with fisheries or existing water right holders. Applications should be made in the form of a letter request to the Department with an associated map showing the location of the water take point and location and amount of water use.

Further information about water rights and copies of the application forms may be obtained from one of the following offices. Applications for water rights must be submitted to a Division of Land and Water Management regional office.

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

SOUTHEASTERN REGIONAL OFFICE
400 Willoughby Avenue
Suite 400
Juneau, Alaska 99801
465-3400

NORTHERN REGIONAL OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHCENTRAL REGIONAL OFFICE
Frontier Building
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
762-2277

Mat-Su Area Office
Central Plaza, Suite 202
Pouch 874008
Wasilla, Alaska 99687
376-4595

DIVISION OF FORESTRY

HAINES AREA OFFICE
Room 6, Gateway Building
Main Street
Post Office Box 263
Haines, Alaska 99827
766-2120

KETCHIKAN AREA OFFICE
318 NBA Building
Post Office Box 5220
Ketchikan, Alaska 99901
225-3070

PETERSBURG AREA OFFICE
Petersburg State Office Building
215 Sing Lee Alley
Box 1580
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S.R.2, Box 107
Soldotna, Alaska 99669
262-7559

COPPER RIVER AREA OFFICE
Mile 110 Richardson Highway
Post Office Box 185
Glennallen, Alaska 99588
822-5534

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

OFFICE OF THE COMMISSIONER

Senate Bill 150

Testimony/Senate Resource Committee

Department of Natural Resources

Senator Sturgelewski, Members of the Committee:

Senate Bill 150, dealing with federal reserved water rights, was introduced during the past legislative session. This committee held a hearing on the bill in March of last year. We think it is crucial piece of water resources legislation for Alaska because it would establish procedures to adjudicate federal reserved water rights.

Currently, the Water Use Act, AS 46.15, does not have procedures for basin-wide adjudication of state administered water rights or claimed federal reserved water rights. The proposed bill would provide a state superior court procedure for efficiently adjudicating federal reserved water rights through the use of existing state agency expertise. The bill also sets up an administrative basin-wide adjudication procedure for state administered water rights when a controversy exists between appropriators, such as the scarcity of water within a river basin or ground water aquifer.

A federal reserved water right is one created either expressly or by implication when the federal government withdraws land for a specific purpose. The U.S. Supreme Court first recognized federal reserved water rights in Winters v. Unites States, in 1908. Since that time court cases have extended the doctrine to national forests, parks, refuges, and monuments. Since federal reserved water rights are most often created by implication, no specific quantity of water and no priority date for the water right is established until a court does so by decree. Congress passed the McCarren Amendment, to allow water adjudication suits to be brought against the federal government in state court to determine the quantity and priority date of these implied water rights. While allowing state court adjudication of federal reserved water quantities and priority dates, the McCarren amendment also requires a comprehensive adjudication of all rights within a hydrologic basin where a federal reserved water right may exist.

Federal land reservations make up almost 49 percent of Alaska's total land mass, and may have federal reserved water rights. While competition for water resources in the locale of many of Alaska's federal reservations is limited, we have recently encountered instances where a procedure for adjudication would improve opportunities for state economic development. Applications for additional hatchery water in Sitka were shelved pending study of federal rights to Indian River water. Of more immediate consequence are National Park Service requests for Nuka River appropriations which could reduce Bradley Lake power

production potential. These situations will continue to arise and require a resolution mechanism.

Legislation for basin-wide adjudication was first submitted to the Legislature in 1981. SB 150 was prepared by the Attorney General's Office after extensive review of that initial bill and other western states' laws dealing with federal reserved water rights adjudication. This bill is the best of the basin-wide adjudication legislation of the western states. Drafts of this bill were reviewed by the Departments of Fish and Game and Environmental Conservation, members of the Alaska Water Resources Board, the Western States Water Council, and the states of Idaho and Wyoming. During the past legislative session, there was one hearing by the Senate Resources Committee on SB 150 and we received a number of written comments. This fall we have worked with Senator Halford and the state and federal resource management agencies that participate on the Federal Reserved Water Rights Work Group, chaired by DNR. The committee substitute before you incorporates the changes suggested during this review.

A unique feature affecting federal reserve water rights in Alaska is that so much of Alaska's water resources are undeveloped and unappropriated. Thus, unlike the other western states, federal agencies in Alaska may encounter little competition for their water needs. For this reason, we may find that the courts in Alaska may be more lenient in adjudicating federal reserved water rights for the amounts claimed by the federal government. The

state's challenge will be to persuade the courts to apply the same standards in Alaska that have been applied outside--granting the minimum amount of water needed for the primary purposes of the land reservation. This is important to ensure that developable water resources are available for the continued growth and development of our state.

In summary, under the State's system of allocating water rights based on prior appropriation, there is no way that dealing with federal reserved water rights can be avoided. We will either adjudicate administratively, through the state courts, or in federal court -- these are the choices as we see them. Adjudication using the administrative and state court procedures that would be provided by enactment of SB 150 is the most efficient as well as the least expensive alternative.

Cyril R. Wanamaker
P.O. Box 2234
Juneau, Alaska 99803

Alaska Water Resources Board

January 22, 1986

Honorable Arliss Sturgulewski
Chairman, Senate Resources Committee
Pouch V
Juneau, Alaska 99811

RE: Committee Substitute for SB 150

Dear Senator Sturgulewski:

The Committee Substitute (Bradley,'01,'20,'86) for SB 150 has been proposed as an act to make miscellaneous amendments to the Alaska Water Use Act (AS 46.15), to establish procedures for the administrative and judicial adjudication of water rights under the act and to provide for an effective date. The substitute bill appears to meet the concerns identified to the Alaska Water Resources Board, the administrative needs of the Alaska DePartment of Natural Resources (as identified to you in a letter from Commissioner Numnichs dated January 9, 1986) and to provide the means to properly adjudicate any Federal Reserved Water Rights that may be asserted.

The Alaska Water Resources Board has had a long period of involvement with the development of SB 150 the Predecessor to the Committee Substitute. Although the Board as a whole has not had an oPPortunity to review and comment on the Committee Substitute a member has had input into the substitute bill and Previous Board suggestions have been incorporated as well. I think it meets the concerns of the Board and the needs of the State in its Present form.

The Board will meet in Juneau from February 26th through the 28th, and additional comments may come from the Board after that meeting. I am sure that new revisions or amendments to this substitute or SB 150 will Prompt additional Board comments or recommendations.

As the Chairman of the Alaska Water Resources Board I suPPort the Committee Substitute. I recommend that it be Passed this legislative session in its Present form.

Respectfully,

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman
Alaska Water Resources Board

cc: All Board members

STATE OF ALASKA

DEPARTMENT OF LAW

OFFICE OF THE ATTORNEY GENERAL

BILL SHEFFIELD, GOVERNOR

REPLY TO:

☑ *1031 W 4th AVENUE*
SUITE 200
ANCHORAGE, ALASKA 99501
PHONE: (907) 276-3550

☐ *1st NATIONAL CENTER*
100 CUSHMAN ST.
SUITE 400
FAIRBANKS, ALASKA 99701
PHONE: (907) 452-1568

☐ *POUCH K - STATE CAPITOL*
JUNEAU, ALASKA 99811
PHONE: (907) 465-3600

January 24, 1986

JAN 27 1986

Honorable Arliss Sturgulewski
Senate Resources Committee
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Re: CS For Senate Bill No. 150
(Amending the Water Use Act)

Dear Senator Sturgulewski:

During the January 22, 1986, hearing on the proposed amendments to the Alaska Water Use Act, both Senators Fahrenkamp and Halford asked very good questions with respect to the proposed new AS 46.15.040(d) (section 1 of the proposed committee substitute for Senate Bill No. 150). Through the Division of Land and Water Management, proposed substitute language for subsection (d) will be offered which should clarify the intent and language of this subsection.

The intent of subsection (d) as drafted was to insure that water appropriators are not under the mistaken impression that when the state issues a permit or certificate the state is also guaranteeing some aspect of the appropriation, such as that the appropriator will be able to withdraw water from a well at a particular flow rate. In other words, the issuance of a permit or certificate only authorizes the use of the water, but promises nothing about it's flow rate, quality, etc. The hope was that subsection (d) would help the state avoid law suits claiming a permit or certificate is a state guarantee of some sort.

The subsection as written was <u>not</u> designed to insulate the state from liability for taking water and thereby adversely affecting a prior appropriator when the state itself is a permittee or certificate holder (such as in the case of a fish hatchery or a hydropower project). When the state itself is an appropriator, and the state's taking of water adversely affects the water right of an appropriator with a priority date earlier than the state, under Alaska law the prior appropriator has an enforceable right against the state for damages. This right is secured by AS 46.15.050 and art. VIII, sec. 16 of the Alaska Constitution.

Also, during the hearing Senator Fahrenkamp asked me for a statutory reference giving authority to the commissioner to declare critical water management areas. The relevant cite is AS 46.15.020(a) and (b)(1). Current regulatory authority in 11 AAC 93 is now being revised in light of the experience in declaring such an area at Auk Nu-Indian Cove in Juneau.

Again, thank you very much for helping arrange on short notice the teleconference to Anchorage.

Sincerely yours,

HAROLD M. BROWN
ATTORNEY GENERAL

By: Michael J. Frank
Michael J. Frank
Assistant Attorney General

MJF:amh
cc: Senator Rick Halford
Senator Betty Fahrenkamp
Ned Farquhar
Mary Lu Harle
Tom Hawkins

January 25, 1986

Dear Arliss;

First of all, thank you for the opportunity to make further comments on SB 150. As you know, this issue is of grave concern to me. I understand that you are holding a Senate Resources Hearing on the issue on Monday. I would like to request that we be allowed to address the Committee via the teleconference, if that is available.

Secondly, I realize that the State has a problem regarding appropriated water rights being essentially tied up by people that no longer have a use for them. This gives water management people a real problem.

However, it takes many years to perfect a mining claim and bring it into production. One of the major obstacles is to obtain a certificate of appropriation for needed water. This process involves research, public hearings, etc. additionalluy, years may be involved in exploration and development. In the meantime, the certificate of water could be lost due to the present language in SB 150 under the Abandonment section.

I have been assured that a miner who files an affadavit of annual labor on an unpatented mining claim is making a showing of an intent to hold his water rights. However, I do not see that spelled out in the bill.

I have a suggestion that might work, but it would take some research and discussion with miners to win their approval. That would be to insert language that would allow a water appropriator to file an "intent to hold" their water appropriation, similar to the one used by BLM to hold federal mining claims. On unpatented mining claims, this could be simply by filing their affadavit of annual labor. In other instances, such as patented claims or agriculture, etc., a short letter of intent could be used to confirm their intention.

As I stated, this is strictly a personal idea at this time---I have not had the time to discuss it with other miners, or the Board of Directors of AMA. Therefore, I am requesting that you not move the bill from you committee until we have had an opportunity to ascertain if this approach is feasible.

On another matter, I am enclosing a Resolution just passed by the Alaska Miners Association. I believe mining, particularly placer mining, is standing on the threshhold of extinction. I believe that the formation of such a Commission could possibly determine just what the underlying problems are, and arrive at solutions. I hope you will consider sponsoring such a bill. I have also sent copies of the Resolution to Senator's Fahrenkamp, Bennet, and Coghill, and Representatives Schultz and Frank.

Again, thank you for this opportunity. We appreciate the support you are giving the mining industry.

Yours,

Rose Rybachek

SB 150

WESTERN LEGISLATIVE CONFERENCE
THE COUNCIL OF STATE GOVERNMENTS

720 SACRAMENTO STREET, SAN FRANCISCO, CALIFORNIA 94108 (415) 986-3760

APPROVED RESOLUTION NO.85-11

PRIMACY OF STATE LAW IN RIPARIAN AREA LAND MANAGEMENT

(Introduced by the Water Policy Committee)

Urging Application of State Water Law in Riparian Area Land Management

WHEREAS, riparian lands are crucial to the economic development, environmental protection and scenic resources of the west and are protected under state law for those uses; and

WHEREAS, various proposals have been made to expand the powers of federal land agencies under the Federal Land Policy and Management Act (FLPMA) of 1976 to manage riparian lands; and

WHEREAS, the Bureau of Land Management has asserted authority under FLPMA to separately classify and manage riparian lands; and

WHEREAS, the definition of "riparian area habitat" as a separate land management classification fails to recognize state water law primacy in the definition of beneficial uses of western streams and rivers; and

WHEREAS, the Department of Agriculture has attempted to manage western state water resources by imposing stream channel stability requirements; and

WHEREAS, under the existing law of many states, a definition of beneficial use has developed which meets the concerns and purposes of riparian area habitat management; and

WHEREAS, the U.S. Supreme Court in the cases of U.S. v. New Mexico, 438 U.S. 696 (1978), and U.S. v. California, ___U.S.__(1978), clearly stated that waters necessary for management of public lands should be quantified and administered pursuant to state law;

WESTERN LEGISLATIVE CONFERENCE
THE COUNCIL OF STATE GOVERNMENTS

720 SACRAMENTO STREET, SAN FRANCISCO, CALIFORNIA 94108 (415) 986-3760

APPROVED RESOLUTION NO. 85-12

RESERVED WATER RIGHTS

(Introduced by the Water Policy Committee)

Opposing the Creation of New Reserved Rights

WHEREAS, the western semi-arid portions of the United States were settled and developed under local property laws and with the help and encouragement of the federal government under local property and water laws which have been recognized by Congress and the courts; and

WHEREAS, the Congress has consistently recognized and deferred to state water laws for well over 100 years; and

WHEREAS, state primacy in water allocation and management allows individual states to determine for themselves the water uses necessary to meet their present and future needs; and

WHEREAS, the "federal reserved water rights doctrine" was developed by the U.S. Supreme Court as a means for the federal government and Indian tribes to secure the water necessary to meet the purposes for which federal lands were withdrawn or designated; and

WHEREAS, as long as these federal reserved water rights remain unquantified, they interfere with the ability of state water agencies to manage the resource as well as threaten longstanding but junior appropriations who have historically relied on the resource; and

WHEREAS, Congress and the U.S. Supreme Court have also recognized that it is appropriate for state courts to quantify federal reserved rights as a part of a valid general stream adjudication proceeding; and

SB 150

WESTERN LEGISLATIVE CONFERENCE
THE COUNCIL OF STATE GOVERNMENTS

720 SACRAMENTO STREET, SAN FRANCISCO, CALIFORNIA 94108 (415) 986-3760

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WHEREAS, the Bureau of Land Management has asserted authority under FLPMA to separately classify and manage riparian lands; and

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WHEREAS, the Department of Agriculture has attempted to manage western state water resources by imposing stream channel stability requirements; and

WHEREAS, under the existing law of many states, a definition of beneficial use has developed which meets the concerns and purposes of riparian area habitat management; and

WHEREAS, the U.S. Supreme Court in the cases of U.S. v. New Mexico, 438 U.S. 696 (1978), and U.S. v. California, ___U.S.__(1978), clearly stated that waters necessary for management of public lands should be quantified and administered pursuant to state law;

NOW, THEREFORE, BE IT RESOLVED by the Western Legislative Conference of the Council of State Governments that federal land management agencies should not attempt to use scarce western water resources for riparian habitat management or stream channel stability purposes excerpt as provided under state law.

(RESOLUTION APPROVED BY THE CONFERENCE AT ITS 1985 ANNUAL MEETING ON OCTOBER IN EUGENE, OREGON)

WESTERN LEGISLATIVE CONFERENCE
THE COUNCIL OF STATE GOVERNMENTS

720 SACRAMENTO STREET, SAN FRANCISCO, CALIFORNIA 94108 (415) 986-3760

APPROVED RESOLUTION NO. 85-12

RESERVED WATER RIGHTS

(Introduced by the Water Policy Committee)

Opposing the Creation of New Reserved Rights

WHEREAS, the western semi-arid portions of the United States were settled and developed under local property laws and with the help and encouragement of the federal government under local property and water laws which have been recognized by Congress and the courts; and

WHEREAS, the Congress has consistently recognized and deferred to state water laws for well over 100 years; and

WHEREAS, state primacy in water allocation and management allows individual states to determine for themselves the water uses necessary to meet their present and future needs; and

WHEREAS, the "federal reserved water rights doctrine" was developed by the U.S. Supreme Court as a means for the federal government and Indian tribes to secure the water necessary to meet the purposes for which federal lands were withdrawn or designated; and

WHEREAS, as long as these federal reserved water rights remain unquantified, they interfere with the ability of state water agencies to manage the resource as well as threaten longstanding but junior appropriations who have historically relied on the resource; and

WHEREAS, Congress and the U.S. Supreme Court have also recognized that it is appropriate for state courts to quantify federal reserved rights as a part of a valid general stream adjudication proceeding; and

WHEREAS, the procedural laws of many Western States allow federal agencies and tribes the authority to quantify their water rights through less expensive and less confrontational negotiation procedures;

NOW, THEREFORE, BE IT RESOLVED that the Western Legislative Conference of the Council of State Governments urges that:

1. The federal government continue to acknowledge and honor the primary state role in water allocation and management,

2. The federal government and Indian tribes promptly quantify their reserved water rights claims in state general stream adjudications or non-litigative or mediation proceedings and that where necessary those resulting settlements be promptly ratified by Congress,

3. The federal land management agencies seek no new reserved rights not specified in existing federal land use legislation. Federal land management agencies should specify the federal water which will be required for purposes created in any new land use legislation or designation, and

4. The federal government provide assistance to states to expedite the quantification of reserved rights and reduce the harmful effects of reserved rights judgments or settlements.

(RESOLUTION APPROVED BY THE CONFERENCE AT ITS 1985 ANNUAL MEETING ON OCTOBER IN EUGENE, OREGON)

WESTERN LEGISLATIVE CONFERENCE
THE COUNCIL OF STATE GOVERNMENTS

720 SACRAMENTO STREET, SAN FRANCISCO, CALIFORNIA 94108 (415) 986-3760

APPROVED RESOLUTION NO.85-13

WATER QUALITY STANDARDS

(Introduced by Water Policy Committee)

Urging Flexibility in Setting Water Quality Standards

WHEREAS, water quality standards are developed with the purpose of protecting designated beneficial uses of the nation's water; and

WHEREAS, uniform nationwide standards are promulgated to protect these designated beneficial uses; and

WHEREAS, Environmental Protection Agency (EPA) water quality standards on some waters are more stringent than documented evidence requires at the specific site, and such standards on Western waters may result in excessive costs far out of proportion to derived benefits;

NOW, THEREFORE, BE IT RESOLVED that the Western Legislative Conference of the Council of State Governments urges that EPA water quality standards should not be based on nationwide criteria if it can be documented that site-specific criteria will not impair the designated beneficial use.

(RESOLUTION APPROVED BY THE CONFERENCE AT ITS 1985 ANNUAL MEETING ON OCTOBER 2 IN EUGENE, OREGON.)

STATE OF ALASKA 1986 LEGISLATIVE SESSION
FISCAL NOTE

Revision Date : 2/6/86

REQUEST

Bill/Resolution No. : CSSB 150 (Res)
Title : Basinwide Water Rights and Water Use Act

Sponsor : Rules/Governor
Requestor : Sen. Resources
Date of Request : 1/25/86

FISCAL DETAIL

Agency Affected : Natural Resources
BRU : Land and Water

Components : Water Management

EXPENDITURES/REVENUES : (Thousands of Dollars)

OPERATING	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	?	?	?
CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
REVENUE	-0-	-0-	-0-	-0-	-0-	-0-

FUNDING : (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS :

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : Attach a separate page if necessary

See attached explanation.

Prepared by : Ned Farquhar NF
Division : Commissioner's Office
Phone : 465-2400
Date : Feb. 6, 1986

Approved by Commissioner : [signature] Deputy
Date : Feb. 6, 1986
Agency : Natural Resources

Distribution (by Agency preparing fiscal note) :
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

10/25/85

Fiscal note background
for SB 150

The Department of Natural Resources submitted a zero fiscal note for SB 150 because there is no scheduled or anticipated basinwide water rights adjudication activity during the next five years. This has been amended to show that there may be costs in future years (beyond year two) if the Department enters into an adjudication that is not currently anticipated. If adjudications become necessary, the Department will submit such project budget requests as are needed to adjudicate each water rights project.

We are able to project the costs of a typical adjudication from work that has taken place to date on Indian River (Sitka) water rights. The costs of a nonbinding preliminary adjudication at Indian River are included in our FY 87 budget submittal (pp. 000548-000549, 000553-000555). The total cost for this adjudication action is estimated at about $8,000 per year over a three-year period.

Without this legislation, the Department and the Department of Law may face much higher costs if complainants, including federal agencies, attempt to resolve water rights issues in the courts. The legislation will set up a clear administrative system certain to be more cost-effective and efficient than court resolution of water rights issues. In other states lacking an administrative procedure the costs of court adjudications have been high. For instance Wyoming's Big Horn adjudication of non-Indian claims cost that state $500,000-700,000 when it was negotiated and settled before the trial date; court adjudication of the Indian claims cost the state an estimated $6,000,000.

An example of a possible area for a large administrative basinwide adjudication in Alaska is the Anchorage Lower Hillside area, encompassing about 16.5 square miles with about 2,250 existing or expected groundwater applications. To adjudicate claims in this area would take approximately three years and would be expected to cost $500,000-700,000.

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

MAR 18 1986

March 18, 1986

The Honorable Arliss Sturgulewski
Chair, Senate Resources Committee
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Re: SB 150 Basin-wide Adjudication of Water Rights

Dear Senator Sturgulewski:

In my February 17, 1986 letter to you (copy attached) answering questions raised by your committee on Senate Bill 150, I stated that I would ask our Division of Land and Water Management to identify areas where regulations would be necessary to implement SB 150. This letter provides this information.

Section 1 of SB 150 which adds a new subsection to AS 46.15.040 will not require a regulation. Section 2 amending AS 46.15.065 by adding a new subsection will not require a regulation. Sections 3 and 4 amending AS 46.15.140, Abandonment, Forfeiture and Reversion of Appropriations, will not require an additional new regulation. The existing regulation, 11 AAC 93.940, Procedure on Abandonment and Forfeiture, could be amended to simplify the administrative procedure for voluntary abandonment of water rights. Concerning Section 5 of SB 150 which amends AS 46.15.145, the existing regulation at 11 AAC 93.147(d) and (e) will need to be amended to include the discretionary hearing and to change the citations. Public notice and a written determination are already required in the existing regulation.

Section 6 of SB 150 would add five new sections to the Water Use Act. A regulation may be needed to set forth administrative procedures for establishing basin boundaries under proposed AS 46.15.165(a). A regulation describing the contents of the order initiating an administrative adjudication under proposed AS 46.15.165(b) may be needed. Subsection (c) of proposed AS 46.15.165 may need a regulation to identify which divisions of federal, state, and local

governments are notified. Subsection (i) may require regulations to set out the procedures for determining parties to the adjudication, classifying groups for efficient and cost effective adjudication, and for determining and allocating costs under subsection (4). Subsection (k) may require a regulation to detail the content of a consent by the federal government to participate in an administrative adjudication to quantify and prioritize federal reserved water rights. Proposed Section 46.15.166, Judicial Adjudications, will not require regulations. We do not foresee regulations required for proposed sections 46.15.167, 168, or 169.

Proposed Section 46.15.255 in Section 7 of SB 150 will require a regulation amendment to 11 AAC 93.290 to make this existing regulation consistent with proposed AS 46.15.255. No regulation is foreseen to implement proposed AS 46.15.256.

I hope this answers the questions raised by some of your committee members concerning regulations to implement this bill. If we can be of further assistance, please contact us.

Sincerely,

Esther C. Wunnicke
Commissioner

Attachment

cc: Senator Fahrenkamp
Senator Coghill
Senator Eliason
Senator Vic Fischer
Senator Halford
Senator Zharoff
Tom Hawkins
Mike Frank

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

February 17, 1986

The Honorable Arliss Sturgulewski
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Re: SB 150, Basin-wide Adjudication of Water Rights

Dear Senator Sturgulewski:

At the January 27, 1986 hearing on Senate Bill 150, several questions were raised to which we would like to respond. Scott Haskins, a miner speaking from the Fairbanks teleconference, stated that he has encountered problems in getting his water rights from DNR. We researched his cases, and located three water rights for which he applied for lode mining claims which he leased from Placid Oil Company. The case files indicated that our Northern Regional Office attempted to contact Mr. Haskins by phone and by mail several times at the listed phone number and address in order to obtain additional information and to provide public newspaper notice as required by AS 46.15.133. The regional office was unable to get a response from Mr. Haskins, so they attempted to reach him through Placid Oil Company, but again received no response. The regional office subsequently closed the case files because adjudication could not proceed. We did not locate any other water rights filed by Mr. Scott Haskins.

As a follow-up, you asked for an analysis of permits and certificates issued to placer miners. It normally takes several months to issue a water rights permit for a mining operation. This time period assumes the operation is fairly routine and includes the time for inter-agency and public notice and comment as required by AS 46.15.133. At the present time DNR has issued 960 permits and 254 certificates for placer mining.

On a different question, Senator Fahrenkamp asked whether we have drafted regulations to implement SB 150. As we responded at the hearing, regulations have not been drafted. Regulations are normally drafted after a bill is enacted so that

LH

the administering agency knows what the final language of the bill is. To do otherwise would require constant revisions of draft regulations as the bill makes its way through the Legislature. It should be noted that all legislators have the opportunity to review and comment on regulations during the public review process. I will ask the Division of Land and Water Management to analyze the bill and identify areas where regulations would be necessary for implementation of the statute.

Finally, Senator Coghill asked for an explanation of "rebuttable presumption." This means that after the state proves that an appropriation has been abandoned for five successive years under AS 46.15.140(b), there is a presumption that the appropriation has been abandoned or forfeited and the burden of proof shifts to the certificate holder to rebut or disprove this presumption.

I hope this answers all the questions raised at the hearing. If we can be of further assistance, please contact us.

Sincerely,

Esther C. Wunnicke
Commissioner

cc: Senator Fahrenkamp
Senator Coghill
Senator Eliason
Senator Vic Fischer
Senator Halford
Senator Zharoff
Tom Hawkins, Director, Division of Land and Water Management
Mike Frank, Department of Law

Frank

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF LAND AND WATER MANAGEMENT

BILL SHEFFIELD, GOVERNOR

555 CORDOVA STREET
POUCH 7-005
ANCHORAGE, ALASKA 99510-7005
PHONE: (907) 276-2653

September 3, 1985

Dear Alaskan:

The enclosed Fact Sheets on Federal Reserved Water Rights are provided by the Alaska Department of Natural Resources as part of our continuing effort to inform the public and government officials about water rights in Alaska.

An increasing population within the state, coupled with residential, agricultural, and industrial development, is causing an increased demand on DNR for assistance in water management and for information on water rights and permits. We believe that fact sheets, such as the enclosed, help provide for the information needs of our state's residents.

Further information may be obtained by contacting this office or one of the offices listed on the fact sheet.

Sincerely,

Tom Hawkins

Tom Hawkins
Director

Alaska Department of
NATURAL RESOURCES

ESTHER WUNNICKE,
COMMISSIONER

Fact Sheet: FEDERAL RESERVED WATER RIGHTS

JULY, 1985

WHAT ARE FEDERAL RESERVED WATER RIGHTS?

- Federal reserved water rights are created when federal lands are withdrawn from entry (by Congress or other lawful means) for federal use.
- Federal reserved water rights:
  - apply to both instream and out-of-stream use
  - may be created without actual diversion or beneficial use
  - are not lost by non-use
  - priority dates are established as the date the land is withdrawn for the primary purpose(s)
  - are created for the minimal amount of water reasonably necessary to satisfy both existing and reasonable foreseeable future uses of water for the primary purpose(s) for which the land is withdrawn
- Water rights for secondary purposes must be obtained under state law, AS 46.15.

WHY ARE FEDERAL RESERVED WATER RIGHTS IMPORTANT TO YOU?

- Water users in areas where there are federal land withdrawals should file for water rights with DNR in order to protect their use of water. If a basin wide adjudication is started for your river basin, you can then be assured of being included in the adjudication.
- Holders of water rights with priority dates established before the withdrawal of federal lands within a basin will have water rights senior to the federal government. Water users filing for water rights after the withdrawal of federal lands within a specific basin will have water rights with priority dates later than those of the federal government.

HOW ARE FEDERAL RESERVED WATER RIGHTS ADJUDICATED?

- Federal reserved water rights are a judicial creation. The United States Supreme Court first recognized federal reserved water rights in *Winters v. United States*, 207 U.S. 564 (1908), an Indian reservation case. Since that time, court cases have extended the Winters Doctrine to other types of federal land withdrawals.
- Federal law, the McCarren Amendment (43 U.S.C. 666), allows judicial adjudication of federal reserved water rights in state court.
- The McCarren Amendment requires that state court adjudications include all water rights in a river basin, including all claimed federal reserved water rights and state administered water rights.

WHY ARE WE CONCERNED ABOUT FEDERAL RESERVED WATER RIGHTS?

- Because federal reserved water rights are unquantified, DNR does not know how much water is needed or used for the primary purposes of federal land withdrawals in Alaska. Because the unappropriated water available from a water source and the amount of water reserved by a federal withdrawal is unknown, water resources cannot be effectively managed.
- Alaska's growing population and development pressures have caused water supply and water rights conflicts in several areas of unquantified federal reserved water rights. Examples include Sitka's Indian River and Anchorage's Ship Creek.
- For DNR to effectively manage and allocate the state's water and adjudicate water rights, it is necessary to have the federal reserved water rights in Alaska inventoried and quantified by the appropriate federal land management agencies in cooperation with the State of Alaska. The state can then integrate federal reserved water rights with state administratively adjudicated water rights and manage water sources with greater certainty.

HOW MUCH LAND IN ALASKA HAS FEDERAL RESERVED WATER RIGHTS?

- Of the 367.7 million acres in Alaska, almost 49 percent, or more than 178 million acres are reserved federal lands which may have federal reserved water rights:

These federal lands are made up of:

Military land - 2.5 million acres
National Forests - 23.2 million acres
BLM lands - 26.1 million acres
National Parks - 51 million acres
Fish and Wildlife Refuges - 76 million acres

For more information about federal reserved water rights and application forms for water rights, please call, write, or come to one of the following Offices:

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

SOUTHEASTERN REGIONAL OFFICE
400 Willoughby Avenue
Suite 400
Juneau, Alaska 99801
465-3400

NORTHERN REGIONAL OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHCENTRAL REGIONAL OFFICE
Frontier Building
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
561-2020

Mat-Su Area Office
Century Plaza, Suite 202
Pouch 874008
Wasilla, Alaska 99510
376-4595

DIVISION OF FORESTRY

HAINES AREA OFFICE
Room 6, Gateway Building
Main Street
Post Office Box 263
Haines, Alaska 99827
766-2120

KETCHIKAN AREA OFFICE
318 NBA Building
Post Office Box 5220
Ketchikan, Alaska 99901
225-3070

PETERSBURG AREA OFFICE
Petersburg State Office Building
215 Sing Lee Alley
Box 1580
Petersburg, Alaska 99833
772-3236

DELTA AREA OFFICE
Mile 267.5 Richardson Highway
Post Office Box 1149
Delta Junction, Alaska 99737
895-4225

TOK AREA OFFICE
Mile 124.1 Glenn Highway
Post Office Box 10
Tok, Alaska 99780
883-5134

SOUTHWEST (McGRATH) AREA OFFICE
McGrath Airport
Box [illegible]
McGrath, Alaska 99627
524-3010

KENAI PENINSULA AREA OFFICE
Mile 92.5 Sterling Highway
S.R. 2, Box 107
Soldotna, Alaska 99669
262-7559

COPPER RIVER AREA OFFICE
Mile 110 Richardson Highway
Post Office Box 185
Glennallen, Alaska 99588
822-5534

INTRODUCTION TO RESERVED WATER RIGHTS

Ralph W. Johnson

Natural Resources Law Center

University of Colorado School of Law

June 11-13, 1984

INTRODUCTION TO RESERVED WATER RIGHTS

Ralph W. Johnson

Natural Resources Law Center
University of Colorado School of Law

June 11-13, 1984

INTRODUCTION.
This paper will discuss the origin and development of the reservation doctrine, describe the various legislative attempts to limit or abolish the doctrine, and discuss its current status and implementation. The paper will concentrate on the NonIndian aspects of the doctrine.

The reservation doctrine inspires anger, fear, disdain, and occasionally eloquence:

Corker.

> It is the product of a fabricated legislative history. It is a perversion and a fabrication." Corker, A REAL LIVE PROBLEM OR TWO FOR THE WANING ENERGIES OF FRANK J. TRELEASE, 54 Den. L. J. 499, 500 (1977).

Trelease.

> "Cyprinodon diabolis, The Devil's Hole pupfish is alive and well and living in a striated marble palace in Nevada, located within a small addition to the Death Valley National Monument created for his benefit in 1952.". The reserved rights doctrine "is very like the Devil's Hole pupfish in many ways. It too is an evolutionary sport. It too lives in Devil's hole. It too has friends in high places within the federal bureaucracy and judicial system." Trelease, FEDERAL RESERVED WATER RIGHTS SINCE PLLRC, 54 Den. L. J. 473 (1977).

Goldberg.

> Described the relationship between western water law, including the reservation doctrine, and federalism as a "concoction of Byzantine politics and legalistic archaeology." Goldberg, INTERPOSITION--WILD WEST WATER STYLE, 17 Stan. L. Rev. 1, 36 (1964).
>
> Commenting on westerner's criticism of the doctrine, and of federal bureaucracy generally, he said: "This sort of fulmination is well within the tradition that permits the

Westerner to "blast at an all-consuming federal encroachment in words more blistering than all the winds that blow from Spokane to San Antonio" in unconcerned disregard of the historical fact "that from start to finish he was [federally] subsidized from his brogans to his sombrero. . . ". Goldberg, id. at 1.

Ely.

The reservation doctrine is a "first mortgage of undetermined and indeterminable magnitude," is a "sword of damocles" hanging over private water rights. Ely. Address to National Water Commission, Nov. 6, 1969. Reported in 54 Den. L. J. at 475 (1977).

Hanks.

The impact of the reservation doctrine could be "staggering indeed": "In 16 western states, the BIA administers 52,307,036 acres; a total of 138,595,360 are included in national forests, which are reserved areas, in the reclamation states. Approximately 85% of the entire state of Nevada is owned by the US. Of the 60 million acres of federal land in Nevada, 12 million acres are reserved lands. In Arizona, approximately 73 percent of all land is owned by the federal government." Hanks, PEACE WEST OF THE 98TH MERIDIAN--A SOLUTION TO FEDERAL-STATE CONFLICTS OVER WESTRN WATERS, 23 Rutgers L. Rev. 33,43 (1968).

Johnson.

Commenting on US v. New Mexico: "If you think that you can think about a thing (that thing being the purposes for which water was reserved under the Forest Service Organic Act in 1897) and that thing is inextricably attached to something else (the something else being the Reserved Rights Doctrine) without thinking of the thing to which it is attached to (which, of course, is the Reserved Rights Doctrine, which you can't think about because it didn't exist in 1897) then you have a legal mind. Or at least you may be qualified to sit on the Supreme Court!" Inst. for Nat. Res. Law Teachers, Boulder Colo., May 28, 1981. Adapted from saying by Thomas Reed Powell.

THE ORIGIN OF THE RESERVATION DOCTRINE

Disagreement on the date of origin of the doctrine.

The earliest cited case on the doctrine is United States v. Rio Grande Irrigation Co. 174 US 690 (1899), where the court said, per dicta, "[A] state cannot by its legislation destroy the

right of the United States, as owner of the land bordering on a stream, to the continued flow of its waters, so far at least as may be necessary for the beneficial uses of the government property." Id. at 703.

In Winters v. United States, 207 US 564 (1908) the Court recognized reserved rights in an Indian Tribe even though nothing had been said in the Ag eement with the Indians about water. The Court relied on Rio Grande for the proposition that "The power of the Government to reserve the waters and exempt them from appropriation under the state laws is not denied, and could not be."

Samuel Weil, in his treatise WATER RIGHTS IN THE WESTERN STATES (Bancroft-Whitney, 1911), says there are "divergent theories regarding the law of waters . . . on military and Indian reservations. . . .

But the general tendency of the Federal courts in dealing with water on or used by military or Indian reservations is to . . . tacitly assume that the creation of the reservation impliedly repealed the act of 1866 as to waters thereon; and to restore the proprietary rights of the Unites States, . . . not limited to the amount of water in actual use at any specific time."

"Military and Indian reservations are in exclusive government occupancy, wherein they may possibly differ from the forest and other reserved areas, which are intended to be open to the people." (Sec. 207).

The state's rights argument. This position argues that three acts, the Act of 1866, 1870, and 1877, constituted waivers of federal reserved rights claims . This argument seemed to be confirmed in California Oregon Power Co. v. Portland Beaver Cement Co., 295 US 142 (1935) where the court said:

> [The Desert Land Act] effected a severance of all water on the public domain, not theretofore appropriated, from the land itself. . . Congress intended to establish the rule that for the future the land should be patented separately; and that all nonnavigable waters thereon should be reserved for the use of the public under the laws of the states and territories. . . " 295 US at 162.

FPC v. Oregon, 349 US 435 (1955), alerted western lawyers to the possibility that the reserved rights doctrine might apply to NonIndian reserves, although no actual allocation of water was made in the case. The Court denied Oregon's claim of ownership of a nonnavigable stream, saying that the three above acts did not constitute a severance of waters as to federally "withdrawn" lands, and then held that a federally licensed project could go forward over state objections.

Arizona v. California, 373 US 546 (1963), firmly held that the reservation doctrine applied to NonIndian, reserved public lands, and the court allocated water to such reserved lands, 41,839 acre-feet per year for the Havasu Lake National Wildlife Refuge, and 28,000 acre-feet per year for the Imperial National Wildlife Refuge, both with 1941 priorities.

EXPECTATIONS DASHED

The western water establishment cried "unfair" after FPC v. Oregon and Arizona v. California, arguing that these cases destroyed legitimate expectations of prior appropriators. Trelease, debunking the claim that the doctrine originated with Rio Grande in 1899, and Winters in 1908, argued:

> "I was there. I took a course in water law in 1938 and got an A in it. I then went to work for L. Ward Bannister, one of the negotiators of the Colorado River Compact and lecturer in water law at Denver University and Harvard University. I helped to bring his notes up to date. I listened in on discourses he had with Ralph Carr, Jean Breitenstein, John Reed, and other "irrigation lawyers" of the old school. I started to teach water law in 1946, and I was General Counsel for the Missouri River Basin Survey Commission in 1952. At no time prior to 1955 did I ever hear a suggestion that the reserved rights doctrine was anything but a special quirk of Indian water law." Trelease, FEDERAL RESERVED WATER RIGHTS SINCE PLLRC, 54 Den. L. J. 473 (1977).

WESTERN WATER RIGHTS SETTLEMENT BILLS

Starting in 1955 and for the next 15 years, over 50 bills were introduced in Congress to reverse the effects of the reservation doctrine.

Four principal objections were raised to the doctrine.

(1) The federal government, rather than the states, decides how the water is to be used.

(2) The federal government does not follow state filing procedures, impairing the completeness of the state's water records. No centralized federal record system exists for reserved water rights.

(3) Reserved rights are unquantified, creating uncertainty and making long range planning impossible.

(4) Prior appropriators under state law can lose their rights to preexisting, unquantified, unrecorded,

undiscoverable federal reserved rights.

THE FIRST BILLS

The first bills were introduced by Senator Barrett. Their central theme was that "All unnappropriated water in the 17 western states is declared to be free for appropriation under state law" (See Corker, WATER RIGHTS AND FEDERALISM, 45 Cal. L. Rev. 604,606 (1957)) and to require the United States to comply with state appropriation laws rather than claiming waters under the reservation doctrine.

LATER BILLS

Most of the bills introduced over the ensuing years dealt not only with the reserved rights issue, but also with the compensation question under the navigation servitude. In general they proposed that compensation be required for the loss of private property rights under the reservation doctrine and the navigation servitude, that the federal government be required to comply with state water law when it buildsprojects under the Reclamation Act of 1902, and that FPC licensees be required to comply with state law when they build projects under the Federal Power Act of 1920.

Various compromises were developed, under Senator Kuchel of California and others. None of these bills ultimately passed. See, Hanks, PEACE WEST OF THE 98TH MERIDIAN--A SOLUTION TO FEDERAL-STATE CONFLICTS OVER WESTERN WATERS" 23 Rutgers L. Rev. 33 (1968).

REPORT OF THE PUBLIC LAND LAW REVIEW COMMISSION. (One Third of the Nation's Land, 1970) 147-149. For commentary, see Trelease, WATER RESOURCES ON THE PUBLIC LANDS: PLLRC's SOLUTION TO THE RESERVATION DOCTRINE, 6 Land and Water Law Review 89 (1970); Muys, COMMENTS ON "FEDERAL RESERVED WATER RIGHTS", 54 Den. L. J. 493 (1977).

The Commission recommended:

(1) Require federal agencies to give notice of their projected water requirements for the next 40 years;

(2) Establish administrative or judicial review of the reasonableness of the quantities claimed by the federal agencies;

(3) For reservations created in the future, require express statement of intent to reserve water, and the quantity reserved;

(4) Require compensation for the taking of water rights vested prior to the 1963 decision in Arizona v. California.

NATIONAL WATER COMMISSION REPORT (Water Policies for the Future, 1973) pp. 467-468.

The Commission took a different approach from the PLLRC. It recommended:

(1) Require federal agencies to give notice of their projected water requirements for the next 40 years.

As to existing uses by federal agencies, the agencies would be entitled to priority as of the date of the original reservation of the federal lands.

Future uses would receive a priority date as of the date of initiation of actual use.

Compensation would be required where existing private water uses were displaced by new federal agency uses.

REASONS FOR THE FAILURE OF PROPOSED SETTLEMENT LEGISLATION

(1) Eastern suspicion of western avarice.

"The Wild West water version of interposition . . .: not only should the [western] states have the right to do as they please, but they should be able to do it with federal property, and at federal expense." Goldberg, 17 Stan. L. Rev. 1, 3 (1964).

(2) Rising influence of the environmental movement. Reserved rights tend to protect instream flows, forests, wildlife, and environmental interests.

(3) Splits in western water politics in the 1960s, e.g., over the proposed diversion of Columbia River water to the Southwest, and over the continuation of the 160 acre limitation.

(4) Enactment of Sec. 111 Rivers and Harbors Act, 1970, 33 USC Sec. 595a, reversing United States v. Rands, 389 US 121 (1967), and United States v. Twin City Power Co., 350 US 222 (1956) and providing that when condemnation occurs, compensation must be paid to riparians on navigable waters for the "highest and best use" of their uplands, unburdened by the navigation servitude. This excised one of the major problems addressed by proposed settlement legislation.

(5) The Supreme Court's interpretation of the McCarran Amendment, 66 Stat. 560, 43 USC Sec. 666 to constitute waiver of sovereign immunity for suits in federal or state courts to adjudicate, and quantify, federal reserved water rights. Colorado River Water Conservation Dist. v. United States, 424 US 800 (1976), United States v. District Court for Eagle County, 401 US 520 (1971).

(6) The fact that no one could be found whose vested water right had been destroyed by the exercise of a federal reserved right.

The PLLRC reported that "The federal lands are the source of most of the water in the 11 coterminous western states, providing approximately 61% of the total natural runoff occurring in the region. Most of this runoff comes from land withdrawn or reserved for specific purposes. Forest Service and National Park Service reservations contribute about 88 % and 8 %, respectively, of the runoff from public lands and more than 59 % of the total yield from all lands in those states." ONE THIRD OF THE NATION'S LAND, Final Report of the PLLRC, p. 141, 1970.

The PLLRC reported, however, that "Although most of the current concern relates to the doctrine's potential future impact, such potential impacts could be major". Id. at 144.

In 1964 Nicolas B. Katzenbach, Deputy Attorney General for the US said that

"for all the outcry. . . not one state, not one county, not one municipality, not one irrigation district, not one corporation, not one individual has come forward to plead and prove that the United States. . . has destroyed any private right." Hearings on S. 1275 Before the Subcommittee on Irrigation and Reclamation of the Senate Comm. on Interior and Insular Affairs, 88th Cong. 2nd. Sess. (1964). Trelease reported that "Twenty-two years after Pelton Dam this is still true." Trelease, 54 Den. L. J. at p. 492 (1977).

Corker, commenting on the "de minimus" quantity of reserved rights as to NonIndian lands, noted that

"It is the quantity beneath the accuracy of a stream guage. It is what a bird, a butterfly, a deer, or a backpacker drinks from a stream without need of permission. [This statement was made prior to US v. New Mexico; not even these minimal drinkers would now be protected]. The rest of the water flows from the National Forests and the National Parks subject to the law of gravity." Corker, 54 Den. L. J. 499 (1977).

Professor Corker, after extensive research on a report for the

PLLRC, finally found an "injured" person. Mrs. Glenn sued under the Tort Claims Act for loss of a 1930 irrigation appropriation to a recreation area in a National Forest established in 1897. Her suit was dismissed on stipulated facts. Apparently sufficient water was made available for both Mrs. Glenn and the Forest Service. See Glenn v. United States, Civil No. C-153-61 (D. Utah March 16, 1963) discussed in DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES ON THE PUBLIC LANDS, by Wheatley, Corker, Stetson, and Reed. Clearinghouse for Federal Scientific and Technical Information of the Dept. of Com., PB 188 065 & 188 066. See also, Corker, LET THERE NO NAGGING DOUBTS: NOR SHALL PRIVATE PROPERTY, INCLUDING WATER RIGHTS, BE TAKEN FOR PUBLIC USE WITHOUT JUST COMPENSATION, 6 Land & Water L. R. 109 (1970)

THE DEVIL'S HOLE PUPFISH

While this case is cited for the implied reservation doctrine, it really belongs in the express reservation category. In Cappaert v. United States, 426 US 128 (1976) the court enjoined an irrigator's groundwater pumping which was lowering the level of water in Devil's Hole, and endangering the spawning grounds of the tiny pupfish. A 1952 Presidential Proclamation had expressly reserved this water for the pupfish. The court adopted a rule of "minimal need" to effectuate the reservation's purposes, saying it applied to both express and implied reservations.

The use of this reserved water did not interfere with an "existing" private appropriation right. The creation of the federal reservation clearly pre-dated the planned private use, and the water-related purpose of the reservation was clearly expressed.

THE GILA NATIONAL FOREST

In United States v. New Mexico, 238 US 696 (1978), the Court upheld federal reserved rights for National Forest lands. The United States claimed reserved rights for minimum instream flows, and for recreational, stockwatering, and fish purposes. But the Court said it would recognize only "primary" purposes under the National Forest Organic Act of 1897, 16 USC Secs. 473-478, 479-82, 551 (1976). These purposes did not include recreation, aesthetics, wildlife-preservation, or cattle grazing which the court called secondary purposes. They only include securing favorable conditions of water flows, and furnishing a continuous supply of timber for the people.

A second issue in New Mexico was whether the Multiple Use Sustained Yield Act of 1960, P.L. 86-517, 74 Stat. 215,

codified as amended at 16 USC Secs 528-531 (1976), reserved additional waters. The Court held not, saying that although Congress intended the forests to be administered for broader purposes after 1960, Congress did not intend to reserve water for secondary, MUSYA purposes.

Some 16 or 17 Articles and Notes appeared on the New Mexico case. See, e.g. "Water Rights and National Forests--Narrowing the Implied Reservation Doctrine: United States v. New Mexico, 40 Ohio State Law Journal 728 (1979); Boles, Jr. and Elliott, "United States v. New Mexico and the Course of Federal Reserved Water Rights, 51 Colo. L. Rev. 209 (1980); Fairfax & Tarlock, No Water for the Woods: A Critical Analysis Of United States v. New Mexico, 15 Ida. L. Rev. 509 (1979).

UNITED STATES v. CITY AND COUNTY OF DENVER, 656 P. 2d 1 (Colo. 1982). (Not appealed) This case is the most extensive implementation of the reservation doctrine to date and deserves careful attention.

In this complex state-court adjudication the United States submitted claims for reserved water rights covering seven national forests, three national monuments, one national park, over 1500 public waterholes and springs, two mineral hot springs, and the public domain administered by the Bureau of Land Management. The case involved thousands of claims for state law appropriation rights. 169 parties objected to the US claims, represented by at least 70 different attorneys. A Water Court decree was appealed to the Colorado Supreme Court. That court held:

NATIONAL FORESTS

Instream flows for recreational, scenic, and wildlife purposes. The United States claimed instream flow rights for watershed and timber protection, and wanted to use this water for recreational, scenic, and wildlife protection.

HELD: Instream flow claim rejected. The US failed to demonstrate that this water was needed for national forest purposes of watershed protection and timber production.

Does MUSYA expand reservation purposes? The United States claimed that MUSYA (1960) expanded the purposes for which water could be reserved under the 1897 Act.

HELD: MUSYA did not expand these purposes. While conceding the Supreme Court's statement in New Mexico was dicta, the Colorado Court said that the dicta was controlling. Congress was aware of the Reserved Rights Doctrine when it passed MUSYA, but did not choose to reserve additional water explicitly.

DINOSAUR NATIONAL MONUMENT

Reservations for Monuments. The US claimed reserved instream flows in the Yampa River for recreational boating (river rafting) within the Monument. This have seriously impaired junior appropriators upstream on the Yampa. This National Monument was created under 16 USC Sec. 431 (1976) by presidential proclamation to preserve public lands of outstanding historic and scientific interest. President Wilson created it in 1915 to preserve an "extraordinary deposit of Dinosaurian and other gigantic reptilian remains".

HELD: Recreational boating is not one of the purposes for

which water can be reserved under the National Monument Act.

Monument transferred to Park. This Monument was placed under the supervision of the National Park Service in 1938 and the US argued that its "purposes" were thus expanded to include National Park purposes.

HELD: The transfer was done for administrative convenience and did not change the purposes for which water could be reserved. The area is still a Monument, being administered by the National Park Service.

Instream flows for scientifically important species. The US claimed instream flows might be necessary for fish habitats of endangered species of historic and scientific interest.

HELD: Claim upheld. REMANDED for determination of quantity needed for these purposes. The US must quantify its claim within 6 months.

ROCKY MOUNTAIN NATIONAL PARK

National Forest transferred to Park status. This Park was created from a national forest. The land was transferred to the Park in 1915, and again in 1930.

HELD: For reservation purposes that are common to both national forests and national parks (watershed protection and timber production), the priority date is the initial national forest reservation.

National Parks also have broader purposes, inter alia, conserving scenery, historic and scientific objects, and wildlife. See National park Service Act of 1916, 16 USC Sec. 1 (1976). The priority date for the reserved rights for these broader purposes is the date the land was made into a Park. Decrees were awarded for minimum flows and lake levels for conservation of scenic, natural and historic objects and for recreational and aesthetic purposes.

PUBLIC SPRINGS AND WATERHOLES

Reservation by Interior Dept. regulation. The fede government claimed reserved water rights for the entir eld of numerous waterholes and springs, whether tributary o nontributary, locate on lands withdrawn by a 1926 exec order titled "Public Water Reserve No. 107".

HELD: The Executive Order was issued under authority of

the Stock Raising Homestead Act of 1916, 43 USC Sec. 300 (1976). While the Exec. Order did not state an intention to reserve water and withdraw it from appropriation under state law, Department of Interior regulations did state such intention, and that is adequate to create a reserved right.

Anti-monopolization purpose for reservation. The Dept. of Interior REGULATIONS reserved water to "prevent the monopolization of vast land areas in the arid states by providing a source of drinking water for animal and human consumption".

HELD: These regulations reserved only sufficient water to carry out this anti-monopolization purpose, and no more. The springs and water holes contain more water than is minimally essential for this purpose. The government has 4 years to quantify its minimal needs to effectuate this purpose.

Tributary springs. The reservation applies to both tributary and nontributary springs; the reservation documents made no distinction between these two types of sources.

MINERAL HOT SPRINGS

Reservation for leasing purposes. The federal government claimed reserved water rights to hot springs for leasing purposes pursuant to the Pickett Act (43 USC Sec. 141 (1976).

HELD: Reserved rights upheld.

Reservation for geothermal power production. The federal government claimed reserved water rights to hot springs for geothermal power production, under the Pickett Act, and under the Geothermal Steam Act of 1970, 30 USC Sec. 1001, et seq. (1976).

HELD: No reserved rights. The Geothermal Act is principally a leasing Act. No express or implied intent can be found in either Act to reserve water for power generation.

Federal licensees and contractors exercising reserved right. The federal government claimed that permittees, licensees, and concessionaires could exercise the federal reserved right, and that it was not necessary for the federal government to itself exercise these rights.

HELD: Licensees etc. can exercise the federal reserved right.

TWO OTHER ISSUES were expressly not decided by the court:

(1) whether reserved rights are limited to waters on, under, or touching the reserved lands;

(2) Whether the reserved right can be transferred to a use not within the original purposes of the reservation. These issues were not properly before the court.

RESERVED WATERS ON BLM LANDS

In Sierra Club v. Watt, 659 F.2d 203 (D.C.Cir.1981) the Court denied the Sierra Club's claim that FLPMA had reserved waters on BLM lands for "scenic, scientific, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values", ruling that FLPMA merely set forth "purposes, goals and authority for uses of the public domain," and did not reserve any water.

THEORETICAL BASIS FOR THE RESERVATION DOCTRINE

This topic is considered last in this outline, or almost so, because it is a peculiar concern of academics, rather than the courts. The Courts have been concerned with results, letting theoretical bases take the hindmost. Nonetheless two theories hold some sway. Supporters of each theory claim judicial support:

(1) The federal government owns waters on lands that have been withdrawn, and therefore can do with those waters as it pleases, without regard to state law. See Hanks, FEDERAL-STATE RIGHTS AND RELATIONS, in 2 WATERS AND WATER RIGHTS Sec. 102.1, at 38-40 (R. Clark ed. Supp 1978).

(2) The reservation doctrine is explained by the supremacy clause, coupled with some incidental constitutional power (e.g. commerce power) exercised on the reserved land. See F. Trelease, FEDERAL-STATE RELATIONS IN WATER LAW 138-47 (National Water Commission Legal Study No. 5, 1971).

FEDERAL NON-RESERVED WATER RIGHTS

The argument about the existence of these oddities, and what they look like, has preoccupied a number of federal lawyers and academics. To date the courts have not been concerned with them.

If one cuts through the extensive verbiage on the subject, one thing seems clear. If Congress wants to claim waters for some federal government use, then it has the power to do so, assuming it acts under the Supremacy clause in conjunction with some other empowering clause, e.g., commerce or property. Of course if the federal use damages or destroys vested private water rights, the the owners of those rights, must be compensated. In view of past congressional history (e.g., the Acts of 1866, 1877), and Supreme Court cases (e.g., US v. New Mexico) the Congressional intention to claim such waters will have to be clearly expressed. But, that the power exists is not really be debatable.

Debate can, of course, occur about whether the Congressional intent is clear enough to pass judicial muster. That debate, especially as it concerns the Federal Land Policy and Management Act of 1976, 43 USC Sec. 1701 et seq. (FLPMA) has waxed extensively in the federal legal establishment since 1979. See:

Krulitz view: Such rights probably exist under FLPMA, and other statutes, and, indeed, are not all that hard to find. FEDERAL WATER RIGHTS OF THE NATIONAL PARK SERVICE, FISH AND WILDLIFE SERVICE, BUREAU OF RECLAMATION, AND BUREAU OF LAND MANAGEMENT, 88 Interior Dec. 553 (1979).

Martz view: Such rights probably don't exist, and certainly not unless clearly mandated by Congress; FLPMA is too fuzzy to be the basis of such rights. MEMORANDUM OF THE SOLICITOR OF THE DEPARTMENT OF THE INTERIOR, 88 Interior Dec. 253 (1981).

Coldiron view: "There is no 'federal non-reserved water right.'" NON-RESERVED WATER RIGHTS--UNITED STATES COMPLIANCE WITH STATE LAW, 88 Interior Dec. 1055 (1981).

Olson view (Office of Legal Counsel): Such rights might well exist, but only where congress explicitly or clearly provides for them! U.S. Dept. of Justice, Office of Leg. Counsel, "Federal Non-Reserved" Water Rights (June 16, 1982).

WHAT IS THE DIFFERENCE BETWEEN RESERVED RIGHTS AND NON-RESERVED RIGHTS?

Coggins and Wilkinson suggest that non-reserved rights arise when Congress delegates to a federal agency authority to administratively claim the waters of a particular stream or lake, for a particular location and purpose, e.g., a campsite. These rights have a priority from the date "the public was given notice, probably through rulemaking." G.C. Coggins, C. F. Wilkinson, FEDERAL PUBLIC LAND AND RESOURCES LAW, 1983 Supp. p. 70.

FINIS

HOMAN

The Resource Development Council and Alaska Section of the American Water Resources Association present:

WATER POLICIES AND RESOURCE DEVELOPMENT IN ALASKA

November 9, 1985
University of Alaska - Anchorage
Library 215

8:00 - 9:00 Registration

9:00 - 9:15 Introductions and Opening Remarks:
Pete Nelson; RDC Executive Committee Member

9:15 - 10:00 Water Availability

How much water is available in different regions of Alaska? When is it available? What is its water quality? How much data do we have for different regions? What are the prospects for obtaining more data?

Moderator: William Blackmer; Montgomery Engineers, Project Mgr., Eklutna Water Project

Panelists: Phil Emery; Chief, Alaska Water Resources Division, U.S.G.S.
Bill Long; Chief, Water Resources Section Alaska DNR, D.G.G.S.

10:00 - 10:15 Morning Break

10:15 - 11:45 Water Rights

Who has the legal rights to Alaska's surface water and groundwater? What are water rights? How are they obtained? What data are required? Instream flow appropriations. Federal reserve water rights.

Moderator: Brent Petrie; Dir. of Systems Planning, Alaska Power Authority

Panelists: James K. Barnett; Deputy Commissioner. Alaska DNR
Tom Meacham; Attorney and member, Alaska Water Resources Board
Anne Puffer; Regional Hydrologist, USFS
JUNEAU.

11:45 - 12:45 Lunch served (included in registration fee)

12:45 - 2:30 **Water Quality Policies**

What are state water quality objectives? What water quality criteria are applied? Why? Regional considerations. What resources (time, personnel and money) are required to meet these criteria? How do these criteria affect resource development?

Moderator: Dr. Bob Miller; Dept. of Civil Engineering, UAA

Panelists: Bob Martin; Spec. Assistant to the Commissioner, Alaska DEC
Norman Cohen; Director, Div. of Habitat, Alaska DF&G
Jim Jinks; Executive Director, Alaska Miners Association
Dr. Chien-Lu Ping; Asst. Professor of Agronomy, UAF, Ag. & For. Exp.

2:30 - 2:45 Afternoon Break

2:45 - 4:30 **Case Studies: Water and Energy Policies**

How have water policies affected resource development in Alaska? How does the developer interact with the water agencies? In what manner were conflicts resolved? In what manner could resolution of conflicts be streamlined?

Moderator: Stephen Bredthauer; R & M Consultants and President, AK Section, AWRA

Panelists: - Brent Petrie; Dir. of Systems Planning, Alaska Power Authority (Hydro)
- Tom Zimmer; Chairman, AOGA Operations Committee
Luke Franklin; Environmental Specialist, Diamond Alaska Coal Co.
Joseph Jordan; District VP, Morrison-Knudsen Engineers

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WATER POLICIES AND RESOURCE DEVELOPMENT IN ALASKA

Frank / cover water issues

The Resource Development Council and the Alaska Section of the American Water Resources Association invite you to participate in a one day workshop concerning water resource issues. We've assembled panels of experts to discuss the policies concerning water use and the effects on Alaska's resource development. (A complete agenda is attached.)

There will be question and answer sessions at the end of each panel in which we urge you to take part. For more information about topics to be discussed, please call Steve Bredthauer at 561-1733.

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Date: November 9, 1985
Time: 8:00 a.m. to 4:30 p.m.

Place: Library 215, University of Alaska, Anchorage

Registration fee: $40.00
Student Registration: $15.00

(Lunch is included in your registration. Please make checks payable to the Resource Development Council.)

Call Lynn Gabriel at 276-0700 with any questions concerning registration.

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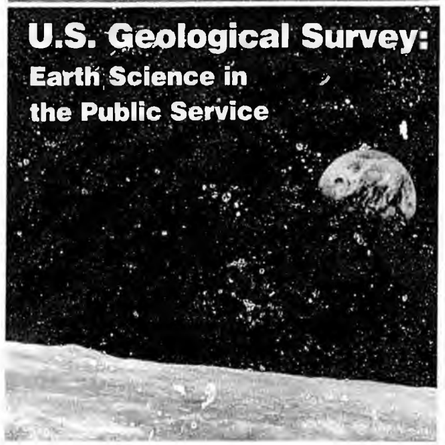
U.S. Geological Survey:
Earth Science in the Public Service



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Since 1879, the research and fact-finding role of the USGS has grown and been modified to meet the changing needs of the Nation it serves. Today's programs serve a diversity of needs and users and include assessing the Nation's energy and mineral resources; providing information to enable society to mitigate the impacts of earth-science hazards, such as floods, earthquakes, volcanoes,

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- Issuing warnings of earthquakes, volcanic eruptions, landslides, and other geologic and hydrologic hazards;
- Conducting research on the geologic structure of the Nation;
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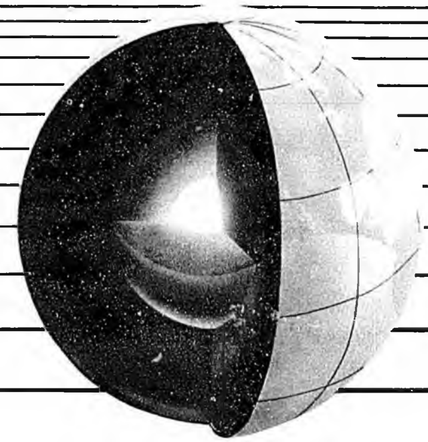
U.S. Geological Survey:
Earth Science in the Public Service

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.



U.S. Department of the Interior/Geological Survey

Water Dowsing

Water Dowsing

One of the major responsibilities of the U.S. Geological Survey is to assess the quantity and quality of the Nation's surface- and ground-water supplies. The Survey's Water Resources Division, in cooperation with other Federal, State, and local agencies, maintains a nationwide hydrologic data network and carries out water-resource and hydrologic investigations.

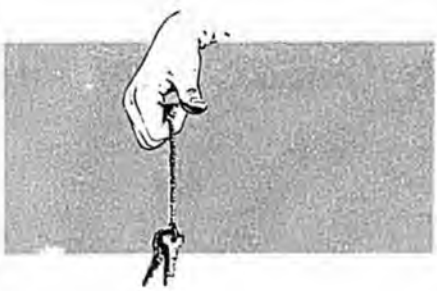
Numerous general inquiries concerning water resources and hydrology are directed to the Survey, which has prepared a number of "popular publications" to help answer such requests. As part of that group of publications, this leaflet was prepared to answer some of the most frequently asked questions about the subject of water dowsing and is not intended to make editorial comment on dowsing or its practitioners.

and Roman naturalists and scientists do not mention the use of a magic rod, although they do give hints and directions for finding water.

The exact origin of the divining rod in Europe is not known. The first detailed description of it is in Johannes Agricola's "De Re Metallica" (1556), a description of German mines and mining methods. The device was introduced into England during the reign of Elizabeth I (1558-1603) to locate mineral deposits, and soon afterward it was adopted as a water finder throughout Europe.

The practice of water dowsing has always aroused widespread controversy. Its 17th century champions attempted to explain it by the principal of "empathy" or "attraction and repulsion." Its adversaries condemned it as a superstitious and vain practice. Some held that the stick was moved by a satanic influence, and others believed that the dowser received his power from God. To protect against evil, the rod was sometimes "Christianized" by being placed in bed with a newly baptized child, by whose Christian name it was afterward addressed.

Despite opposition from church and lay leaders, use of the rod spread throughout Europe. Water dowsing seems to be a mainly European cultural phenomenon, completely unknown to New World Indians and Eskimos. It was carried across the Atlantic to America by some of the earliest settlers from England and Germany. Although the published record was very slight at first, water dowsing or witching began to be mentioned after 1675 in connection with witches and witchcraft. Two articles condemning it appeared in the 1821 and 1826 issues of the American Journal



of Science and were among the first in a long line of treatises on water witching.

Despite almost unanimous condemnation by geologists and technicians, the practice of water dowsing has spread throughout America. It has been speculated that thousands of dowsers are active in the United States; many are members of the American Society of Dowsers, Inc.

What Do Dowsers Believe About Ground Water?

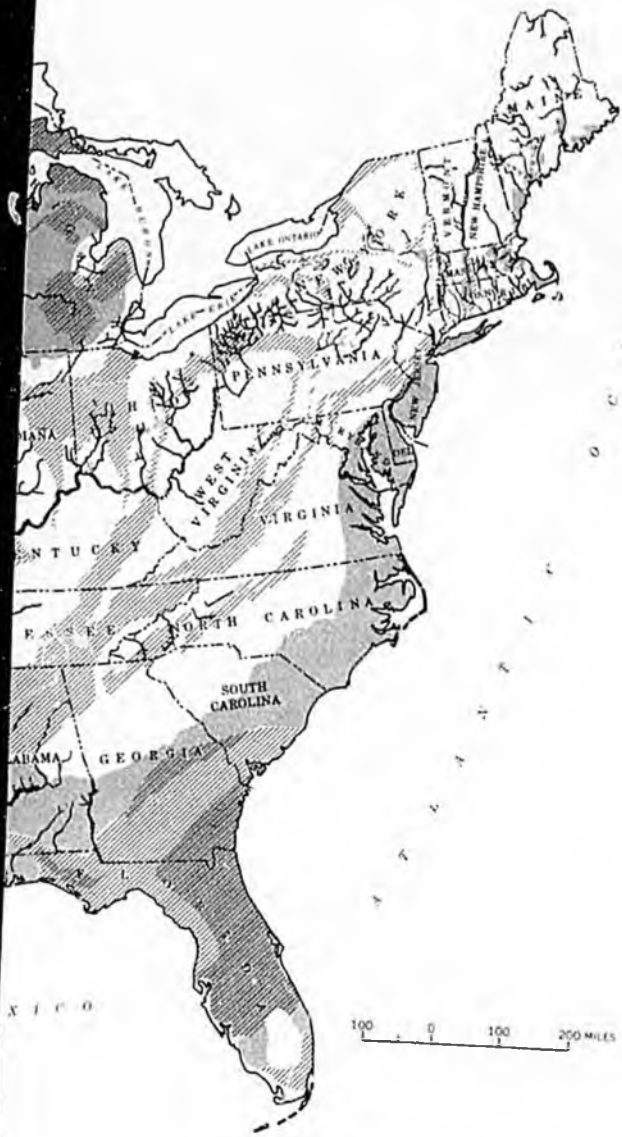
Some dowsers seem to believe that water occurs in veins resembling the veins of one's body. According to Henry Gross, one of the best known modern practitioners, underground water flows upward from great depths, forming "domes." He believes such domes to be the source of water for underground veins that flow in various directions. Three domes supposedly on top of Mount Washington, N. H., were said to be coming from a depth of 57,000 feet.

Most dowsers attempt only to locate the positions of the so-called water veins. But many of their clients ask: How deep will I have to drill, and how much water will I get? Some dowsers, therefore, do attempt to estimate the quantity of and the depth to water.

If the well driller does not find water at the indicated spot, the failure may be blamed on interference of hills with the dowsing, a short circuit of "current," incorrect drilling, or the crushing or deflection of the delicate water veins by the driller.

What Does Science Say About Dowsing?

Case histories and demonstrations of dowsers may seem convincing, but when dowsing is exposed to scientific examination, it presents a very different picture. For instance, what does it mean to say that a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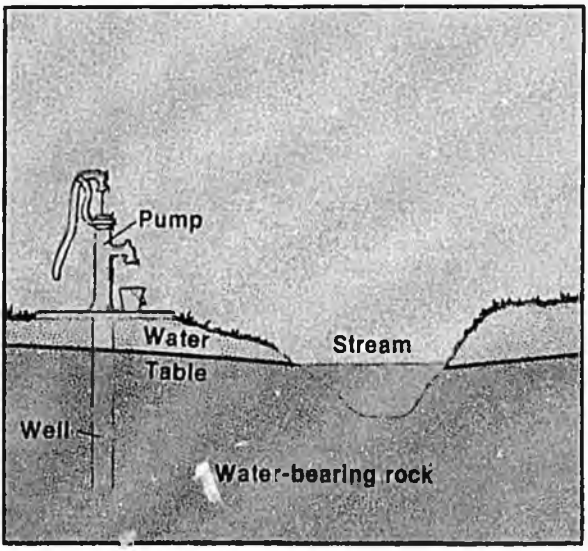
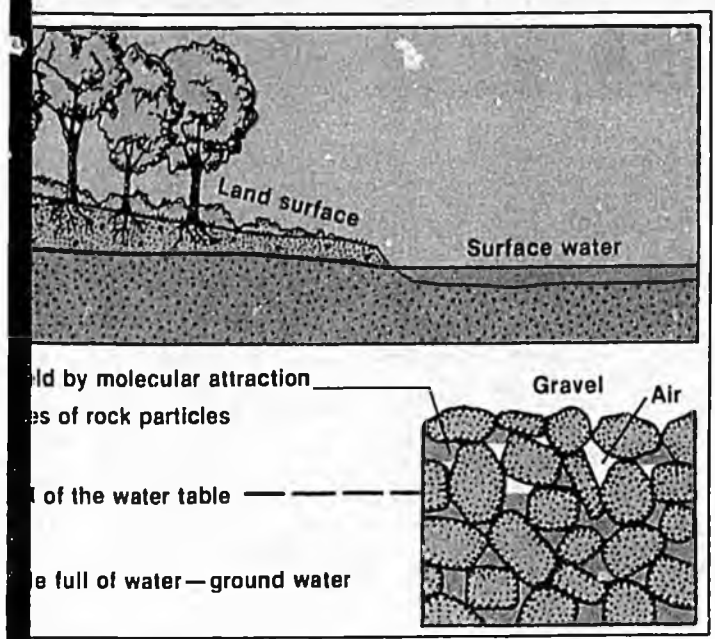
dowser is successful in 8 out of 10 cases? The dowser may find water, but how much? And of what quality? At what rate can it be withdrawn? For how long and with what impact on other wells and on nearby streams?

The natural explanation of "successful" water dowsing is that in many areas water would be hard to miss. The dowser commonly implies that the spot indicated by the rod is the *only* one where water could be found, but this is not necessarily true. In a region of adequate rainfall and favorable geology, it is difficult *not* to drill and find water!

Some water exists under the Earth's surface almost everywhere. This explains why many dowsers appear to be successful. To locate ground water accurately, however, as to depth, quantity, and quality, a number of techniques must be used. Hydrologic, geologic, and geophysical knowledge is needed to determine the depths and extent of the different water-bearing strata and the quantity and quality of water found in each. The area must be thoroughly tested and studied to determine these facts. The U.S. Geological Survey, the Federal agency with major responsibility for assessing the quantity and quality of the Nation's surface and ground waters, believes that no single





sand. An "aquifer" is any body of rock that contains a usable supply of water. A good aquifer must be both porous enough to hold water and permeable enough to allow the continuous recharge of water to a well. Gravel, sand, sandstone, and limestone are among the best aquifers, but they form only a fraction of the rocks in the Earth's crust. Most rocks are fine grained or otherwise "tight" and store or carry little water.

As a first step in locating ground water, the hydrologist prepares a geologic map showing where the different kinds of rock come to the land surface. Some of the rocks may be so cracked and broken that they provide good openings to carry water underground. The rocks may be so folded and displaced, however, that it is difficult to trace their location underground.

Next, he gathers information on the wells in the area—their locations, the depth to water, the amount of water pumped, and the kinds of rock they penetrate. Because he cannot always afford to drill a test hole to obtain information, records of wells already drilled are his mainstay.

If there are no wells in the area, or not enough information is available on existing ones, the hydrologist may contract with a well driller to put down some test holes. At these holes he will make pumping or aquifer tests. These tests indicate the water-bearing properties of the aquifer tapped by the well. From the tests the hydrologist can determine the amount of water moving through the aquifer, the volume of water that can enter the well, and the effect of pumping on the water level of other wells in the area.

For man's use of water, quality is just as important as quantity. The hydrologist will take samples of water from different wells and have them chemically analyzed.

The hydrologist's report and geologic map will show where water can be found, its chemical composition, and in a general way, how much is available. This is the scientific approach used by the U.S. Geological Survey, State resource agencies, and consulting engineers in making their ground-water studies. Information about local ground-water conditions may be found in the offices that the U.S. Geological Survey's Water Resources Division maintains in all 50 States.

Where Can I Find Out More About Water Dowsing and Ground Water?

The only comprehensive report on water dowsing published by the U.S. Geological Survey is *The Divining Rod, A History of Water Witching*, by A. J. Ellis, published as USGS Water-Supply Paper 416 in 1917 and reprinted in 1957. This report contains detailed information and includes references to several hundred papers on the use of the divining rod and related subjects.

U.S. Geological Survey Water-Supply Paper 1800 *The Role of Ground Water in the National Water Situation*, by C. L. McGuinness, 1963, summarizes the

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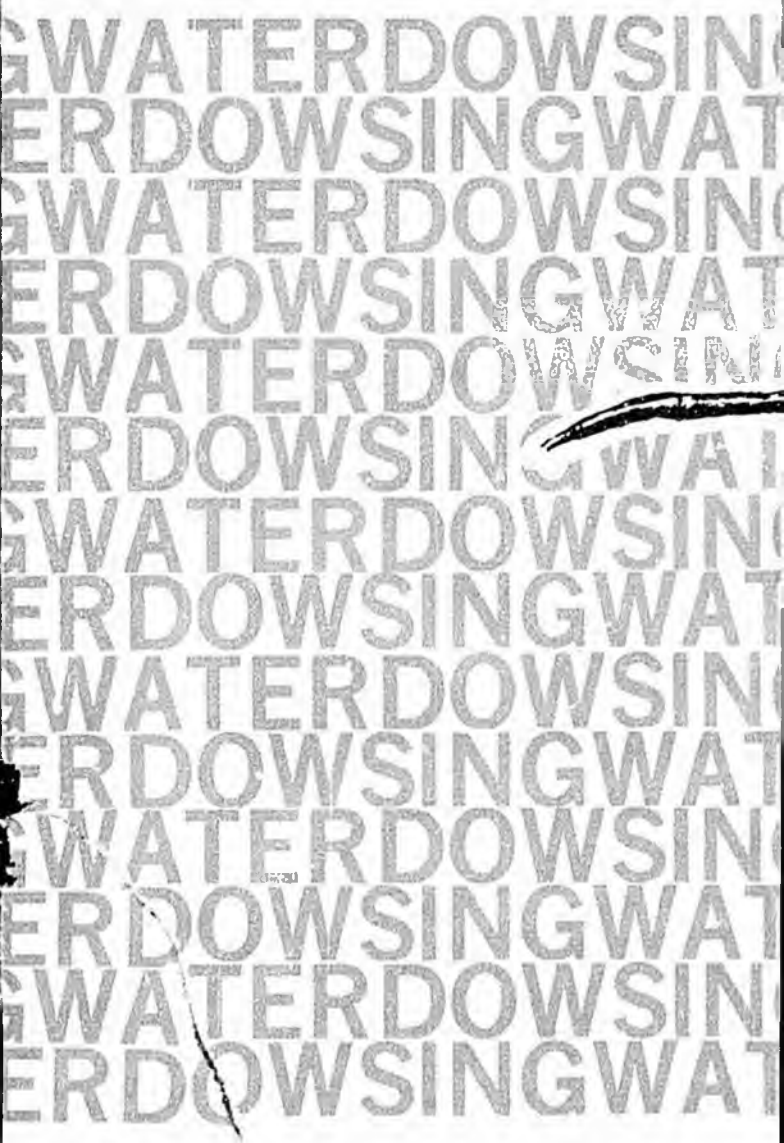

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What Is Water Dowsing?

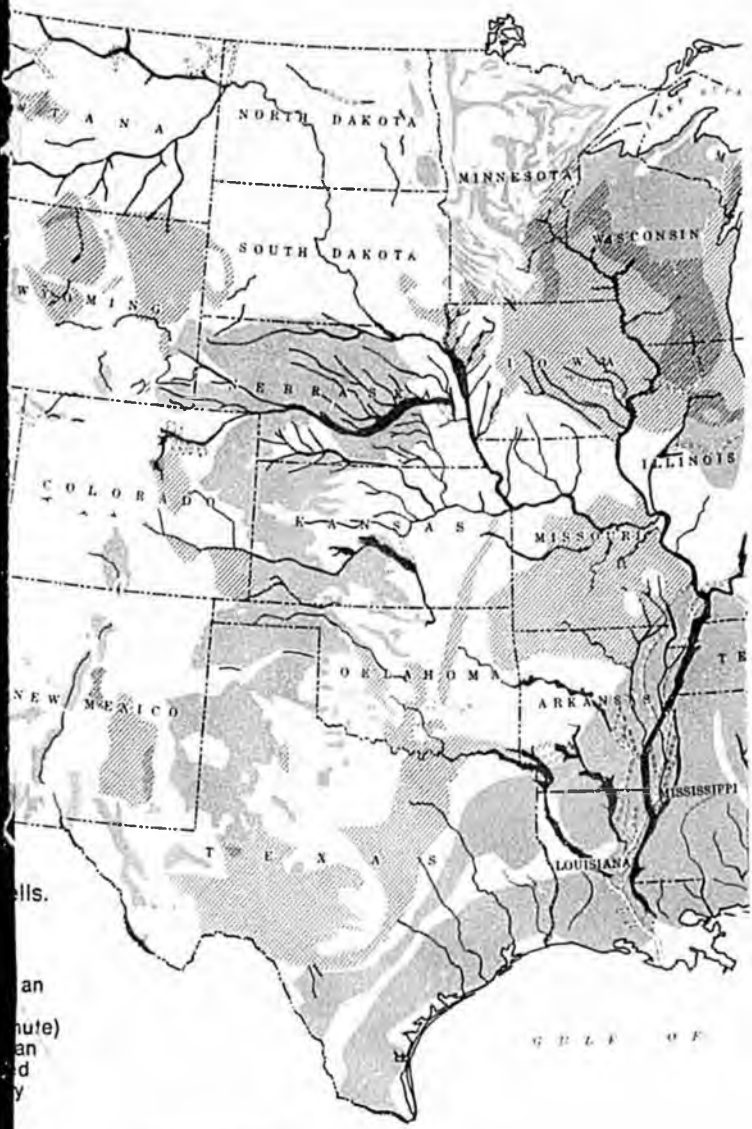
"Water dowsing" refers in general to the practice of using a forked stick, rod, pendulum, or similar device to locate underground water, minerals, or other hidden or lost substances, and has been a subject of discussion and controversy for hundreds, if not thousands, of years.

Although tools and methods vary widely, most dowsers (also called diviners or water witches) probably still use the traditional forked stick, which may come from a variety of trees, including the willow, peach, and witch hazel. Other dowsers may use keys, wire coathangers, pliers, wire rods, pendulums, or various kinds of elaborate boxes and electrical instruments. Some claim powers that enable them to "see" through soil and rock, and some are mediums who go into trances when conditions are favorable.

In the classic method of using a forked stick, one fork is held in each hand with the palms upward. The bottom or butt end of the "Y" is pointed skyward at an angle of about 45°. The dowser than walks back and forth over the area to be tested. When he passes over a source of water, the butt end of the stick is supposed to rotate or be attracted downward.

According to dowsers, the attraction of the water may be so great that the bark peels off as the rod twists in the hands. Some dowsers are said to have suffered blistered or bloody hands from the twisting.

Although most dowsing for water is done at the actual site where water is needed, some dowsers claim to be able to locate water simply by passing the stick over a map.



Consolidated-rock aquifers (mostly limestone, sandstone, or volcanic rocks).

Both unconsolidated-and consolidated-rock aquifers.

Not known to be underlain by aquifer that will generally yield as much as 50 gpm to wells.

technique suffices to locate favorable water-well sites.

Numerous books and pamphlets have been written on the subject of water dowsing. Some of these publications report on scientifically controlled experiments and investigations. From these findings, the U.S. Geological Survey has concluded that the expense of further tests of water dowsing is not justified.

How Does Ground Water Occur?

Contrary to the belief of dowsers, ground water does not commonly flow in veins, domes, or underground rivers. Ground water is the water which fills pores or cracks in underground rocks. It is replenished by nature according to the local climate and geology and is variable in both amount and quality.

When rain falls, the plants and soil take up water. Some of the excess water runs off to streams, and some percolates down into the pores or cracks in the subsurface rocks. A well that extends into the saturated zone will fill with water to the level of the water table—the top of the zone in which all the openings of the rocks are filled with water.

It is important to know whether water will flow into the well fast enough to make it useful for man's purposes. A "tight" rock such as clay or solid granite, with tiny pores or only a few narrow cracks, may give up water so slowly that it is not useful. If the openings in the rock are large enough to let water flow freely, however, water in useful amounts can be taken out.

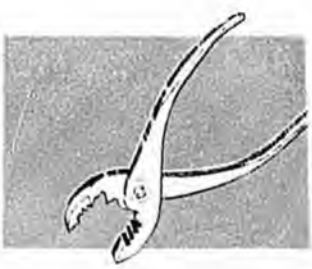
Several water-bearing rock layers may lie beneath the surface, separated by layers of rock less capable of carrying water. This geologic configuration may give rise to *artesian* conditions, where water levels in wells that penetrate the deeper layers of water-carrying rock rise under pressure and in some instances rise so high as to create flowing wells.

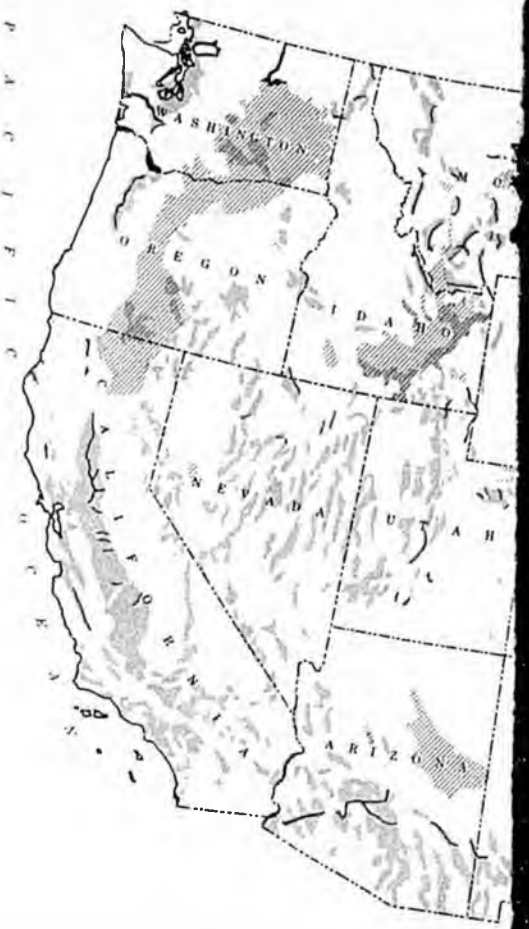
Water dowsers practice mainly in rural or suburban communities where residents are uncertain as to how to locate the best and cheapest supply of ground water. Because the drilling and development of a well often costs more than a thousand dollars, homeowners are understandably reluctant to gamble on a dry hole and turn to the water dowser for advice. The dowser, in turn, undoubtedly believes that he is endowed with a natural ability or has found a workable if unexplainable method of locating underground water.

Water is only one of many substances that different dowsers claim they can find. Divining rods have been used in attempts to locate gold, silver, lead, uranium, oil, coal, and other valuable minerals; to discover buried or hidden treasure; to find lost landmarks and reestablish property boundaries; to detect criminals or hidden soldiers; as well as to analyze personal character, and to trace lost animals. A few dowsers even claim the ability to diagnose and cure disease or to determine the sex of an unborn child.

How Did Water Dowsing Begin?

One of the first known divining rods was that mentioned in the Biblical passage in which Moses strikes a rock with his rod and water gushes forth (Numbers 20: 9-11). Cave paintings in northwestern Africa that are 6,000-8,000 years old are believed to show a water dowser at work. Divining rods were also used by the Scythians, Persians, and Medes. Most accounts, however, by Greek





Ground-water areas in the conterminous United States capable of yielding 50 gallons per minute or more to w

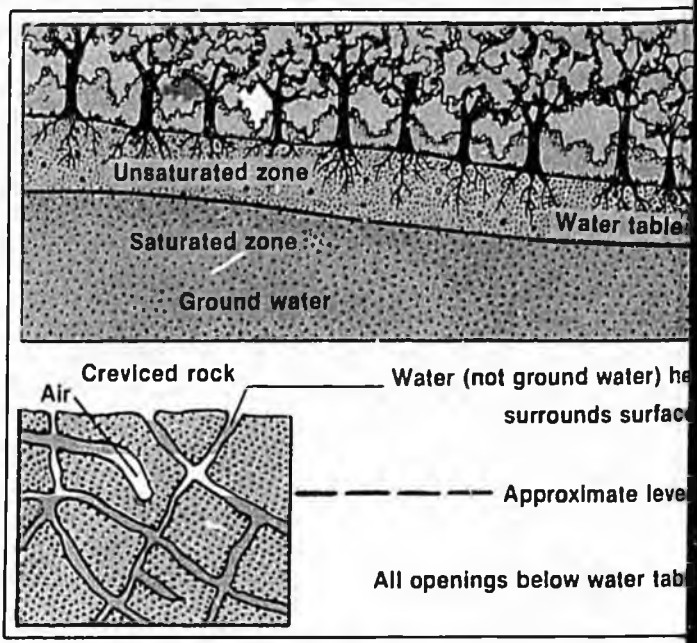
EXPLANATION

Any pattern shows an area underlain by aquifer generally capable of yielding to individual wells 50 gpm (gallons per mi or more of water containing not more th 2,000 ppm (parts per million) of dissolve solids (includes areas where more highl mineralized water is actually used).

Watercourses in which ground water can be replenished by perennial streams.

Buried valleys not now occupied by perennial streams.

Unconsolidated and semiconsolidated aquifers (mostly sand and gravel).



How ground water occurs in rocks.

How Do Hydrologists Locate Ground Water?

Compared to the dowser's dramatic display, the hydrologist's procedure for locating ground water may seem dull. His patient pursuit of the unseen is interesting, nonetheless.

The landscape offers helpful clues. Shallow ground water is more likely to occur in larger quantities under valleys than under hills, because ground water obeys the law of gravity and flows downward just as surface water does. In arid regions the presence of "water-loving" plants is an indication of ground water at shallow depth. Any area where water shows up at the surface, in springs, seeps, swamps, or lakes, must have some ground water, though not necessarily in large quantity or of usable quality.

Rocks are the most valuable clues of all. Hydrologists use the word "rock" for hard, consolidated formations such as sandstone, limestone, or granite as well as for loose, unconsolidated sediments such as gravel or

occurrence and development of ground water in the conterminous United States.

These reports are now out of print, but can be consulted at certain Geological Survey libraries and offices.

For a simple and easily understood discussion of basic facts, principles, and problems of water, consult *A Primer on Water*, by L. B. Leopold and W. B. Langbein, 1960, and *A Primer on Ground Water*, by H. L. Baldwin and C. L. McGuinness, 1963. These primers are sold by the Alexandria Branch of Distribution listed below.

This publication is one of a series of general interest publications prepared by the U.S. Geological Survey to provide information about the earth sciences, natural resources, and the environment. To obtain a catalog of additional titles in the series "Popular Publications of the U.S. Geological Survey," write:

Eastern Distribution Branch
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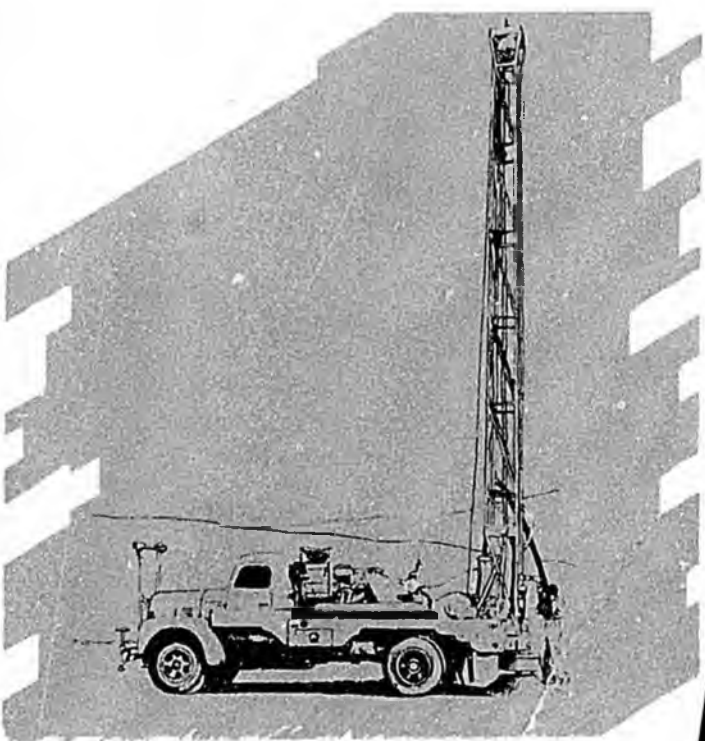
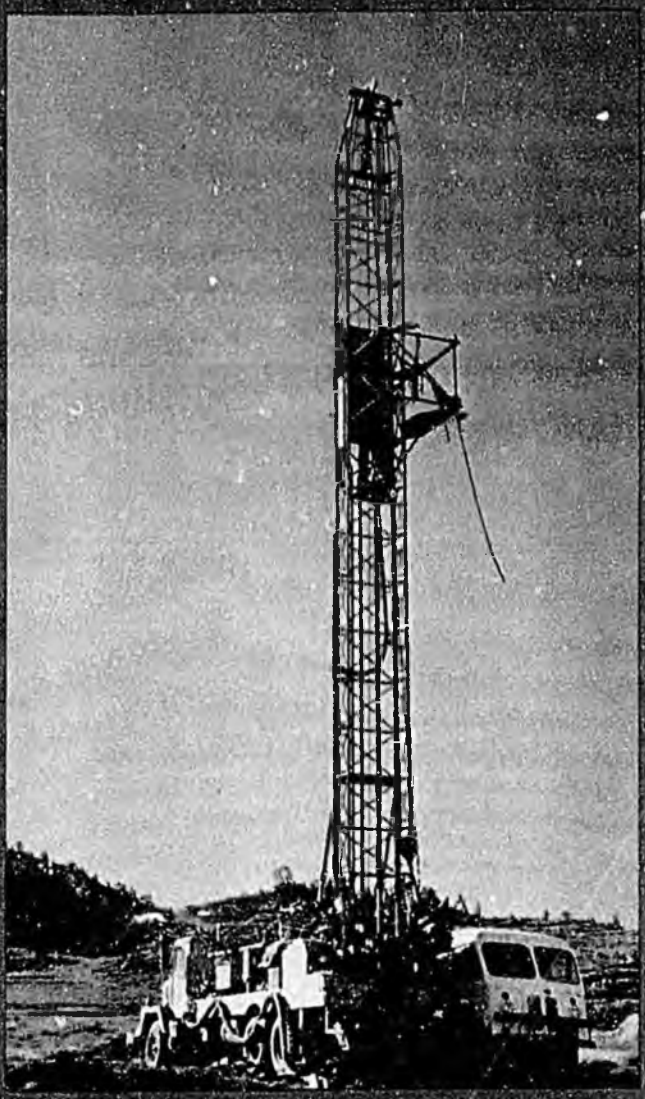


Ground Water



Ground Water

Twin Spring, Thousand Springs, Idaho.

Some water underlies the Earth's surface almost everywhere, beneath hills, mountains, plains, and deserts. It's not always accessible, it's not always fresh enough for use without treatment, and it's sometimes difficult to locate or to measure and describe. This water may occur close to the land surface, as in a marsh, or it may lie many hundreds of feet below the surface, as in some arid areas of the West. Some water, especially in very shallow zones, might be just a few hours old; in a moderately deep zone, it may be 100 years old; at great depth or after having flowed long distances from places of entry, it may be hundreds of thousands of years old.

The preser usage of ground water throughout the country—most intensive in parts of the West—and the potential for much additional development, demonstrate that it is the Nation's principal reserve source of fresh water. This resource will become even more valuable in the years ahead as the Nation copes with burgeoning natural-resource and environmental problems and increased water demands.

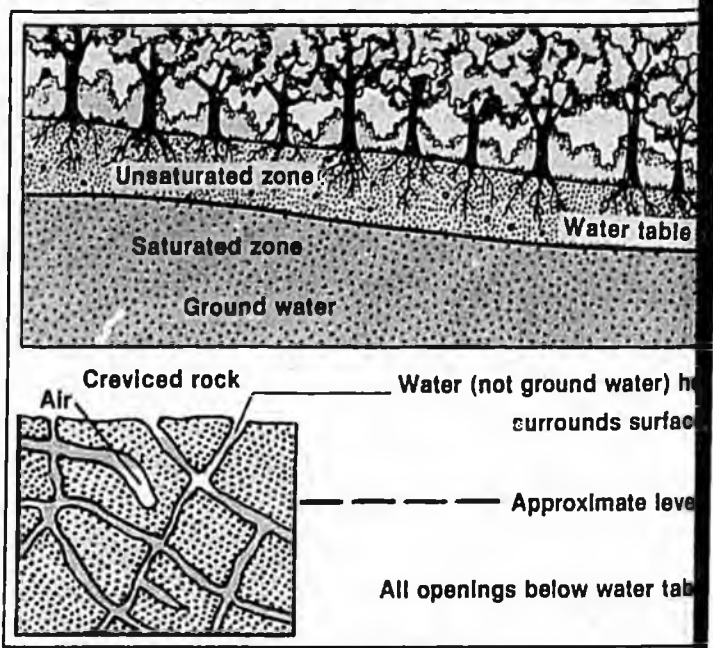
The Nation's total supply of water is large. Average annual streamflow in the conterminous (48) States is about 1,200 billion gallons a day or about three times the present water use. Much of that streamflow is water discharged from ground-water reservoirs. The distribution of water in both space and time is irregular. Some areas, however, already face serious regional water shortages —using water faster than it is naturally replenished. Further development of needed energy, mineral, and agricultural resources is dependent largely upon adequate water supplies.

How Ground Water Occurs

It is difficult to picture water underground. Some people have fanciful notions of underground lakes or of water flowing in veins or underground rivers. In fact, ground water is simply water that fills pores or cracks in subsurface rocks. It is ultimately replenished by precipitation, according to the local climate and geology, and is unevenly distributed in both quantity and quality.

The source of ground water is precipitation. When rain falls or snow melts, plants and soils take up water. Some water is evaporated to the atmosphere from plant leaves, some runs off to streams, and some percolates down into the pores or cracks in rocks. When rain falls, the first water that enters the soil replaces water that has been evaporated or used by plants during a preceding dry spell.

Between the land surface and the water table is a zone that hydrologists call the



How ground water occurs in rocks.

unsaturated zone in which there is usually at least a little water, mostly in smaller openings of the soil and rock. The larger openings in the rocks of the zone at times contain mostly air instead of water. After a significant rain, the zone may be almost saturated; in a long dry spell, it may become drained and almost dry. In this zone, some water is held in the soil and rocks by *molecular attraction,* and it will not flow toward or enter a well. Similar forces hold enough water in a wet towel to make it feel damp after it has stopped dripping.

After the thirsty plants and soil have had enough water and if rain continues to fall, the excess water will drain to the *water table*—the top of the zone in which openings in rocks are saturated. Below the water table, all the openings—crevices and pores—are full of water. The raindrops have, at last, become ground water, and this water is free to move from the saturated rocks to a nearby stream or into a well being pumped. A well, in simple concept, may be regarded as nothing more than an extra large pore into which gravity forces new water as water is removed from

volume of the aquifer. If the grains, however, are poorly sorted, the spaces between larger grains may be filled with smaller grains instead of water. Poorly sorted rocks, therefore, do not hold or transmit as much water as well-sorted rocks.

If water is to move through rock, the pores must be connected to one another. If the rock has a great many connected pore spaces big enough that water can move freely through them, the rock is said to be *permeable.*

A rock that is a good source of water must contain many interconnected pore spaces or cracks. A compact rock almost without pore spaces, such as granite, may be permeable if it contains enough sizable cracks or fractures. Nearly all consolidated rock formations are broken by parallel systems of cracks, called *joints* by geologists. These joints are caused by stresses in the Earth's crust similar to those that elevate mountains, cause earthquakes, and cause other earth movements. At first many joints are hairline cracks, but they tend to enlarge through the action of many physical and chemical processes. The ice crystals formed by water that freezes in rock crevices near the land surface will cause the rocks to split open. Heating by the Sun and cooling at night cause expansion and contraction that produce the same result. Water will enter the joints and may gradually dissolve away the rock or flush out weathered rock and thereby enlarge the openings.

As ground water moves through permeable rocks, it moves around and between neighboring impermeable ones; thus, like surface water, it takes the paths of least resistance. Although it moves slowly, it may travel for miles before it emerges as a spring, seeps unseen into a stream, or is tapped by a well.

A relationship does not necessarily exist between the water-bearing capacity of rocks and the depth at which they are found. A very dense granite (poor aquifer) may be found at the Earth's surface, as in New England, whereas a porous sandstone (better aquifer) may lie hundreds or thousands of feet below

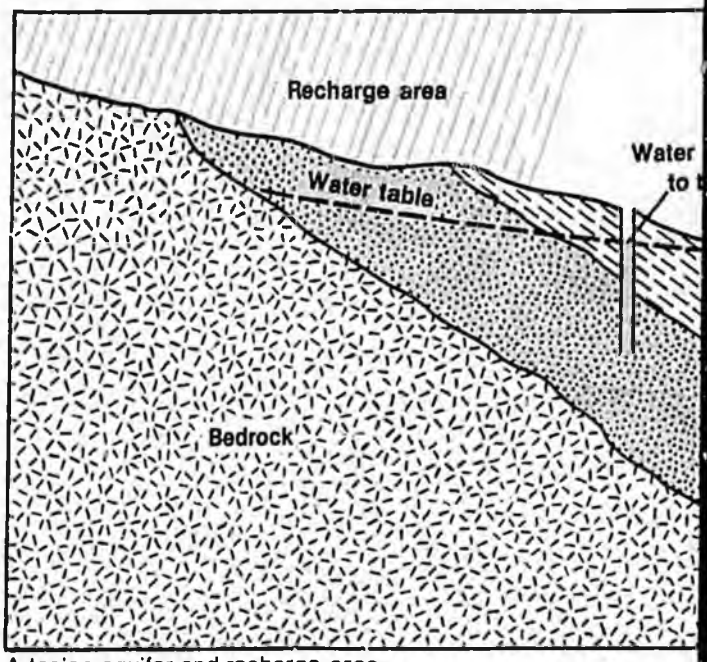
the surface, such as the Dakota Sandstone mentioned previously. Rocks that yield fresh water have been found at depths of more than 6,000 feet, and salty water has come from oil wells at depths of more than 30,000 feet. On the average, however, porosity and permeability decrease as depth increases; the pores and cracks in the rocks at great depths are virtually closed because of the pressure of overlying rocks.

After entering an aquifer, water moves toward lower lying places of discharge from the aquifer. Ground water also can move *upward* when it is confined under pressure between layers of impermeable rock, such as clay or shale. If an aquifer confined under such pressure is pierced by a well, water will rise above the top of the aquifer and may even flow from the well onto the land surface. Water confined in this way is said to be under *artesian pressure,* and the aquifer is called an *artesian aquifer.* The word *artesian* comes from the town of Artois in France, the old Roman city of Artesium, where the best known flowing artesian wells were drilled in the Middle Ages. The imaginary level to which water will rise in tightly cased wells in artesian aquifers is called the *potentiometric surface.*

Deep wells bored into rock to intersect the water table and reaching far below it are often called artesian wells in ordinary conversation, but this is not necessarily a correct use of the term. Such deep wells may be just like ordinary, shallower wells; great depth alone does not automatically make them artesian wells. The word artesian, properly used, refers to situations where the water is confined under pressure below layers of impermeable rock.

Where ground water is not confined under pressure, it is described as being under *water-table* conditions. For practical reasons, hydrologists need to know whether they are dealing with water under artesian or water-table conditions. For example the two kinds

Patterns indicate areas underlain by productive aquifers (capable of yielding 50 or more gallons per minute of fresh water to wells). Areas without patterns are underlain by smaller capacity or less extensive aquifers.
EXPLANATION
Watercourse; productive aquifer adjacent to and capable of replenishment by perennial streams
Unconsolidated aquifers; mostly sand and gravel
Consolidated rock aquifers; mostly volcanic rocks in the Northwest, mostly sandstone and limestone elsewhere
Combination aquifers; sand and gravel aquifers overlying productive rock aquifers



Artesian aquifer and recharge area.

of aquifers—artesian and water-table—respond differently to pumping. Generally, it is assumed that artesian water is continuous for some distance under the confining layer of rock, and that it is replenished some distance away. However, replenishment to artesian aquifers may be derived locally by leakage from adjacent confining rocks. Under water-table conditions, an aquifer also may be recharged locally and is therefore more immediately responsive to precipitation.

A *spring* is the result of the natural discharge from a ground-water reservoir filled to overflowing. There are different kinds of springs and they may be classified according to the geologic formation from which they come, such as limestone springs or lava-rock springs; or according to the amount of water they discharge (large or small); or according to the temperature of water (hot, warm, or cold); or by the forces causing the springs (gravity or artesian flow).

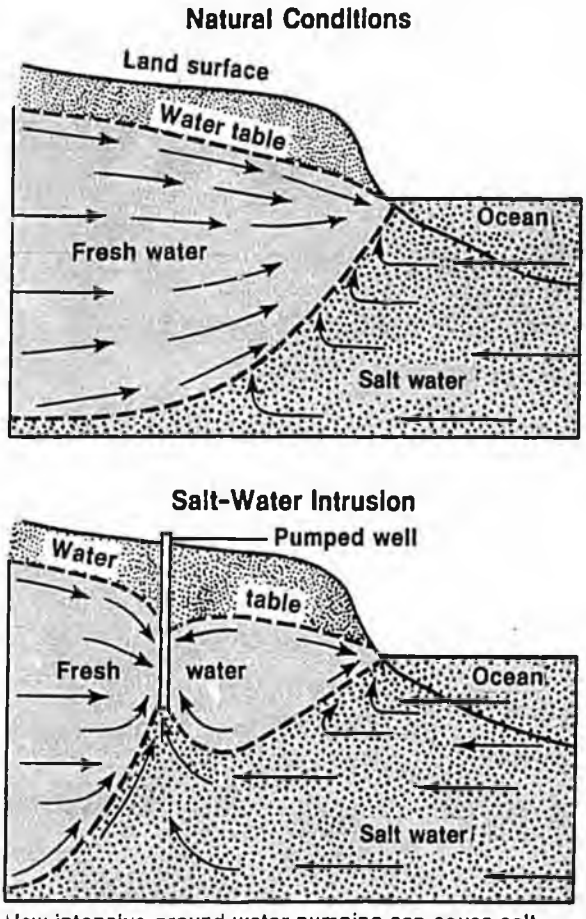
Thermal springs are ordinary springs except that the water is warm, or, in some places, hot. Many discharge in regions of

for plants in small amounts but is toxic to some plants in only slightly larger concentrations.

Water that contains a lot of calcium and magnesium is said to be *hard*. The hardness of water can be expressed in terms of the amount of calcium carbonate (the principal constituent of limestone) or equivalent minerals that would be formed if the water was evaporated. Water is considered soft if it contains 0 to 60 mg/L of hardness constituents, moderately hard if between 61 to 120 mg/L, hard if between 121 and 180 mg/L, and very hard if more than 180 mg/L. Very hard water is not desirable for many domestic uses; for example, it will leave a scaly deposit on the inside of pipes, boilers, and tanks. Hard water, however, can be made soft at a fairly reasonable cost, and it is not always desirable to remove all the minerals that make water hard. Extremely soft water is likely to corrode metals but is suitable for laundering, dishwashing, and bathing. Water for a municipal supply commonly strikes a reasonable balance between hardness and softness.

Ground water, especially acidic ground water, in many places contains excessive amounts of iron. This iron causes reddish stains on plumbing fixtures and clothing. Like hardness, excessive iron content can be reduced by treatment.

Another characteristic that must be considered in water, whatever its source, is pH which is a measure of the hydrogen-ion concentration. The pH scale ranges from 0 to 14. A pH of 7 indicates neutral water; above 7, the water is basic; below 7, it is acidic. A one-unit change in pH represents a 10-fold change in hydrogen-ion concentration. For example, water with a pH of 6 has 10 times more hydrogen-ions than water with a pH of 7. Basic water can form scale; acidic water can corrode. According to U.S. Environmental Protection Agency criteria, water for

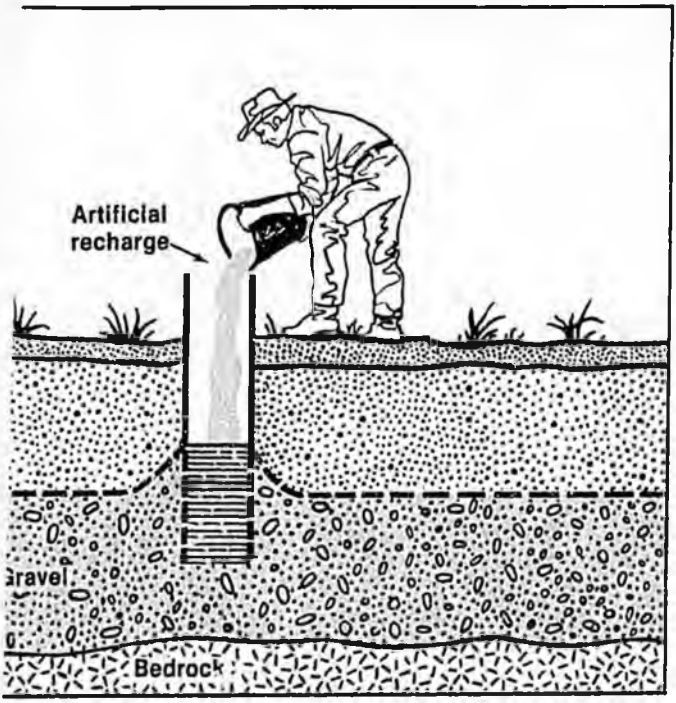


How intensive ground-water pumping can cause salt-water intrusion in coastal aquifers.

domestic use should ordinarily test between a pH of 5.5 and 9.

In recent years, the growth of industry, technology, population, and water use has increased the stress upon both our land and water resources. Locally, the quality of ground water has been degraded. Municipal and industrial wastes and chemical fertilizers and pesticides, not properly contained, have entered the soil and filtered downward to threaten ground-water quality. Other contamination problems include sewer leakage, incorrect septic-tank operation, and landfill leachates. Along some coastal areas, intensive pumping of ground water has caused salt-water intrusion into fresh-water aquifers.

In recognition of the potential for contamination, chemical analyses are made routinely



supplies. The Survey's Water Resources Division, in cooperation with other Federal, State, and local agencies, maintains a nationwide hydrologic-data network and carries out a wide variety of water-resource and hydrologic investigations, and develops new methodologies for studying water. The results of these investigations are indispensable tools for those involved in water-resource planning and management. Numerous inquiries concerning water resources and hydrology are directed to the Survey and to State water-resources and geological agencies.

Some water underlies the Earth's surface almost everywhere. To locate ground water accurately, however, as to depth, quantity, and quality, several techniques must be used, and a target area must be thoroughly tested and studied to determine hydrologic and geologic features important to the planning and management of the resource. To start with, the landscape may offer clues to the hydrologist about the occurrence of shallow ground water. Conditions for large quantities of shallow ground water are more likely under

valleys than under hills. In some regions—in parts of the arid Southwest, for example—the presence of "water-loving" plants, such as cottonwoods or willows, indicates ground water at shallow to moderate depth. Any area where water persists at the surface as springs, seeps, swamps, or lakes reflects the presence of ground water, although not necessarily in large quantities or of usable quality.

Rocks are the most valuable clues of all. As a first step in locating favorable conditions for ground-water development, the hydrologist prepares geologic maps and cross sections showing the distribution and positions of the different kinds of rock both on the surface and underground. Some sedimentary rock formations may extend many miles as aquifers having fairly uniform permeability. Other formations may be cracked and broken and contain openings large enough to carry water. Types and orientation of joints or other fractures may be clues to useful amounts of ground water. The rocks may be so folded and displaced, however, that they can be traced underground only with difficulty.

Next, the hydrologist obtains information on the wells in the target area—their locations, depth to water, amount of water pumped, and kinds of rocks they penetrate. This information is then processed and analyzed.

If there are no wells in the area, or if not enough information is available on the ones that are there, the hydrologist may contract with a well driller to drill some test wells, which he will use in pumping or aquifer tests. These tests will help to determine the amount of water moving through the aquifer, the volume of water that can enter a well, and the effects of pumping on water levels in the area. Because water quality is as important as water quantity, the hydrologist will take samples of water from different wells and samples of the rocks through which the water flows and have them chemically analyzed.

underground, but it is only within recent decades that hydrologists, geologists, and engineers have learned to estimate just *how* much and have begun to document its vast potential for use.

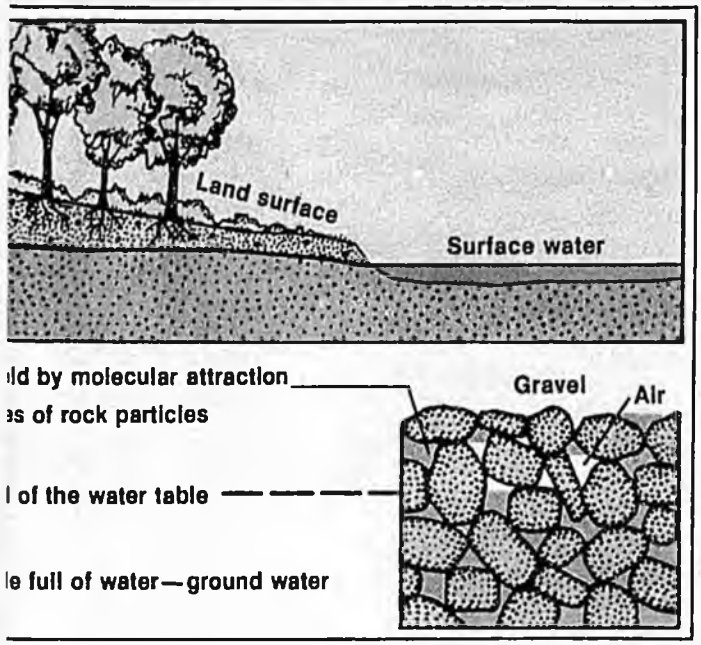
One million cubic miles of the world's ground water is estimated to be stored within one-half mile of the land surface. Although only a fraction of this reservoir of ground water in storage can be practicably tapped and made available on a perennial basis through wells and springs, the amount of water stored underground is more than 30 times larger than the volume in all the fresh-water lakes (nearly 30,000 cubic miles) and more than 3,000 times larger than the estimated volume of water (about 300 cubic miles) in all the world's streams at any given time.

According to water-resource specialists of the U.S. Geological Survey, the United States was using about 415 billion gallons of water a day in the mid-1970's for public supplies, commerce, industry, irrigation, and other urban and rural uses. About 20 percent of this water was water from wells and springs, and in several States the use of ground water equaled or exceeded the use of water from streams and lakes.

Comparison of ground-water use with total water use in the United States, 1975

	Total use (Bgal/d)*	Ground-water use (Bgal/d)	Ground water (Percent of total water use)
Public supplies	29	11	37
Rural domestic and livestock	5	4	80
Irrigation	140	57	40
Industrial	241	11	4
TOTALS	415	83	20%

Source: Geological Survey Circular 765—Estimated use of water in the United States, 1975.
* billion gallons per day



the pore. Thus, a well drilled into water-saturated rocks will fill with water approximately to the level of the water table. If the well is pumped, gravity forces water to move from the saturated rocks into the well to replace the pumped water.

This leads to the question: Will water be forced in fast enough under pumping for a continuing water supply? A tight rock, such as clay or solid granite, having only a few hairline cracks may restrict movement of water to the well. Obviously, such a rock would be a poor water bearer. On the other hand, a rock having large openings will permit water to move more freely, and such a rock would be a good water bearer. The amounts yielded to a well that justify calling a rock water bearing, an aquifer, may range from a few hundred gallons a day where a small domestic supply is needed, to as much as several million gallons a day where large supplies are needed for industry, agriculture, or municipalities.

The word *aquifer* comes from the two Latin words, *aqua,* or water, and *ferre,* to bear or carry. The aquifer literally carries water

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environment and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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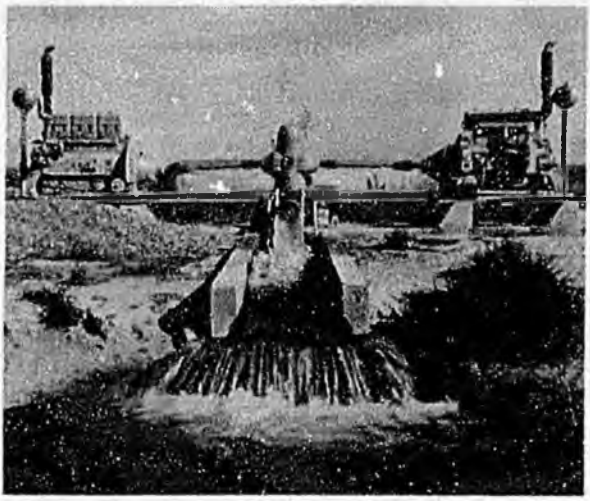
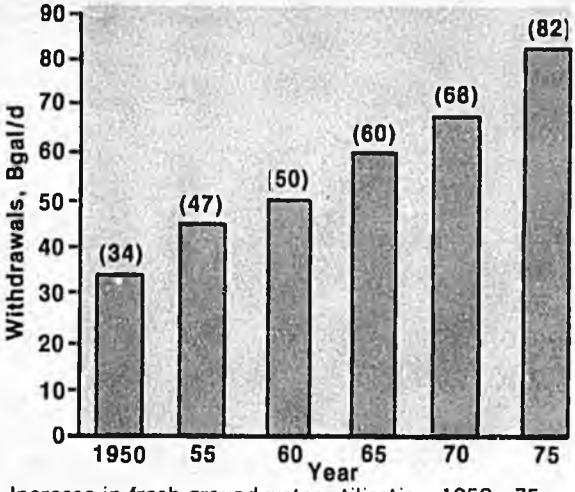


This water is called *ground water.* It is stored in, and moves slowly through, moderately to highly permeable rock strata called *aquifers* and represents, in terms of instantaneous storage at any one time, the largest single source of fresh water available to and commonly used by man.

Ground-water reservoirs have been known to man for thousands of years. Scripture (Genesis 7:11) on the Biblical Flood states that "the fountains of the great deep (were) broken up," and Exodus, among its many references to water and to wells, refers (20:4) to "water under the Earth." Many other chronicles show that man has known from ancient times that much water is contained



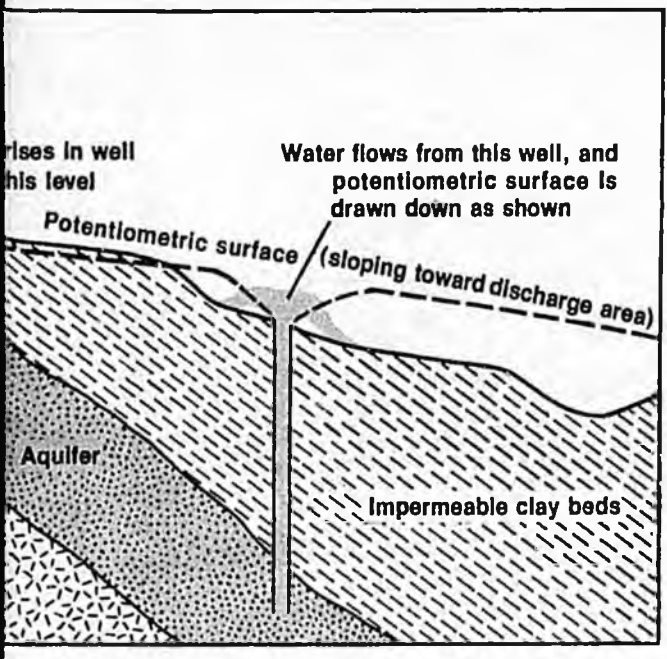
Increase in fresh ground-water utilization, 1950—75

underground. The aquifer may be a layer of gravel or sand, a layer of sandstone or cavernous limestone, a rubbly zone between lava flows, or even a large body of massive rock, such as fractured granite, that has sizable openings.

An aquifer may be only a few or tens or hundreds of feet thick. It may lie just below the surface or thousands of feet below. It may underlie a few acres or thousands of square miles. The Dakota Sandstone in the West, for example, carries water over great distances beneath many States (including North Dakota, South Dakota, southeastern Montana and eastern Wyoming, eastern Colorado, Nebraska, Kansas, northeastern New Mexico, and northwestern Oklahoma). Many aquifers, however, are only local in extent (such as the deposits of permeable sand and gravel accumulated irregularly in the central and northeastern parts of the United States during and following the Glacial Period).

The quantity of water that a given rock can contain depends on the rock's *porosity*—the total measure of the spaces among the grains or in cracks that can fill with water. If the grains of a sand or gravel aquifer are all about the same size, or "well sorted," as geologists say, the spaces between them account for a large proportion of the total

nd-water areas in the United States.



recent volcanic activity and are fed by water heated by contact with hot rocks far below the surface. Such are the thermal springs in Yellowstone National Park. Even where there has been no recent volcanic action, the rocks become warmer with increasing depth. In some such areas, water may migrate slowly to considerable depth, warming as it descends closer to the heated regions deep in the Earth. If it then reaches a large crevice that offers a path of less resistance it can rise more quickly than it descended. Such water does not have time to cool before it emerges, and a thermal spring results. The famous Warm Springs of Georgia and Hot Springs of Arkansas are of this type. *Geysers* are thermal springs that erupt intermittently and to varying heights, some of which are spectacular and world famous, such as Old Faithful in Yellowstone National Park.

Quality of Ground Water

For the Nation as a whole, the chemical and biological character of ground water is

good. The quality of ground water in some parts of the country, however, particularly shallow ground water, is changing as a result of man's activities. Ground water is usually more free of bacterial contamination than surface water because the soil and rocks through which ground water percolates screen out most of the bacteria. Bacteria, however, occasionally find their way into ground water, sometimes in dangerously high concentrations. But freedom from bacterial contamination alone does not mean that the water is fit to drink. Many unseen dissolved mineral and organic constituents are present in ground water in various concentrations. Most are harmless or even beneficial; though occurring infrequently, others are harmful, and a few may be highly toxic.

Water is a solvent. Spring water may contain dissolved minerals and gases that give it the tangy taste enjoyed by many people. Without these minerals and gases, the water would taste flat. The most common dissolved mineral substances are calcium, magnesium, sodium, potassium, chloride, sulfate, and bicarbonate. In natural water chemistry, these substances are called *common constituents.*

Water is not considered desirable for drinking if the quantity of dissolved minerals exceeds 1,000 milligrams per liter (mg/L). Water with a few thousand mg/L of dissolved minerals is classed as slightly *saline*, but it is used routinely in areas where less-mineralized water is not available. Some well and spring water contains dissolved-mineral constituents in even greater concentration and cannot be tolerated by human beings, plants, or animals. At depth, many parts of the country are underlain by highly saline ground water which has only very limited uses.

In high concentrations, certain dissolved mineral constituents can cause special troubles; for example, too much sodium in the water may be harmful to people who have heart trouble. Boron is a mineral that is good

and regularly on municipal and industrial water supplies. Federal, State, and local agencies are taking steps to increase water-quality monitoring and have refined analytical techniques so that early warning can be given, and plans can be implemented to mitigate or prevent water-quality hazards.

Appraising the Nation's Ground-Water Resources

A widespread popular notion is that the water table has progressively declined all over the country. Although there are sizable areas where ground water is being withdrawn at rates causing water levels to decline persistently, as in parts of the dry Southwest, this is not true throughout the country. For the Nation as a whole, there is neither a pronounced downward nor upward trend. Water levels rise in wet periods and decline in dry periods. In areas that are not "over-pumped," particularly in the humid central and eastern parts of the country, water levels average about the same as they did in the past.

Aquifers are recharged by rain or snowmelt percolating downward or by seepage from overlying lakes or streams. An area of recharge, where rainwater or seepage enters the aquifer, may be nearby or many miles from wells or springs. Natural refilling of ground-water reservoirs at depth is a slow process because ground water moves slowly through aquifers. It has been estimated, for example, that if the ground-water reservoir of the High Plains of Texas and New Mexico, an area of slight precipitation, was emptied and all pumping was to cease, it would take centuries to refill at the present estimated small rate of recharge. In contrast, a shallow aquifer that is in an area of heavier precipitation or one in direct contact with streams and lakes and receiving water from them may be recharged rapidly.

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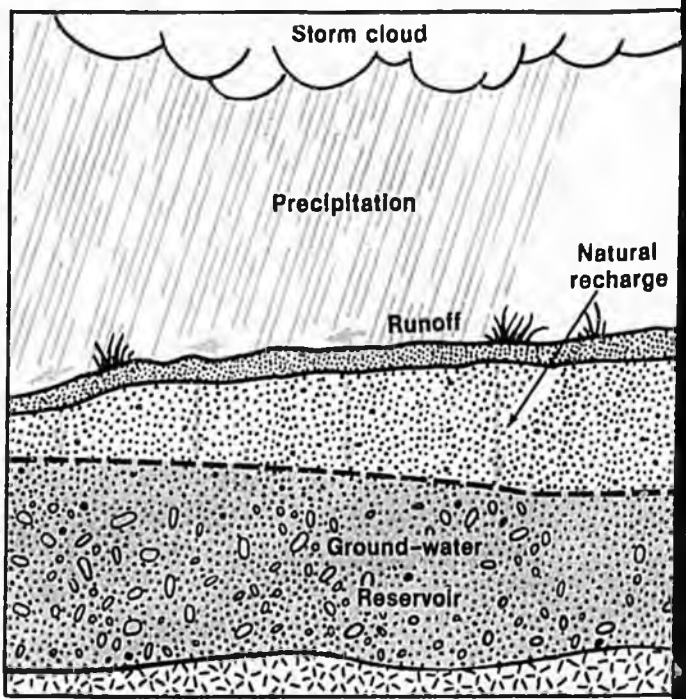

Natural and artificial recharge of a ground-water reservoir.

Ground-water reservoirs can be recharged artificially. For example, considerable ground water used for air conditioning is returned to aquifers through recharge wells on Long Island, N.Y. Ground-water reservoirs may be recharged in two main ways: one way is to spread water over the land in pits, furrows, or ditches, or to erect small dams in stream channels to detain and deflect surface runoff, thereby allowing it to infiltrate to the ground-water reservoir; the other way is to inject water directly into recharge wells constructed for the purpose as simulated above by a man pouring water into a well. The latter is a more expensive method but may be justified where the spreading method is not feasible. Although some artificial-recharge projects have been successful, many have been disappointing, and there is still much to be learned about different ground-water environments and their receptivity to artificial-recharge practices.

One of the major responsibilities of the U.S. Geological Survey is to assess the quantity and quality of the Nation's water

The hydrologist's report, with its geologic and hydrologic maps, will show where water can be found, its chemical composition, how it moves underground, and, in a general way, how much is available. Although described simply, this is the scientific approach used by the U.S. Geological Survey, State resource agencies, and consulting engineers, hydrologists, and hydrogeologists in studying ground-water resources.

In the past, locating ground-water supplies was the main problem facing hydrologists and well drillers. Now, with years of experience and a large information base available, finding water is no longer the main problem; evaluating the ground-water resource in developed areas and prudent management of the resource, once it is found, and protection of its quality are the current problems. Thus, prediction of the capacity of the ground-water resource for long-term pumpage, the effects of that pumpage, and evaluation of water-quality conditions are among the principal aims of modern-day hydrologic practice in achieving proper management of ground water.

Ground water, presently a major source of water, is also the Nation's principal reserve source of fresh water. Thus, every individual, well owner or not, has a stake in its wise use. The public will have to make decisions regarding water supply and waste disposal—decisions that will either affect the ground-water resource or be affected by it. These decisions will be more judicious and reliable if based upon knowledge of the principles of ground-water occurrence. Even the simple facts contained in this leaflet can help people make wiser judgments about the use of our ground-water resource.

This publication is one of a series of general interest publications prepared by the U.S. Geological Survey to provide information about the earth sciences, natural resources, and the environment. To obtain a catalog of additional titles in the series "Popular Publications of the U.S. Geological Survey," write:

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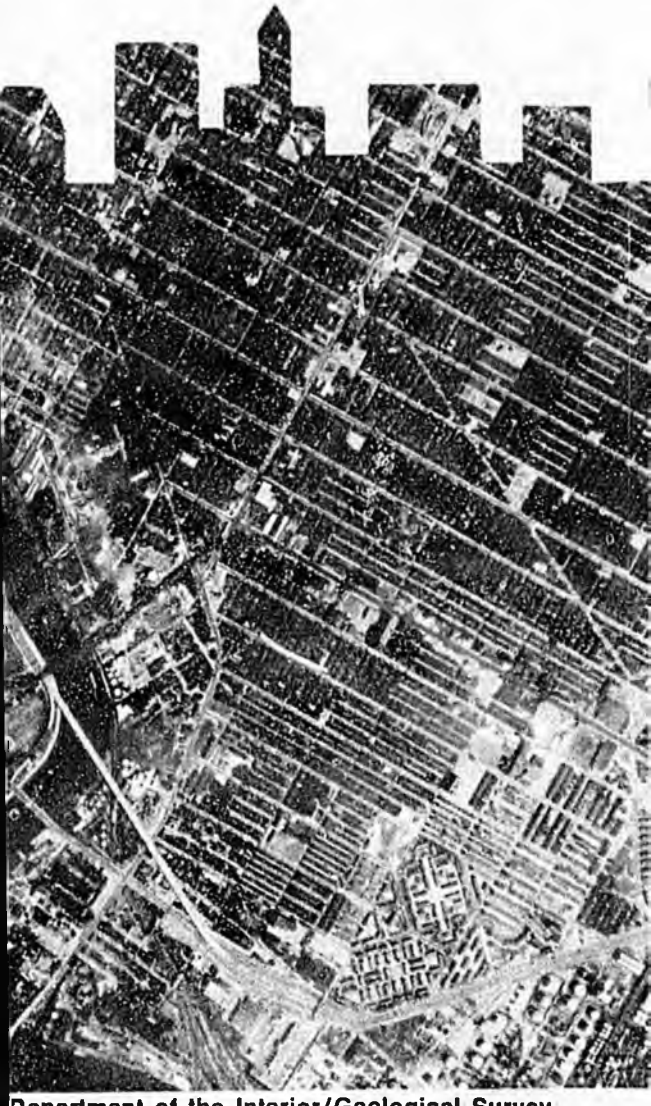
rosion and ediment



Department of the Interior/Geological Survey

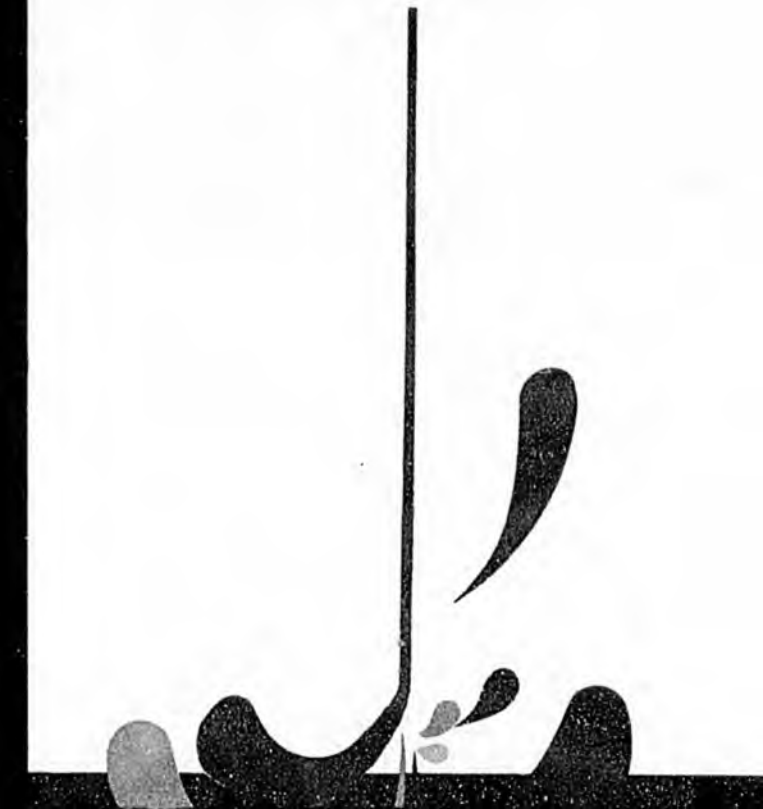
Water in the Urban Environment:

Erosion and Sediment

by William J. Schneider

Water: Resource and Hazard

Water is both an urban resource and a potential hazard. As a resource, it supplies our daily needs, sustains our industries, adds beauty to the landscape, and provides recreational opportunities. As a hazard, water can cause flooding and accumulate pollution. This leaflet discusses the problem of erosion and sediment.



Sediment—the mud and other solids washed off the land surface—is one of the major pollutants of our waterways. For every pound of municipal and industrial waste dumped into our rivers, lakes, and streams, erosion usually adds several pounds of sediment. Although perhaps not as dangerous to health as waste pollution, sediment pollution is indeed costly. Each year we spend more than $125 million to dredge some 38 million cubic yards of sediment from our harbors and waterways—enough sediment to fill almost 2 million railroad cars. In addition, we lose more than $100 million in reservoir capacities each year from the deposition of stream-borne sediment. Added to this are the less tangible losses from sediment damage to the water environment and to its recreational and esthetic qualities.

Sediment deposition can reduce a lake to mud flats.

Sediment: The Sources

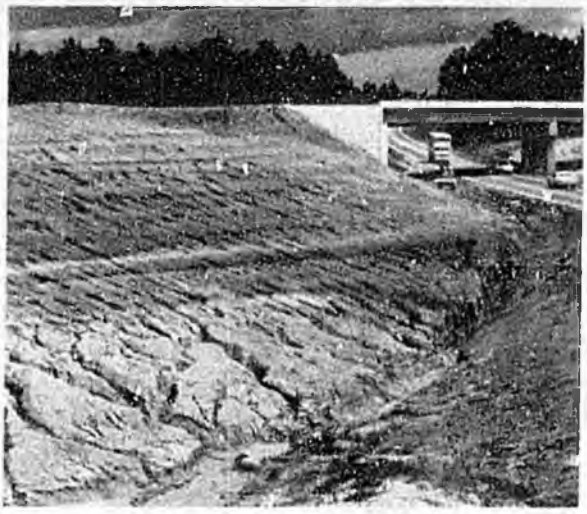
The sediment in our streams and rivers is derived almost entirely from the erosion of soil. Although rural and forest areas contribute some sediment to our waterways, by far the greatest source is from land undergoing urbanization. When exposed to rainfall, earth laid bare during construction erodes easily and contributes sediment to our waterways at rates that may approach 20,000 to 40,000 times the erosion rate of farms and woodlands. Furthermore, such land commonly remains bare for as much as 3 months during construction of a single residence unit and for more than a year during construction of large housing and apartment developments. Hydrologists of the Geological Survey have documented the magnitude of this sediment problem, particularly in the fast-growing Washington, D.C. metropolitan area. Their studies indicate clearly the tremendous amounts of sediment that can be eroded during construction:

Sediment also impairs recreational uses of our water resources.

Erosion from bare soil during housing construction is one of the sources of sediment.

- Lake Barcroft, in northern Virginia, originally served as a water-supply reservoir for the surrounding area. As encroachment by urban development forced its abandonment as a water-supply source, the lake became the focal point of high-priced suburban development. The continued urban expansion resulted in even greater accumulation of sediment from the construction and development. Eventually more than 235,000 tons of sediment were deposited in the lake; that is more than 40 tons of silt for every acre under development in the basin. During 1961 and 1962, when construction in the basin was at its peak, residents of the area spent more than $200,000 to dredge sediment from the lake in order to maintain its recreational and esthetic qualities.

- In Montgomery County, Md., Geological Survey hydrologists have determined erosion and sediment production rates at an actual construction site. Here, more than 3,800 tons of soil were eroded during construction of 89 houses on a 20-acre site. This amount of erosion is equivalent to the removal of 1¼ inches of soil over the entire area. A single storm on August 4, 1960, removed more than 256 tons of soil in less than 2 hours.



Erosion from highway construction also contributes significant sediment loads.

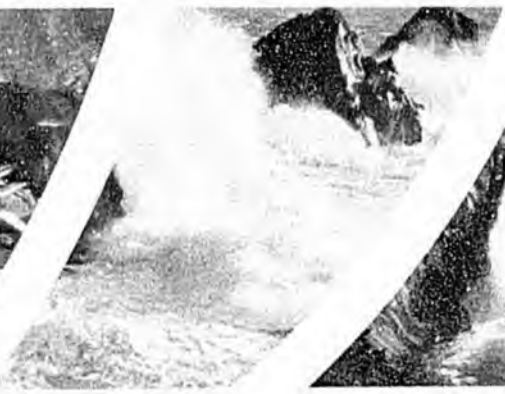
- Highway construction—another form of urban development—also contributes huge sediment loads to our waterways. In the Scott Run watershed in Fairfax County, Va., over 69,000 tons of sediment were eroded from the land laid bare during highway construction. More than half the sediment, some 37,000 tons, was carried by Scott Run to the Potomac River, where it contributed to siltation of the estuary in the Washington, D.C. area. Although the area of highway construction covered only 11 percent of the land area in the basin, it contributed 94 percent of the total sediment load carried by Scott Run to the Potomac River during the 3-year construction period.

Erosion: Its Control

How can this erosion and sedimentation be controlled? The easiest way to prevent sediment problems in streams and rivers is to control the erosion at its source. By inhibiting or preventing the erosion of soil during construction, production of sediment is restricted.

Numerous techniques can be used for controlling the erosion and sedimentation caused by urban development. They range from selecting the proper season for construction to the building of engineering

Water
of the World



WATER OF THE WORLD

by Raymond L. Nace

DISTRIBUTION OF MAN'S LIQUID ASSETS IS A CLUE TO FUTURE CONTROL

Most people know that water is unevenly distributed over the Earth's surface in oceans, rivers, and lakes, but few realize how very uneven the distribution actually is. It is instructive to consider the total inventory of water on the planet Earth, the areas where the water occurs, and the long-term significance of the findings.

The world ocean—139 million square miles of it—contains 317 million cubic miles of saltwater. The average depth of the ocean basins is about 12,500 feet. If the basins were shallow, seas would spread far onto the continents, and dry land areas would consist chiefly of a few major archipelagoes—high mountain ranges projecting above the sea.

Considered as a continuous body of fluid, the atmosphere is another kind of ocean. Yet, in view of the total amount of precipitation on land areas in the course of a year, one of the most astonishing world water facts is the very small amount of water in the atmosphere at any given time. The volume of the lower 7 miles of the atmosphere—the realm of weather phenomena—is roughly four times the volume of the world ocean. But, the atmosphere contains only about 3,100 cubic miles of water, chiefly in the form of invisible vapor, some of which is transported overland by air currents. If all vapor were suddenly precipitated from the air onto the Earth's surface it would form a layer only about 1 inch thick. A heavy rainstorm on a given area may remove only a small percentage of the water from the airmass that passes over. How, then, can some land areas

receive, as they do, more than 400 inches of precipitation per year? How can several inches of rain fall during a single storm in a few minutes or hours? The answer is that rain-yielding airmasses are in motion, and as the water-depleted air moves on, new moisture-laden air takes its place above the area of precipitation.

The source of most atmospheric water is the ocean from which it is derived by evaporation. Evaporation, vapor transport, and precipitation constitute a major arc of the hydrologic cycle—the continuous movement of water from ocean to atmosphere to land and back to the sea. Rivers return water to the sea along one chord of the arc. In a subterranean arc of the cycle, underground bodies of water discharge some water directly into rivers and some directly into the sea.

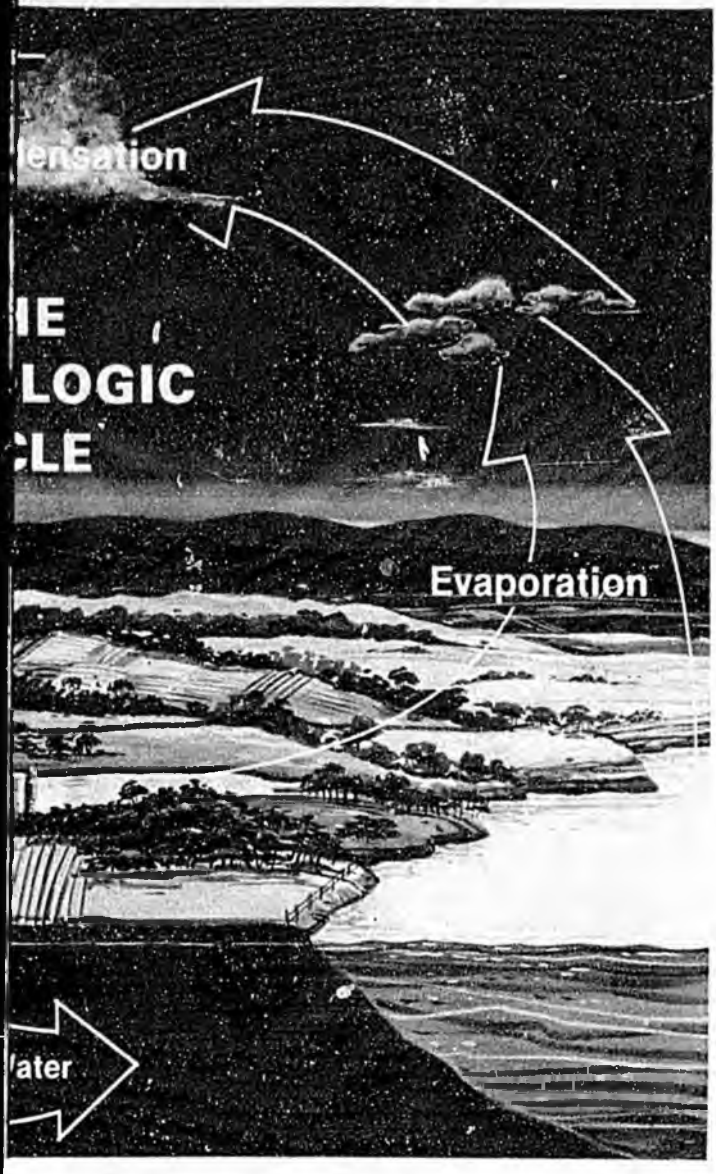
Estimated average annual evaporation from the world ocean is roughly 39 inches. The conterminous United States receives an average of 30 inches of precipitation every year, or about 1,430 cubic miles in total volume. Evapotranspiration returns approximately 21 inches of this water to the atmosphere (about 1,000 cubic miles). Obviously, some rain is water that was vaporized from the land areas and is being reprecipitated. Evidently the global hydrologic cycle, which sends water from sea-to-air-to-land areas and back to the sea again, has short circuits. These are called subcycles.

There are many complexities and variations in the fate of water that falls as rain or snow. For example, high in the central Rocky Mountains of North America, the Yellowstone River heads in Yellowstone National Park just east of the Continental Divide. The river water discharges through the Missouri and Mississippi Rivers into the Gulf of Mexico about 1,600 airline miles distant from the head.

On the west side of the Continental Divide, not far from the Yellowstone, rises the Snake River which flows across Idaho to join the Columbia near Pasco, Washington. Its water eventually reaches the Pacific Ocean about 700 airline miles from the source and about 2,200 miles from the mouth of the Mississippi.

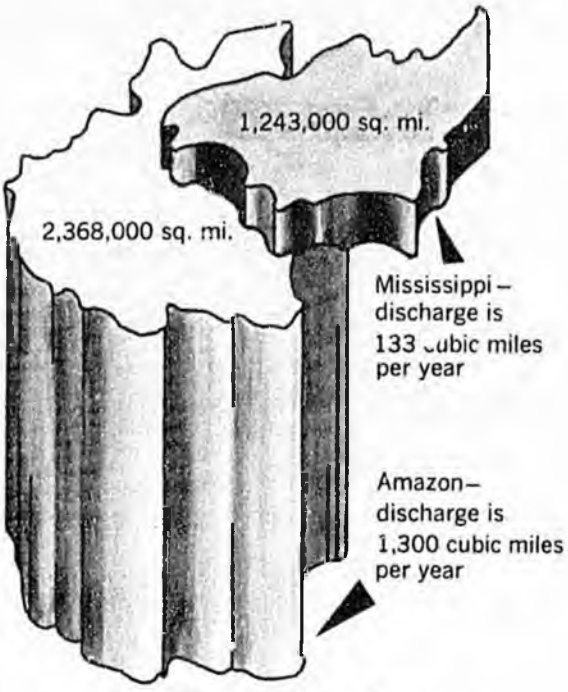
All water comes from the ocean and is returned to i
continuous hydrologic cycle.

This is a good example of the continuous m
and transfer of water in the hydrologic cycl
airmass moving eastward across the F
Mountains contains water evaporated fror
Pacific Ocean. Some of the water falls as ra
snow to the west and some to the east o
Continental Divide. Thus, two drops of rain fa
side by side along the continental backbone



end up, one in the Pacific, the other in the Atlantic Ocean, although both were derived from the Pacific.

No one knows how much water moves from the Pacific to the Atlantic Ocean by vapor transfer, precipitation, and runoff, but we do know a great deal about runoff itself. Estimated total flow into the sea from rivers in the 48 adjacent States takes place at the rate of about 1,803,000 cubic feet per second (a cubic foot is about 7.48 gallons), which amounts to approximately 390 cubic miles per



Amazon vs. Mississippi drainage.

year. Values for runoff (390 cubic miles) plus evaporation (1,000 cubic miles) do not quite equal the precipitation (1,430 cubic miles) because none of these values is precise. Moreover, some water is discharged into the sea directly from ground-water sources without passing through streams. The missing 40 cubic miles of water, roughly 10 percent of the value for streamflow, might represent direct ground-water discharge.

Hydrologists have not generally considered that direct ground-water outflow to the sea is so large, but there is really no good basis that can be used to dispute or support what the computations seem to indicate. At any rate, the data are sufficiently accurate for the present purpose which is to show the relative magnitude of water volumes involved in the annual water cycle.

Some more specific data give a good idea of the relative importance of large and small rivers in maintaining continental water balances.

The Mississippi, North America's largest river, has a drainage area of 1,243,000 square miles (about 40 percent of the total area of the 48 conterminous States) and discharges at an aver-

ate of 620,000 cubic feet per second. This nts to some 133 cubic miles per year, or ximately 34 percent of the total discharge all the rivers of the United States.

Columbia, nearest American competitor of lississippi, discharges less than 75 cubic per year. Relatively speaking, the great ado River is a dwarf, discharging only about c miles annually.

the other hand, the Amazon, the largest river world, is nearly 10 times the size of the ssippi. It discharges about 4 cubic miles per nd some 1,300 cubic miles per year—about times the flow of all United States rivers.

ca's great Congo River, with a discharge of ximately 340 cubic miles per year, is the 's second largest. The estimated annual arge of all African rivers is about 510 cubic

surements of only the few principal streams continent afford a basis for reasonably ate estimation of the total runoff item in a ental water balance. The small streams are

oulee Dam on the Columbia River. Franklin D. Roosevelt ds nearly 2.8 cubic miles of water.

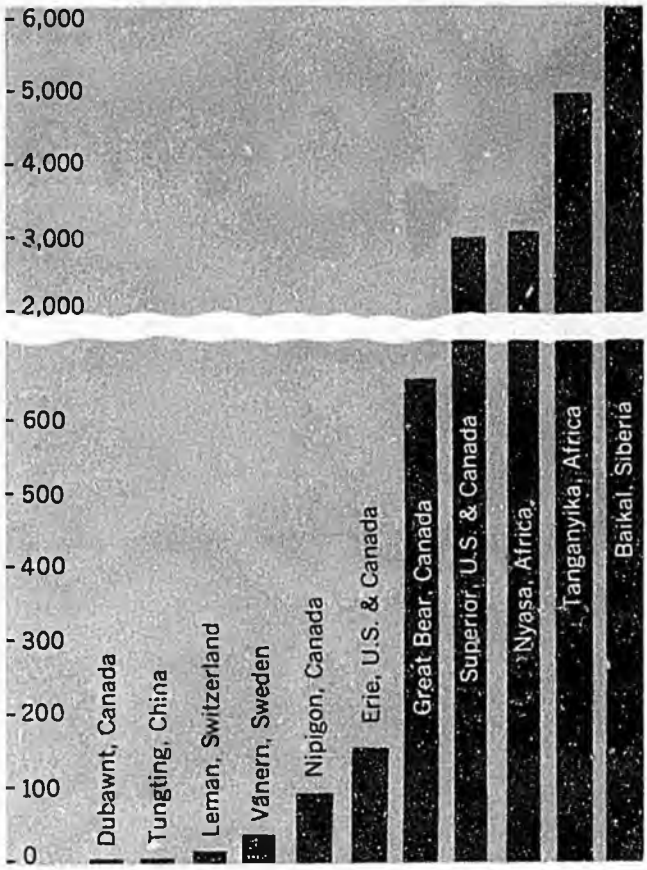
important locally, but they contribute only minor amounts of the total water discharged. Thus it is possible to estimate the total runoff of all the rivers of the world, even though many of them have not been measured accurately. Sixty-six principal rivers of the world discharge about 3,720 cubic miles of water yearly. The estimated total from all rivers, large and small, measured and unmeasured, is about 9,200 cubic miles yearly (25 cubic miles daily).

Crude estimates have indicated that the total amount of water that is physically present in stream channels throughout the world at a given moment is about 300 cubic miles. Evidently, river channels on the average contain only enough water to maintain their flow for about 2 weeks. Some have much more water, others much less, but it seems to be a fair average. How, then, do rivers maintain a flow throughout the year, even during rainless periods much longer than 2 weeks? The answer to that question will appear later in the discussion of ground water.

After oceans and rivers come lakes, which can be called wide places in rivers. This is certainly true of the many small lakes that are impounded by relatively minor and geologically temporary obstructions across river channels. But no single oversimplified metaphor accurately describes all lakes, which are widely varied in their physical characteristics and the geologic circumstances under which they occur. The handsome little tarn occupying an ice-scooped basin in a glaciated alpine area is radically different from the deep and limpid Crater Lake of Oregon, which fills the crater of a now-extinct volcano. Lake Okeechobee in Florida is totally different from any of the North American Great Lakes, which occupy huge basins formed in a complex manner by glacial excavation at some places, moraine and outwash deposition at others, isostatic subsidence of that whole region of the Earth's crust, and other factors. The Great Lakes of North America, in turn, bear no resemblance to Lake Tanganyika in the great Rift Valley of Africa. Processes that are poorly understood created the rift by literally pulling two sections of the Earth's crust apart, leaving a deep, open gash part of which is occupied by the lake. And these are only a few examples of wide

variations in the nature of lakes.

The Earth's land areas are dotted with hundreds of thousands of lakes. Wisconsin, Minnesota, and Finland contain some tens of thousands each. But these lakes, important though they may be locally, hold only a minor amount of the world supply of fresh surface water, most of which is contained in a relatively few large lakes on three continents.



Water volume of lakes in cubic miles

Whether a lake contains freshwater or saltwater makes a considerable difference in its usefulness to man, so the Earth's greatest lakes are considered in both of the categories, fresh and salt.

The volume of all the large freshwater lakes in the world aggregates nearly 30,000 cubic miles, and their combined surface area is about 330,000 square miles. "Large" is a relative term that requires explanation. For this article, a lake is called large if its contents are 5 cubic miles or more.

Location	WORLD'S ESTIM
SURFACE WATER	
Freshwater lakes	
Saline lakes and inland seas	
Average in stream channels	
SUBSURFACE WATER	
Vadose water (includes soil moisture)	
Ground water within depth of half a mile	
Ground water—deep lying	
OTHER WATER LOCATIONS	
Icecaps and glaciers	
Atmosphere (at sea level)	
World ocean	
TOTALS (rounded)	

* *A cubic mile of water equals 1 trillion gallons*

D WATER SUPPLY

Surface area (square miles)	Water volume (cubic miles)	Percentage of total water
330,000	30,000	.009
270,000	25,000	.008
—	300	.0001
	16,000	.005
50,000,000	1,000,000	.31
	1,000,000	.31
6,900,000	7,000,000	2.15
197,000,000	3,100	.001
139,500,000	317,000,000	97.2
	326,000,000	100

Thus the listing includes Dubawnt Lake, Canada (about 6 cubic miles), but excludes the Zürichsee of Switzerland (about 1 cubic mile). The range of volume among the large lakes is enormous, from a lower limit of 5 cubic miles to an upper one of 6,300 cubic miles in Lake Baikal in Asiatic Russia, the largest and deepest single body of freshwater in existence. Some appreciation of its volume may be gained from the realization that Lake Baikal alone contains nearly 300 cubic miles more water than the combined contents of the five North American Great Lakes. The Great Lakes loom large on a map, but their average depth is considerably less than that of Baikal.

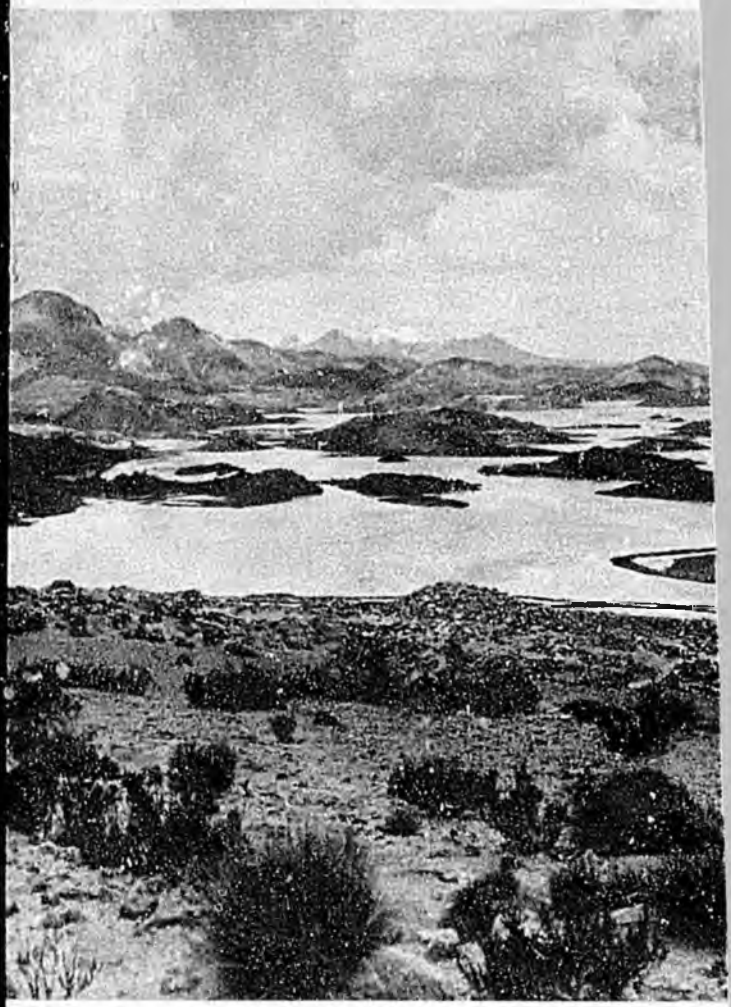
Nevertheless, North American lakes are a major element in the Earth's water balance. The Great Lakes, plus other large lakes in North America (chiefly in the 48 States and Canada) contain about 7,800 cubic miles of water—26 percent of all liquid, fresh, surface water in existence.

Similarly, the large lakes of Africa contain 8,700 cubic miles, or nearly 29 percent of the total freshwater supply. Asia's large lakes contain about 6,400 cubic miles, or 21 percent of the total, nearly all of which is in Lake Baikal.

Lakes on these three continents account for roughly 75 percent of the world's fresh surface water. Large lakes on other continents—Europe, South America, and Australia—have only about 720 cubic miles, or roughly 2 percent of the total. All that remains to fill the hundreds of thousands of rivers and lesser lakes that are found throughout the world is less than one-fourth of the total fresh surface water.

Saline lakes are equivalent in magnitude to freshwater lakes. Their total area is 270,000 square miles and their total volume is about 25,000 cubic miles. The distribution, however, is quite different. About 19,240 cubic miles (75 percent of the total saline volume) is in the Caspian Sea, and most of the remainder is in Asia. North America's shallow Great Salt Lake is comparatively insignificant with 7 cubic miles.

All these water sources we have discussed are the obvious ones. There is another—soil moisture—that may be the most significant segment of the world's water supply because of the key role played by plants in the food chain. Some



Laguna de Cotacatani, a morainal-dammed lake, in the Andean region of northern Chile.

plants grow directly in water or marshy ground, but by far the greater mass of vegetation on Earth lives on "dry" land. This is possible because the land is really dry at just a few places, and often only temporarily. How dry is dust? The dust of a dry dirt road may contain up to 15 percent of water by weight. However, plants cannot grow and flourish with so little water because the soil holds small percentages of moisture so tenaciously that plant roots cannot extract it. Aside from desert plants, which store water in their own tissues during infrequent wet periods, land plants flourish only where there is extractable water in the soil. Inasmuch as a quite ordinary tree may withdraw

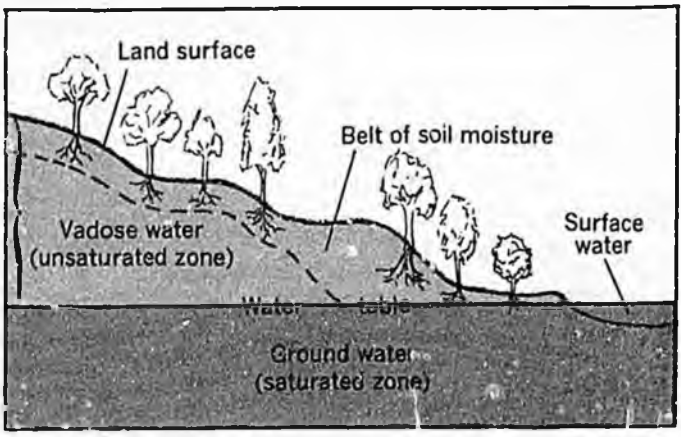
and transpire about 50 gallons of water per day, frequent renewals of soil moisture, either by rain or by irrigation, are essential. The average amount of water held as soil moisture at any given time is on the order of 6,000 cubic miles for the world as a whole—an insignificant percentage of the Earth's total water, but vital to life. Relatively little vegetation receives artificial irrigation, and practically all of it depends on natural soil moisture, which, in turn, depends on orderly and timely operation of the hydrologic cycle.

Another little-considered water reservoir has been known to man for thousands of years. Scripture (Genesis 7:11) on the Noachian Deluge states that "the fountains of the great deep (were) broken up," and Exodus, among its many references to water and to wells, refers (20:4) to "water under the earth." Many other chronicles show that man has known from ancient times that there is much water underground. Only recently has he begun to appreciate how much.

Beneath most land areas of the world there is a zone where the pores of rocks and sediments are completely saturated with water. Hydrologists call this ground water, and the upper limit of the saturated zone is called the water table. The water table may be right at the land surface, as in a marsh, or it may lie hundreds of feet below the land surface, as in some arid areas. Water in the unsaturated zone above the water table is called vadose water and includes the belt of soil moisture. Water in the intermediate part of this zone has passed through the soil and is percolating downward toward the water table.

The world volume of that part of the vadose water below the belt of soil moisture is probably somewhat more than that of soil moisture—say 10,000 cubic miles. It is highly important because, although it is not extractable by man, it is potential ground-water recharge, and ground water *is* extractable. Each influx of water from precipitation on the land surface, followed by percolation through the soil, provides an increment of recharge to the ground water.

Below the water table, to a depth of half a mile in land areas of the Earth's crust, there is about 1 million cubic miles of ground water. An equal if not



Relation of the water table to saturated and unsaturated zones.

greater amount is present at a greater depth down to some 10,000 to 15,000 feet, but this deeper water circulates sluggishly because the rocks are only slightly permeable. Much of the deep-lying water is not economically recoverable for human use, and a good deal of it is strongly mineralized.

Ground water flows through moderately to highly permeable strata, which are called aquifers, at rates of a few inches to perhaps several hundred feet per day; 40 to 50 feet per day would be a rather high rate of flow.

Depending on how far the ground water must travel to reach a surface discharge area, water in shallow to moderately deep zones may remain underground from a few hours to 100 years or longer. Water at great depth may take tens or hundreds of thousands of years to pass through an aquifer, and some is completely stagnant.

The volume of ground water in the upper half mile of the continental crust probably is about 3,000 times greater than the volume of water in *all* rivers at any one time, and nearly 20 times greater than the combined volume of water in all rivers and lakes. It is easy to see, therefore, that ground-water reservoirs have tremendous importance as equalizers of streamflow. Under natural conditions, most ground-water reservoirs are full to overflowing, and the overflow water provides what is called the base flow of surface streams enabling them to flow even during long, rainless periods and after winter snows have melted.

According to calculations, the volume of ground water in storage in the United States to a depth of half a mile is equivalent to the total of all recharge during the last 150 years. This estimate is crude, but it helps to emphasize the important fact that groundwater reserves, although immense, are not wholly self-renewing annually. At places where they have been depleted by pumpage, they might take many decades to recover even if pumping were stopped completely.

Consider, for example, a location in the dr Southwestern United States where annual r charge to an aquifer is only two-tenths of an inc of water. In such areas, it is not uncommon t pump 2 feet or more of water per year for irrigatio or other uses. In this over-simplified example, the entire aquifer were pumped at that rate, yearl pumpage would be equivalent to 120 year recharge, and 10 years of pumping would remove 1,200-year accumulation of water. Recharge du ing the pumping period would be negligibl Mechanical problems and economic factors woul prevent complete emptying of an aquifer, but th example is valid in principle.

The next big items on the water-balance shee are icecaps and glaciers. They may seem unim portant in the water cycle because, although th ice masses alternately shrink or grow a little fror time to time, new ice is added about as fast as ol ice melts. The polar ice masses, however, have great influence on weather, and everything tha happens in the polar regions indirectly affect everyone throughout the world (NATURAL HIS TORY, October 1963). Moreover, if a shift i climate led to extensive melting of icecaps, ther would be a rise in sea level with important effect

Vast expanse of the Antarctic ice sheet, shown in relief model, represents 85 percent of all the ice in the world.

in all low-lying coastal areas.

Mountain glaciers, such as those of the Alps in Europe (after which alpine glaciers are named), the Himalayas of Asia, and the Cascades of North America, are like average rivers in some respects. They are important locally, but they contain an insignificant fraction of the world's water. The total volume of all alpine glaciers and small icecaps in the world is only about 50,000 cubic miles (comparable to the combined volume of large saline and fresh lakes).

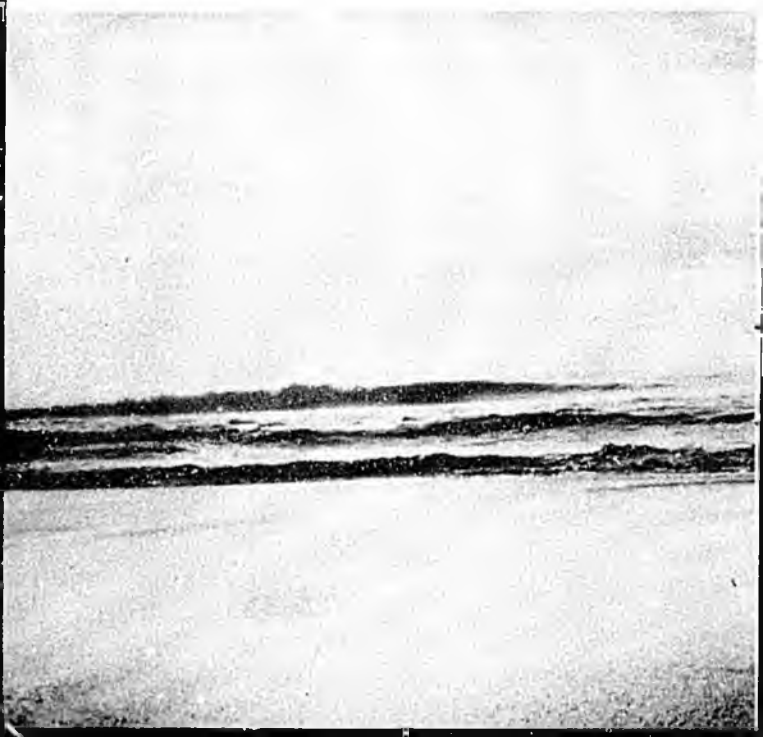
An alpine glacier is one that rises in mountainous uplands and, by plastic deformation, flows along a valley. A continental glacier, or icecap, is one that is plastered over the landscape, mountain and valley alike. Icecaps tend to flow radially outward from their center of accumulation. Wastage occurs by sublimation from the surface and by melting or caving away around the periphery. Average icecaps, like those on Novaya Zemlya, Iceland, and Ellesmere Land, are analogous to average lakes. They are locally important, but hold an insignificant share of the world's water and only a small part of the total volume of perennial ice.

The Greenland icecap is an entirely different matter. About 667,000 square miles in area and averaging nearly 5,000 feet in thickness, its total volume is about 630,000 cubic miles. If melted, it would yield enough water to maintain the Mississippi River for somewhat more than 4,700 years. Even so, this is less than 10 percent of the total volume of icecaps and glaciers. The greatest single item in the water budget of the world, aside from the ocean itself, is the Antarctic ice sheet.

Since the advent of the International Geophysical Year, 1957, considerable information has been accumulated about Antarctica. Data on the thickness of the ice sheet are relatively scarce, but there is enough information to permit an approximate estimate. The area of the ice sheet is about 6 million square miles, and the total volume, therefore, is between 6 and 7 million cubic miles, or some 85 percent of all existing ice and about 64 percent of all water outside the oceans.

The hydrologic importance of the continent and its ice may be illustrated briefly. If the Antarctic icecap were melted at a suitable uniform rate it could feed:

1. The Mississippi River for more than 50,000 years;
2. All rivers in the United States for about



17,000 years;

3. The Amazon River for approximately 5,000 years; or

4. All the rivers in the world for about 750 years.

The statistics about water given here are rather simple, but they are sufficiently important to tabulate in order to get them more clearly in mind. The table on pages 10 and 11 gives a comparative view of the world's water.

About 97 percent of all water in the world is in the oceans. Most of the remainder is frozen on Antarctica and Greenland. Thus, man must get along with the less than 1 percent of the world's water that is directly available for freshwater use. Obviously, he must find much more effective ways of managing if he is to prosper.

Water is a global concern. The water cycle recognizes no national boundaries. Man has become so numerous and his activities so extensive that he has begun to affect the water cycle—certainly on a regional scale and very likely on a global scale. To learn more about the world's water and how to use it, many countries have joined together in a program—the International Hydrologic Decade—aimed at overcoming on a global scale the now-existing critical deficiency in hydrological knowledge.

As the Nation's principal conserv
agency, the Department of the Interio
responsibility for most of our nationa
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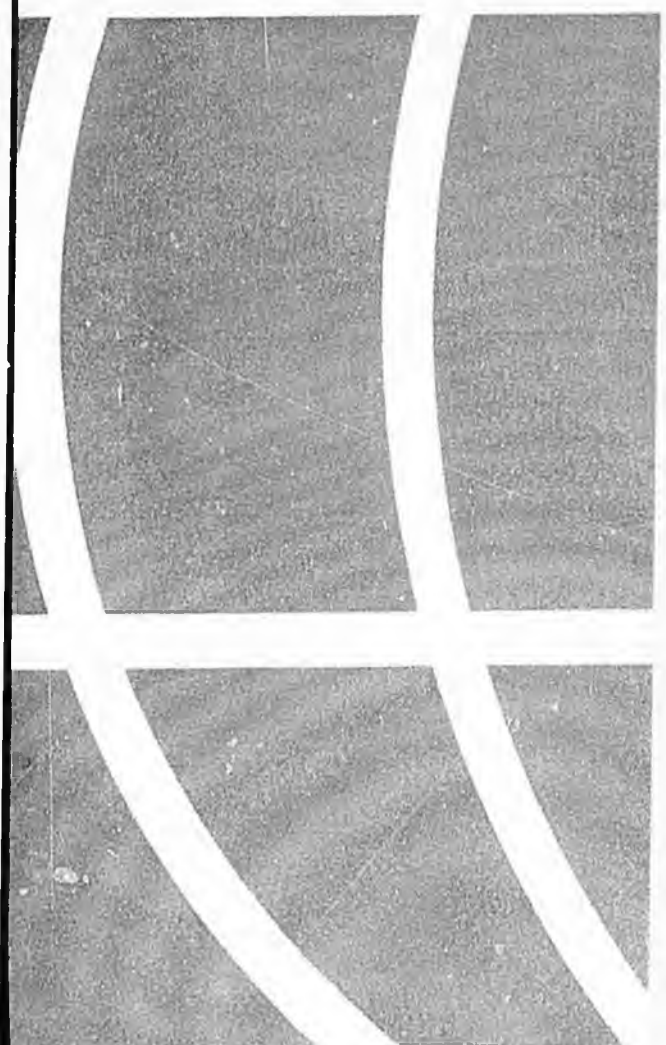

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works, from temporary procedures to permanent installations. Basically, these techniques are aimed at (1) reducing the area and duration of exposure of soils to erosion, (2) covering exposed soils with mulch or vegetation, (3) mechanically retarding the rates of storm runoff, (4) trapping the sediment carried by the storm runoff, and (5) planning land-clearing operations to coincide with periods of minimum rainfall.

Reduction of the area and duration of exposure of bare soils is fundamentally a planning process. Proper planning can insure that large areas are not cleared of cover and left bare for extended periods of time. Land cleared for highway construction and housing subdivisions commonly lies exposed to intensified erosion from one construction season to the next. Ideally, only short sections of highway or individual lots should be

Sediment traps can be used on land undergoing construction to inhibit the movement of sediment to streams.

cleared, developed, and then rapidly provided with erosion-retarding cover. Economically this is not always feasible; clearing of large areas must be done while equipment is available and at the site. Proper planning, however, can minimize the time during which the cleared land is exposed to the erosional effects of storm runoff.

During the construction period following the grading of the land, erosion can be inhibited by mulching or by planting temporary vegetative cover. Natural and artificial mulches, such as straw and plastic-based sprays, are both in use. Straw, or other similar material, provides a ground cover that breaks the force of the falling rain and thus protects the underlying soil. Plastic and chemical sprays and soil additives bind together the soil particles, making them more resistant to the erosional force of the rain. Temporary seeding with grass improves appearance and provides protection from the erosional force of the rainfall.

Hydro-mulching prevents erosion of bare soil.

Sediment traps fill rapidly with sediment during periods of construction.

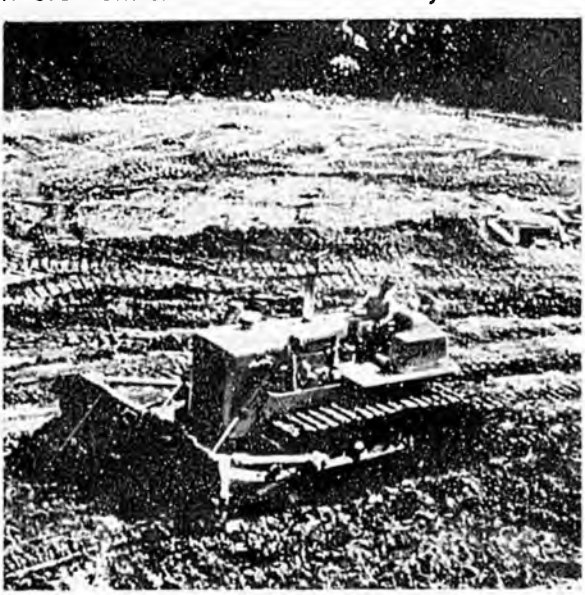
Temporary sediment traps can be constructed. These are essentially small reservoirs that detain the sediment-laden runoff at the construction site and permit the coarser sizes of eroded soil to settle out behind the dam, rather than move into the streams and rivers. Such sediment traps generally are temporary measures, installed during clearing of the land and maintained during construction. Usually they are eliminated during the final grading and landscaping when their usefulness in retarding sediment has diminished.

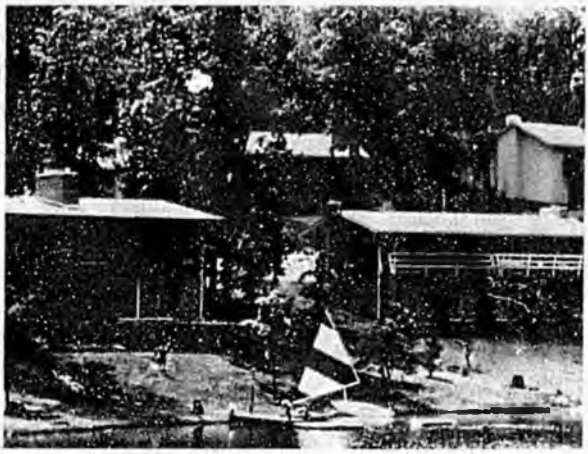
Another approach to controlling erosion and sediment production is the development of zoning based upon potential erodibility of the landscape. By considering land slope, soil characteristics, rainfall intensities, and other factors, regional planning can make density of development commensurate with acceptable sediment levels.

Erosion and Sediment: A Local Responsibility

Preventing erosion is basically a local responsibility. Many local governments now have ordinances or zoning regulations requiring adequate controls over sediment production during construction. The experiences of Montgomery County, Md., in the Washington metropolitan area, are typical. In the early-to-mid 1960's, Montgomery County began to feel the impact of burgeoning urban growth. In 1965, aware of the problems caused by the excess sediment produced during urbanization, the Montgomery County Council adopted a resolution soliciting voluntary cooperation of the construction industry. Experience, however, indicated the need for improved compliance if sediment loads of streams were indeed to be reduced. Thus, in 1967, the voluntary policy became mandatory when zoning regulations were adopted requiring erosion and sediment control procedures as part of construction activities.

Erosion and sediment control measures do add to the cost of construction, but in the long run this cost may be considerably less than the potential damage to streams and rivers from excessive sediment. By far the





Proper land-use planning not only reduces sediment, but can provide esthetic benefits as well.

most economical and effective sediment control measure is careful planning to minimize disturbance of the natural ground cover over the shortest period of time.

* * *

For additional information:

Geological Survey Water-Supply Paper 1591-E, "Sediment Movement in an Area of Suburban Highway Construction, Scott Run Basin, Fairfax County, Va., 1961-64," by R. B. Vice, H. P. Guy, and G. E. Ferguson, $0.70. Geological Survey Circular 601-E, "Sediment Problems in Urban Areas," by H. P. Guy, without charge. Both may be obtained from the Alexandria Branch of Distribution listed below.

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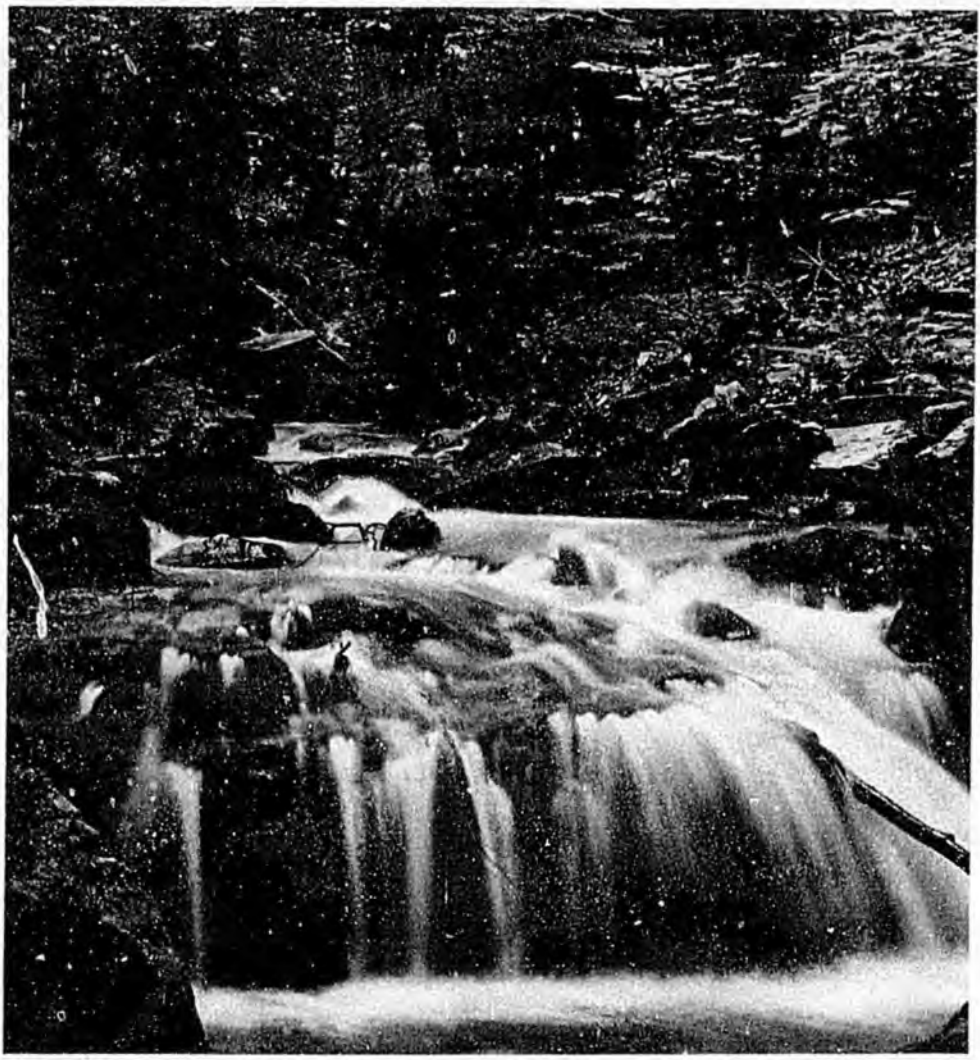
Reprint from: USGS Annual Report, Fiscal Year 1976

How Much Water in a 12-ounce Can?

A Perspective on Water-Use Information



U.S. Department of the Interior/Geological Survey

How Much Water in a 12-ounce Can?

A Perspective on Water-Use Information

by I. C. James II, J. C. Kammerer, and C. R. Murray

A pint a day,
is all I say,
to keep my whistle wet.
But so much more,
I have to pour,
before my table's set!

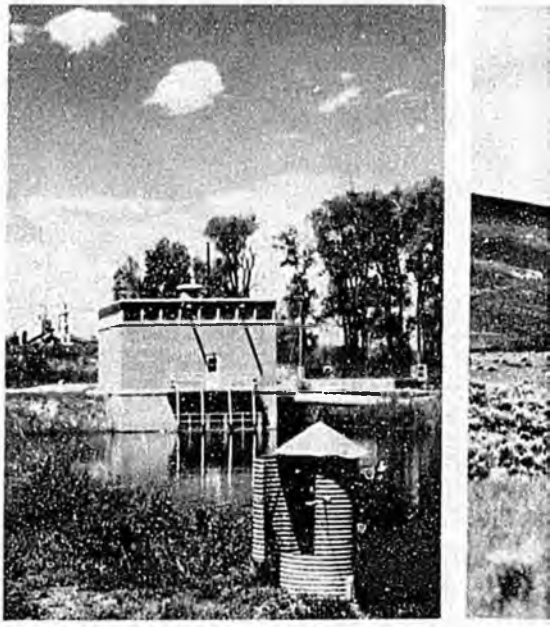
B. L. Anon.

Water Use and Its Variations

On a hot afternoon after mowing the lawn, or after returning home from a round of golf, or when just resting from your daily toil, have you ever gone to the refrigerator to satisfy your thirst with a 12-ounce (355-milliliter) can of your favorite beverage? You want to relax and reflect on the activities of the day, but your act of consuming the contents of that 12-ounce can is the culmination of a long chain of processes requiring energy, materials, water, labor, and management. Let us consider your effect as a consumer on the water resources of the Nation and try to answer the question, "How much water is in a 12-ounce can?" Twelve ounces, of course—three-eighths of a quart, or, in the metric system, 0.355 liter (0.000355 cubic meter). But wait a minute; let's rephrase the question to "How much water did it take to manufacture the 12-ounce can?" Doesn't it take water to clean the can before it is filled, water to produce the steel or aluminum used in the can, water to mine the coal that is used in converting iron ore to metallic iron in making steel used in the can, and water for cooling in the thermal electric plants that supply these industries with electric energy?

Let us use that can from which you were about to pour your 12-ounce drink as an example for exploring the ramifications of one of our simple daily water-consumption decisions. The fabrication of metal cans requires a small quantity of water for a variety of in-plant purposes such as cooling and washing. In 1968, nationwide water withdrawals for this industry

Cooling-water intake.



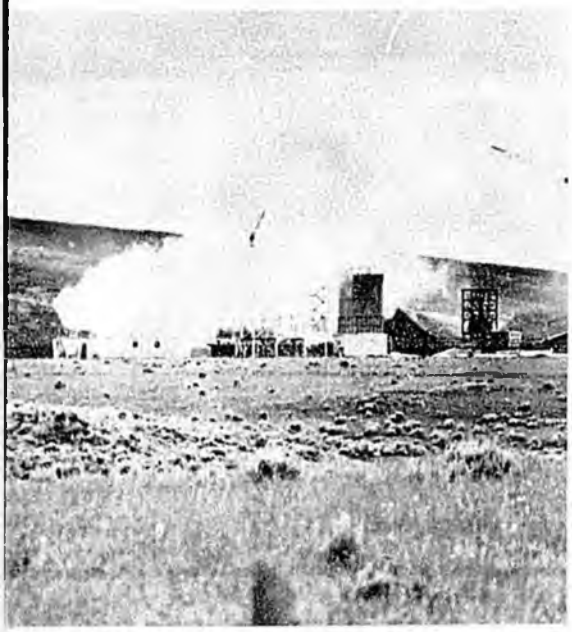
totaled 7 billion liters (7.4 billion quarts). The average in-plant water use per can is about 0.2 liter of water withdrawn. This small direct use of water is an obvious consequence of your consumption of a beverage in a 12-ounce can. But what of the indirect uses of water necessary to sustain the industries that directly supply the can manufacturers with goods and services?

Using 1967 data, it is estimated that supporting industries directly supplying the metal-can fabrication industry withdraw about 23 liters (24.3 quarts) of water per can produced. Each of these supporting industries, in turn, must purchase goods and services from still other industries. As those purchases "ripple out" through our economy, additional economic sectors become involved. The accumulated water withdrawals for all the indirect suppliers total 40 liters (42.3 quarts) per can, thus increasing water withdrawals by both direct and indirect suppliers to about 63 liters (66.6 quarts) per can.

You might question the need for this type of information; certainly, your individual decision to consume the contents of one can has little impact on water use. In the aggregate, however, the water-use decisions of a large group of individuals, or national policy decisions on water use that affect many individuals, may have a considerable impact. Also, the accumulated indirect effects of an industrial water use are often more significant than the direct water use in that industry, as in the example where an additional 63 liters (66.6 quarts) per can is withdrawn by direct and indirect suppliers to a can manufacturer.

ELECTRIC POWERPLANT NEAR HAYDEN, COLO.

Powerplant and cooling towers.

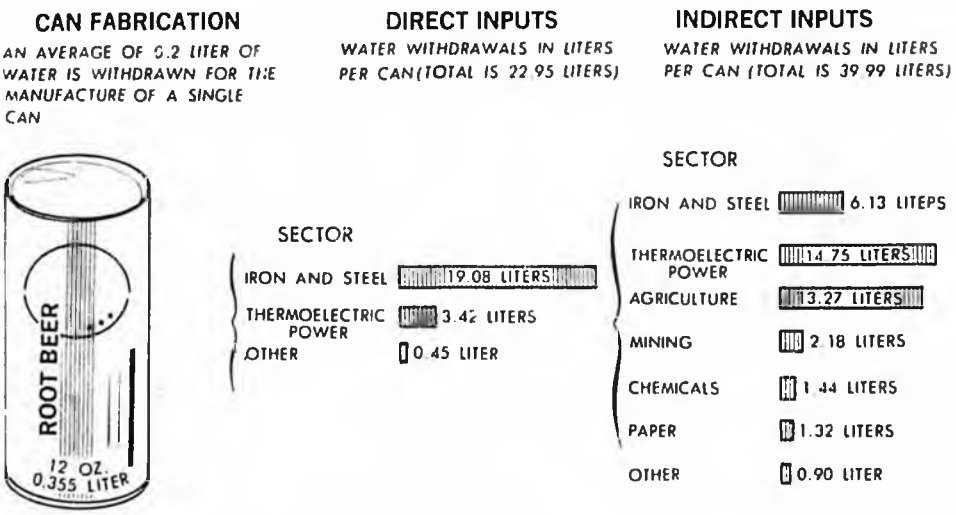


Cooling-water discharge.

Estimates of indirect water-use effects are made by utilizing a technique known as input-output analysis. For this type of analysis, a table is constructed to show the value of direct input from each economic sector in the United States that goes into a unit value of output for all the other economic sectors. By applying mathematical procedures to the information in the table, a new table can be constructed to show total direct and indirect inputs from each economic sector for a unit value of output in each of the other economic sectors. Multiplying these values by the average water use per unit value of output in all of the economic sectors gives the water use for a unit value of output from any particular economic sector. Figure 1 shows in simplified form how this concept may be developed and applied to estimate the water use required to produce one 12-ounce container.

As the total amount of water used by both direct and indirect suppliers for the production of a 12-ounce can was found to be about 63 liters (66.6 quarts), many times the direct use, so may indirect water use for the support of production in other economic sectors be estimated, using similar methods. For example, an estimate can be made of the amount of water used for the production and shipment of $10 billion worth of grain, as can an assessment of water-use effects of national legislation concerning highways, housing, energy, and environmental measures. Possibly too often the prescribed solution to a national problem has been proposed without a thorough evaluation of the impacts of that solution. Would a legislative ban on nonreturnable containers alleviate

FIGURE 1.—Water withdrawals by direct and indirect suppliers for the fabrication of a 12-ounce beverage can. (1 liter equals approximately 1 quart.)



solid-waste disposal problems? And how would that ban affect costs, energy use, water use, and mineral use? Because almost all regulations have negative as well as positive effects, it is desirable that all effects be expressed in specific numbers, if possible, and then debated before a legal or policy commitment is made so that water-use changes can be estimated.

A beverage can may be made entirely of aluminum, or it may be bimetallic, having a steel bottom and steel sides and an aluminum top. The steel industry and the aluminum industry differ from each other in their requirements for water, energy, minerals, and other economic inputs. The aluminum-reduction industries (converting ore to metal), for instance, require a relatively large amount of electric energy; therefore, traditionally, aluminum-reduction plants have been located in areas where hydroelectric power is plentiful and relatively inexpensive. The production of one aluminum can requires the equivalent of 10 cubic meters (about 11 short tons) of water going through turbines in a 15-meter (50-foot) high dam. This also is a water use, but the water is not withdrawn from the river channel; therefore, the quantity and the quality of the water are not perceptibly affected.

Water for steel: Wide variations

The largest direct water use in the example of the 12-ounce can is in the iron and steel industry. A more detailed look at this industry illustrates some interesting water-use facts that must be considered in producing water-use information.

Steel-industry data have often been used to show the wide range in water use that occurs within a single industry. Inasmuch as more than 95 percent of gross water use in steel plants is for cooling, comparisons of quantities used for cooling are very significant. Data (gross use, including reuse) compiled by Walling and Otts (1967, p. 364) for 25 integrated steel plants and steel-processing plants showed ranges of 14 to 409 cubic meters (3,750 to 108,000 gallons) required to produce 907 kilograms (1 short ton) of ingot steel. As these authors pointed out, some factors that affect cooling-water requirements are the age and condition of a plant, procedures of operation, and quality of cooling water. Costs of water withdrawal also significantly affect the amount withdrawn. Russell and Vaughan (1976) estimated that a change in the price of water from $0.0044 to $0.01 per cubic meter would reduce water withdrawals by more than 80 percent; further price increases, however, would have little additional effect. The quantity of water actually consumed would remain about the same or increase slightly with price increases.

Water uses in the home and per capita use

Household uses of water also vary greatly in magnitude. Household uses are internationally expressed in terms of liters (1 liter

equals 1.0567 quarts) per day per person, and depend upon such characteristics as climate, accessibility (connected or not connected to a public water-supply system), water quality, water pressure, cost, outdoor needs (lawn, garden, pool), and whether or not the water supply is metered. Although a person needs less than 2 liters (2.1 quarts) of water a day (from liquid and solid foods) to survive, in the United States the actual daily household use (indoor and outdoor) ranges

TABLE 1.—Anticipated daily domestic uses of water by a family of four. (Adapted from Reid, 1965, p. 18.)

Family use of water	Liters per day per family	Liters per day per capita	Gallons per day per family	Gallons per day per capita
Drinking and water used in kitchen	30	7.6	8	2
Dishwasher (3 loads per day)	57	14	15	3.75
Toilet (16 flushes per day)	363	91	96	24
Bathing (4 baths or showers per day)	303	76	80	20
Laundering (6 loads per week)	129	32	34	8.5
Automobile washing (2 carwashes per month)	38	9.5	10	2.5
Lawn watering (180 hours per year)	379	95	100	25
Garbage disposal unit (1 percent of all other uses)	13	3	3	0.75
Total	1,312	328	346	86.5

TABLE 2.—Estimated daily per capita use of freshwater in the United States.

	Gallons per person per day	Liters per person per day
Water required for survival	Less than ½	Less than 2
Average personal consumption of water (liquids and water in foods).	About 1	About 4
Domestic uses of all kinds (indoor and outdoor uses), 1970; home connected to public water-supply system.	75	280
	National averages in 1975	
Public water systems, including public-supply water for domestic, industrial, commercial, and public (fire-fighting, parks, etc.) uses and water-system losses (population[1] served in 1975: 175,000,000).	168	636
Self-supplied industrial use (total population[1] in 1975: 217,000,000).	783	2,960
Combined public, rural, industrial, and irrigation uses (excluding hydroelectric power).	1,600 (If saline water use is added, per capita use is 1,930 gallons, or 7,310 liters.)	6,000
Water for hydroelectric power	15,200	57,500

[1] Includes Puerto Rico and Virgin Islands (U.S.).
Source of data for 1975: Murray and Reeves, 1977.

from less than 40 liters (42.3 quarts) per capita in some homes without plumbing to several hundred liters per capita in affluent homes with watered lawns. Lawn watering and toilet flushing are the two largest household uses of water. Table 1 shows a hypothetical example of average daily water use in the future by a family of four (assuming that family has two bathrooms, a garbage-disposal unit, a dishwasher, an automatic laundry, and two automobiles).

Daily per capita water use in the United States is sometimes expressed as a nationwide average for a given year. The average daily per capita *household* use for 1970 (Kammerer, 1976) was about 280 liters (297 quarts) per person for homes connected to public water-supply systems; however, the total average daily per capita use of freshwater for *all* withdrawal uses—for agricultural irrigation, self-supplied rural homes (domestic and livestock uses), self-supplied industries, and public supplies—was about 5,900 liters (6,235 quarts) per capita for the same year, and 6,000 liters (6,340 quarts) in 1975 (table 2).

Water as a Commodity: History and Legal Concepts

One of the most significant trends in our water-use picture is the change since colonial times, when water was considered an essentially free resource, to the present, when water has become a very expensive commodity in some locations.

English common law regarded water as a common-property resource for those who owned land along streams (riparian owner) to use freely. The only large uses were for power in milling and manufacturing processes, and those uses were not consumptive or otherwise detrimental to water used by other riparian owners. This doctrine was brought by the colonists to the Eastern United States where it still strongly influences the water laws of the Eastern States. On the other hand, water legislation in most of the Western States was more influenced by Spanish law and custom, and it was generally adapted to meet the particular needs of miners, farmers, and ranchers in arid regions. The appropriation doctrine which evolved as a key element of western water law held that the person who first diverted water and put it to a beneficial use had a right to maintain that diversion and use. Any subsequent upstream diverters could only operate on the condition that prior rights were being satisfied. This was a doctrine that recognized water rights as real property, but it frequently did not provide for marketing arrangements, and the concept of setting a price for water still had not been developed. The idea of free water for those who would develop and use it fit well with the concepts of westward expansion; the natural resources of the West were presumed to be available for those with the initiative to exploit them.

As water needs of the public increased for such purposes as fire

protection, dust control, sanitation, disease eradication, and domestic consumption, there was a significant increase in the extent of water-supply systems, leading to a general transition from private to public ownership of water companies. In the West, the simple irrigation systems on individual farms gave way to large irrigation districts that required the capital and efforts of many. User charges to recover the capital costs and provide for operating and maintenance costs became accepted, but the mechanisms for pricing and marketing water rights developed slowly.

As increases in water use deplete the easily developable supplies, more costly additional supplies are being sought. As the costs of water go up, water resources become more and more like other economic commodities for which there are supplies, demands, and a pricing and marketing structure to balance the supplies and demands. The influences and concepts of economists are being utilized in the study of water use. More commonly, water is being thought of as another input to a production process for which substitutions can be made. In the case of industry, treatment and recycling of water can substantially reduce withdrawals, but only with the expense of additional capital investments and increased energy and chemical costs. To be able to predict water use, some knowledge of the options for substitution that the factory, farm, or home manager has available is necessary so that the impacts of their decisions can be anticipated as the prices of water and other commodities change.

These few examples of water use and its variations and economic ramifications illustrate only some of the complexity and importance of water-use information. U.S. Geological Survey programs that define the time and space availability of the Nation's water supplies provide information, which—when compared to the water demands of industrial, agricultural, and municipal users—provide an assessment of our abilities to meet these current and future demands. However, studies and assessments of water use have not achieved the detail or degree of accuracy that is now found in water-supply information. Because water use is substantially affected by variables—economics, technology, and custom—much different than those affecting water supply, the methods and techniques for measuring and projecting water use must be developed from concepts and technical disciplines that go beyond the natural and physical sciences. The U.S. Geological Survey is cognizant of these needs and, in cooperation with State and local governments, is developing programs to acquire water-use data that are of the same order of accuracy as its water-supply data.

Simply stated, in the hydrologic cycle, water moves from the atmosphere to the land and sea and back again into the atmosphere. Water use—both natural and controlled—occurring during the land-sea part of the hydrologic cycle includes

(1) evapotranspiration from irrigated, nonirrigated, and wild vegetation, (2) evaporation from water surfaces, (3) withdrawal of water from streams, lakes, reservoirs, and wells, (4) dilution, assimilation, and transport of wastes, and (5) occupancy of surface waters as a habitat (by fish, wildlife, and so forth), a transport route (navigation), and a recreational facility.

For purposes of estimation and measurement, these water uses are grouped into three principal categories:

1. Withdrawal (or "off-channel") uses, such as withdrawal from a well or diversion from a stream, for public supplies, irrigation, and industry;
2. Nonwithdrawal (or "instream") uses, such as for hydroelectric power, navigation, recreation, preservation of wildlife and sport fishing habitat, salinity control, waste dilution, and transport;
3. Nonsupply uses (also sometimes referred to as "water losses" or "preemptive consumptive use"), such as evaporation from lakes and reservoirs and evapotranspiration from nonirrigated food and fiber crops.

Withdrawal uses are the most measurable and measured of the three categories of use, but they

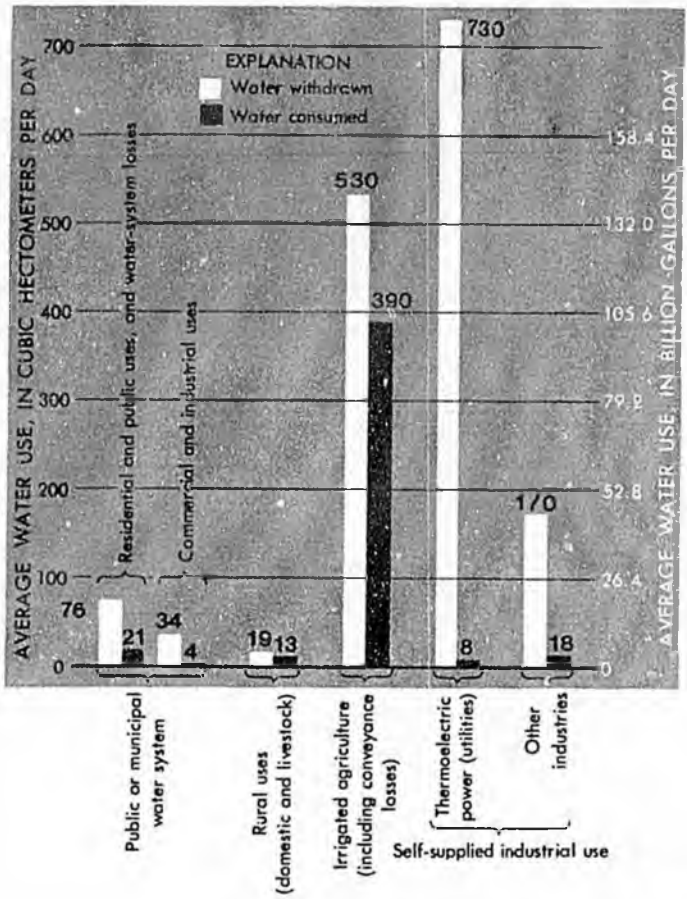


FIGURE 2.—Estimated water withdrawn and water consumed in the United States in 1975. Totals above each bar are in metric units; 1 cubic hectometer = 1 million cubic meters = 264 million gallons. (Adapted from Murray and Reeves, 1977.)

are measured far less frequently and systematically than water supplies (for example, the flow of water in streams). Figure 2 compares a few of the national water-use statistics for 1975 with respect to average quantities withdrawn and the part of the withdrawals consumed.

Nonwithdrawal uses (water uses that are not dependent on diversion of water from ground- or surface-water sources) may be categorized as flow uses and onsite uses. Navigation, hydroelectric power, sport fishing habitat, freshwater sweetening of saline estuaries, and the disposition and dilution of waste water are commonly classified as flow uses; all these uses are accomplished by free-flowing water moving in a defined channel. Onsite uses are of two principal types: (1) water use which occurs in a watercourse, lake, reservoir, or other body of water, and (2) water use resulting from improvement of natural conditions, a use that is sometimes called "preservation use." Stream evaporation from an increased heat load is an example of the first type of onsite use, and water lost from improvements to swamps, wetlands, and fish hatcheries are examples of the second type. Many of the nonwithdrawal uses cannot be readily measured, thus presenting a hydrologic challenge for more accurate determination and for evaluation of their effect on the quantity and quality of water resources available for other uses.

Perhaps surprisingly, about 8 times as much water is used consumptively—in the category, "nonsupply uses"—by the naturally occurring processes of evaporation and transpiration in the growth of vegetation (forests, grasses, and nonirrigated crops) in the United States than is supplied nationwide for all withdrawal uses. The "nonsupply" water returned to the atmosphere by this natural process is also referred to as a "consumptive and preemptive use," or sometimes as "water losses"; it is the remainder after runoff (streamflow) has been subtracted from precipitation. The sustained availability of large quantities of this nonsupply water—most of which occurs as soil moisture—constitutes a major natural resource. Without significant amounts of local soil moisture,

TABLE 3.—Estimated water supply versus water demand—regional (eastern, central, and western) water use in the conterminous United States in 1975. (Adapted from Murray and Reeves, 1977.)

Region
31 Eastern States[1] (8 eastern regions) .....
10 Central States[2] (parts east of Continental Divide; 5 central regions) .....
7 Western States (parts west of Continental Divide; 5 western regions) .....
48 States (conterminous United States) .....

commercial agriculture, as well as public parks and residential lawns and gardens, would not be possible unless there were major importation of water from other locations. Another nonsupply use is the evaporation of water from large water surfaces, such as lakes, rivers, and snow and ice fields. An extremely rough estimate of average nonsupply water use in the conterminous United States is 16,000 cubic hectometers per day (20 inches per year times 3 million square miles), most of which is evapotranspiration from vegetation. Nace (1967, p. 4) has pointed out that actual daily per capita water use for all purposes in an advanced society amounts to "many thousands of gallons, drawn chiefly from soil moisture."

Supply Versus Demand (Water Use) in 1975

In the general terms of average nationwide water supply (based on streamflow), the United States has a great abundance of water—3 times as much as was withdrawn in 1975 and more than 12 times as much as was consumed during usage and therefore unavailable for reuse. Table 3 shows some supply-versus-demand relationships for the aggregated eastern, central, and western parts of the Nation as well as for all the 48 conterminous States. What these data do not

The water we have . . .
Average flow of streams in the 48 conterminous States
(Includes ground-water component of base streamflow)

The water we use . . .
Water withdrawn and water consumed

Area		Stream discharge		Population in 1975	Withdrawals in 1975		Water consumed in 1975	
1,000 square kilometers	1,000 square miles	Cubic hectometers per day	Thousand cubic feet per second	Million people	Cubic hectometers per day	Billion gallons per day	Cubic hectometers per day	Billion gallons per day
2,713	1,047	2,800	1,100	151	860	230	55	15
2,980	1,150	640	260	30	290	78	130	35
2,132	823	1,100	460	32	390	100	170	46
7,825	3,020	4,500	1,800	213	1,500	410	360	96

[1] Excludes some parts of Arkansas, Iowa, Louisiana, Minnesota, and Missouri.
[2] Includes parts of an additional 5 States.
NOTE: Stream-discharge and water-use data rounded to 2 significant figures.

FIGURE 3.—Water withdrawn (used) in 1975 as a percentage (first number) of annual runoff (long-term average), and water consumed in 1975 as a percentage (second number) of annual runoff, in each water-resource region in the conterminous United States. (Adapted from Murray and Reeves, 1977, p. 19.)

those circumstances, might be as little as one-third of the average runoff in some parts of the Nation because of wide variations in flow from season to season and from year to year and because of topographic, geologic, hydrologic, ecologic, and economic constraints on the construction of reservoirs.

	Lowest flow since October 1960		Average runoff 1941-70, in cubic meters per day per square kilometer	Average runoff 1975, in cubic meters per day per square kilometer
Date	Discharge, in cubic hecto-meters per day	Runoff, in cubic meters per day per square kilometer		
Oct. 31, 1963 ..	2.89	165	1,550	2,130
Sept. 10, 1966 ..	1.47	49.1	825	1,150
Aug. 2, 1965 ...	12.5	52.9	1,140	1,680
Nov. 8, 1962 ...	14.9	335	1,190	1,800
Dec. 23, 1963 ..	14.8	10.8	137	158
Jan. 8, 1964 ...	308	104	466	649
Oct. 11, 1961 ..	14.9	271	867	1,050
July 18, 1961 ..	18.9	105	243	315

[The flow of streams (and therefore the supply of surface water) varies not only from place to place, but also from year to year, season to season, month to month, and day to day. For example, on the eight large streams listed at left, the highest flow of a given stream since 1960 was from 9 to nearly 600 times greater than the lowest flow on the same stream.]

What Are Some of Our Information Needs?

Water-use information is needed at all levels of water-resource planning—from the designing of an individual household's self-supplied water system to planning for the development of our largest river basins. The analyses of the effects of potential legal or policy water decisions also require water-use information whether the issue at hand is a temporary ban on lawn watering or a national policy on nuclear-powerplant siting.

The past few years have demonstrated how rapidly radical changes in resource availability can affect the directions of some sectors of the U.S. economy and can affect the national pattern of water use. The growth in energy demand had been mostly satisfied by increasing oil imports during the 1960's and early 1970's. However, with the realization of possible interruptions of oil imports and their subsequent momentous increases in price, national attention has been focused on developing our extensive reserves of coal as a less expensive,

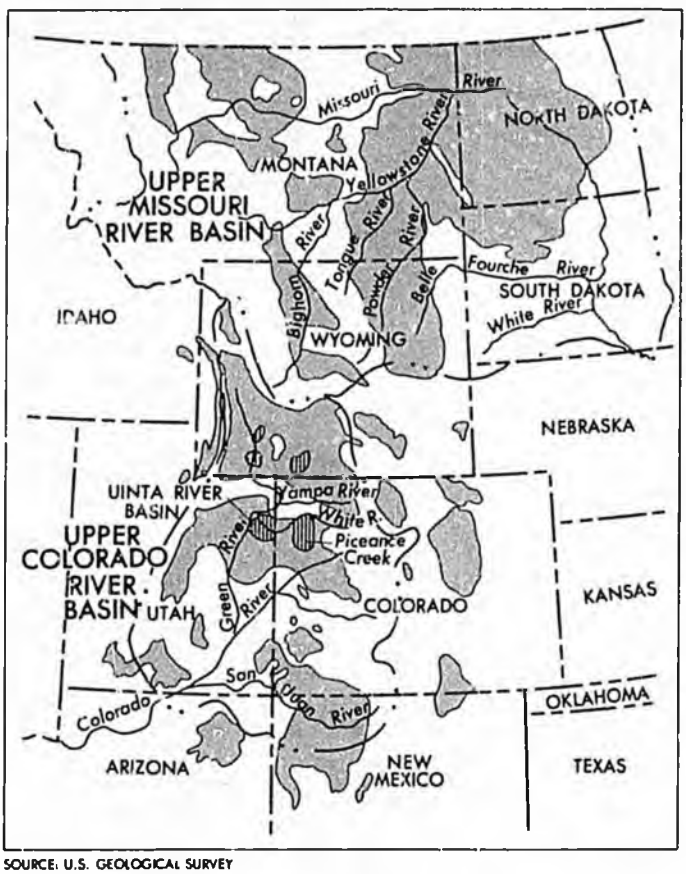


FIGURE 4.—Location of coal fields and oil-shale deposits in upper Missouri River and upper Colorado River basins, Western United States.

SOURCE: U.S. GEOLOGICAL SURVEY

EXPLANATION

WATER SUPPLY (river system)

COAL FIELDS

OIL-SHALE DEPOSITS

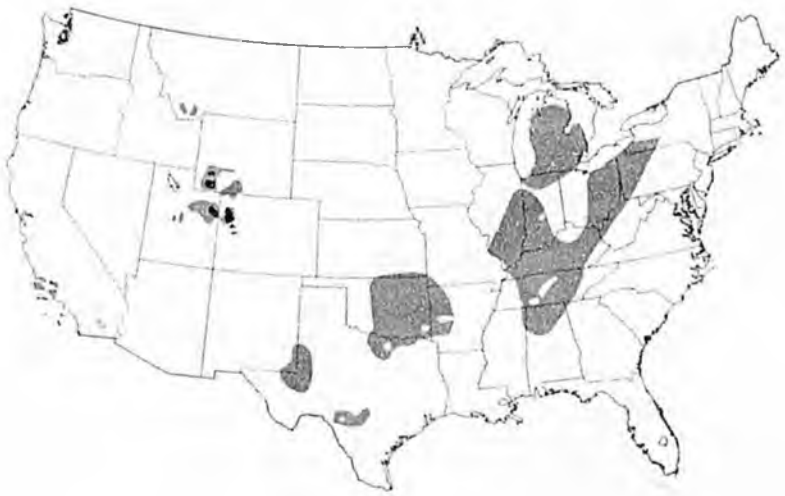
more secure alternative to oil imports.

Most of this attention is now being directed toward the development of surface-minable (strip-minable) coal reserves in the water-short Western United States. Surface-minable coal is the only energy resource that can be brought into production rapidly, and it is usually less costly to produce than underground coal. The semiarid Western States have 63 percent of the demonstrated reserve base of coal suitable for stripping in the United States, and much of this has a desirably low sulfur content. Figure 4 shows the location of some of the principal western deposits of coal, including those minable by surface methods. Comparing this with the existing water uses in figure 3, it can be seen that the coal deposits occur in areas in which the existing water use is large in comparison with supply of water available.

Direct water requirements for surface coal mining are not large; the modest demands for sanitary and dust-control purposes can usually be met locally. Irrigation of spoils undergoing reclamation in arid areas may require more water than is available on a mine site but only in amounts that will not cause significant water-use problems. In contrast to these relatively modest water needs for mining and reclamation, the conversion of coal to secondary forms of energy such as gas, oil, or electricity for transportation, distribution, and consumption will constitute a significantly large water use. These secondary industries will also generate associated industrial and commercial growth that will also increase the water use.

The preponderance of high-grade oil-shale deposits are also located in the semiarid West (fig. 5). In addition to water used for processing and cooling in

FIGURE 5.—Principal reported oil-shale deposits in the conterminous United States. Darker areas in Colorado, Utah and Wyoming are known to contain high-grade deposits. (Adapted from Duncan and Swanson, 1965, p. 11.)



shale-retorting operations, water is used for compacting spent shale material.

The very great demands that will be made on water and environmental resources for energy conversion are only "the tip of the iceberg" compared to the ensuant demands that will be made for industrial, residential, and commercial development. These increased water-use needs cannot be met by the already overcommitted available water supply; rather, they must come from a transfer of water rights from one type of use to another.

This will often mean that water which up to now has been used for agricultural purposes will subsequently be sold to industrial users. If the water was used to irrigate hay and feed-grain crops, its loss might considerably change the character of ranching and, hence, change the ambience of the area. Most water users, especially industrial users, have options for using less water, but these options require higher capital investments and operating costs. If a user can legally buy water from other users, he will do so, but if water transfers are not permitted, the costs of reducing water use will eventually be passed on to consumers. To thoroughly evaluate the social, environmental, and economic effects of energy development, detailed information on water-use options and their costs must be developed for the energy-conversion industries and for other major water users who will be directly or indirectly involved in energy production and development. Also to be considered are industries that are purposely located near energy-conversion industries in order to utilize products or byproducts of energy-conversion processes.

Detailed analyses of plant-level options for converting coal to gas, oil, and electricity and the effects of these options on water use have been undertaken, and some are near completion. Methods for projecting water use for secondary development resulting from increased energy development and for relating these water demands to supply capabilities and environmental resources are being studied.

How Are Water-Use Information Systems Developed?

It is necessary for a planner or designer of a new water-supply system to study other similar systems in order to estimate water demands for the new system, but, because this type of information is often scattered throughout thousands of reports from towns, cities, public-health agencies, and engineering firms, it is not always easy to find. Aggregate water-use information for a region or an industry is even more difficult to assemble because some companies are hesitant to disclose information about their operations that might be useful to competitors.

The need for a more centralized source of water-use information has led to the development of some data-collection and data reporting systems. These have usually been based on periodic assessments

made by conducting many interviews and canvasses, collecting data from secondary sources, and estimating to fill the gaps. The quality of water-use information ranges from the accuracy obtained for metered uses to the uncertainty of hydrologic estimates of irrigation conveyance losses. In fact, a major proportion of existing water-use data consists of estimates that are of such limited accuracy as to be useful only in very general assessments of water problems.

The economic fact that consumers usually use less of a commodity as it becomes more expensive, but use more of it as their incomes increase, indicates that information on income and water prices, as well as a number of related items of information about household size, house-lot size, and property values, may be helpful in estimating variations in water use. Equations can be developed to make these estimates, but statistical analyses must be based on data that include economic and demographic information as well as water-use information.

For estimating the effects of changing prices and technology on industrial water use, another type of detailed analysis can be made on an industry-by-industry basis for industries that use large amounts of water. These plant-level analyses of the processes involve detailed engineering-economic studies of how existing plants are operated or how new plants should be designed and operated in order for the company operating the plant to maximize profits under current prices and regulations. Existing plants often cannot significantly change their rate of water use without extensive retrofitting. New plants, however, have a much wider range of process technologies to choose from for minimizing production costs under changed economic conditions. For cooling purposes, one of the largest uses of industrial water, a decrease in water use (withdrawal) can usually be achieved at a cost of increased water consumption, and the converse is also usually true. The recent increases in energy prices relative to water costs may alter the historical trend toward less water-intensive cooling systems. Plant-level analyses of the total costs of various cooling systems can be used to determine the directions that future changes in water use will take.

Summary and Conclusions

We can estimate past and present water uses, but total water needs for most withdrawal uses are changing; water use is responsive to prices, technology, customs, and regulations. Although inventory systems for estimating water uses are good indicators of past and present uses, such systems are not as accurate or as frequently reported as we would like, and they do not show us future water use trends.

Providing more complete and accurate water-use information will involve the work of many hydrologists, engineers, and economists. It will require more detailed and complete water-use data and a

wider knowledge of local factors. Much of the information can be collected by State or local agencies, and a well planned, nationally consistent effort can produce data that will serve many purposes. However, providing water-use information for *all* purposes will require additional comprehensive statistical-data and engineering analyses of water-use options at the plant level. These analyses can provide information on changing conditions, and, with this knowledge, it will be possible to construct computer models for regional assessments of water use in relation to water supply.

For most of our Nation, the period of free and easily developed water supplies has ended; in some areas, water use is approaching or exceeding the available supply. We are, however, not running out of water. Much still remains to be done toward modifying the occurrence of water to better fit regional demands, and, more importantly, many options for modifying water use and reuse remain to be explored. The development of new water supplies will take more time than the development of methods for better utilizing water through reuse, conservation, and new technologies.

Sometime in the future, the manufacture of a 12-ounce beverage can will have considerably different water-use effects. We must prepare for these effects if that 12-ounce can is to continue to be available to us.

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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FOREST, LAND AND WATER MANAGEMENT

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APPLICATION FOR WATER RIGHT

Instructions: You will need (1) a map showing the location of your source of water and the area of use, (2) a copy of your property ownership document, i.e. deed, patent, lease agreement or an easement agreement if you do not own the property involved, (3) a copy of your driller's well log, if application is for an existing well, (4) Statement of Beneficial Use Of Water (Form 10-1003A) if this is an existing water use, and (5) Application for Permit to Construct or Modify Dam (Form 10-1015) if you will be constructing a dam over 10 feet high or over 50 acre feet of storage. Please type or print in ink.

1. Full legal name of Applicant(s) _____

_____

2. Mailing Address _____

_____

Home Phone _____ Business Phone _____

3. Source of Water Supply:

(a) ☐ Well

☐ Drilled ☐ Hand Driven ☐ Dug ☐ Other _____

If existing well, attach copy of driller's well log.

If existing well, and no log, supply all known information

Total depth _____ Drawdown _____.

Intake Depth _____ Screened Yes ____ No ____ Unknown ____

Static level _____

(b) ☐ Surface Water

☐ Stream ☐ River ☐ Lake ☐ Spring

Give geographic name (if unnamed, state so) _____

If "No," MUST obtain an easement or right-of-way and supply copy. Give name, mailing address and phone number(s) of legal owner.

Name _____

Mailing Address _____

_____ Zip _____

Home phone _____ Business Phone _____

6. Type of water use and Quantity of water needed: Please fill in the attached Water Use Chart indicating the quantity of water and months of use for each type of water use. Standard quantities and definitions are provided for your convenience. If water use is for a Commercial/Industrial purpose or Other Use not on the Water Use Chart, refer to question 7.

7. Commercial/Industrial and Other Uses:

   Explain in detail the basis for quantity of water requested. Use additional sheet of paper if needed. Indicate type of operation including structures and methods used. Include a sketch or engineering drawings. Enter quantity requested and months of use on attached Water Use Chart.

8. Date when water use began or is expected to begin _____. If water use is existing, fill out Statement of Beneficial Use of Water (Form 10-1003A).

HAVE YOU ATTACHED?

- ☐ Deed, patent, lease, etc.
- ☐ USGS or Subdivision map
- ☐ $25 Filing fee (checks payable to State of Alaska)
- ☐ Water Use Chart
- ☐ Statement of Beneficial Use of Water (Form 10-1003A) (if existing water use)
- ☐ Driller's log (if existing well)
- ☐ Diversion sketch and plans
- ☐ Dam sketch and plans

Statements appearing herein are to the best of my knowledge true and correct.

➡ SIGNED _____
(Applicant) DATE

OFFICE USE ONLY	x,y	RMI	Location check	Other

10-102 Rev. 6/79

Water will be taken from surface water source by:

☐ Pumping

☐ Gravity Flow System

☐ Diversion (Altering a watercourse) - Attach sketch and plans giving dimensions and specifications.

☐ Damming - Attach sketch and plans giving dimensions and specifications. If dam is over 10 feet high or over 50 acre feet storage, MUST file Application for Permit to Construct or Modify Dam (Form 10-1015).

☐ Other _____

4. Location of point of WITHDRAWAL, DIVERSION, or IMPOUNDMENT:

MUST attach copy of map or subdivision plat and indicate location

(a) Fractional part _____ Section _____
Township _____, Range _____, _____ Meridian.

(b) If applicable, Lot, Block, Subdivision; U.S. Survey No. _____.

_____

(c) Does applicant own or lease the property at point of water withdrawal and over which water is transported? Yes ☐ No ☐

If "Yes," MUST attach copy of ownership document (i.e. deed, patent)

If "No," MUST obtain an easement or right-of-way and supply copy. Give name, mailing address and phone number(s) of legal owner.

Name _____

Mailing Address _____

_____ Zip _____

Home phone _____ Business Phone _____

5. Location of point of USE: If same as question 4, check and go to question 6. ☐

MUST attach copy of map or subdivision plat and indicate location.

(a) Fractional part _____ Section _____
Township _____, Range _____, _____ Meridian.

(b) If applicable, Lot, Block, Subdivision; U.S. Survey No. _____

_____

(c) Does applicant own or lease the property at point of water use? Yes ☐ No ☐

If "Yes," MUST attach copy of ownership document (i.e. deed, patent)

WATER USE CHART

Office Use SIC	Type(s) Of Use	Standard Quantities	Quantity Requested	Months of Use From	To (Inclusive)
8800	(1) Single Family	Per Household			
	(a) Fully plumbed	500 GPD	GPD		
	(b) Partially plumbed	250 GPD	GPD		
	(c) Unplumbed	75 GPD	GPD		
6514	(2) Duplex	Per Duplex 1000 GPD	GPD		
	(3) Multi-Family	Per Unit 250 GPD	GPD		
7011	(4) Motel, Resort	Per Room 100 GPD	GPD		
	(5) Livestock	Per Head			
0241	Dairy Cows	30 GPD	GPD		
	Hosing dairy barn	35 GPD	GPD		
0212	Range Cattle	15 GPD	GPD		
0272	Horses	15 GPD	GPD		
0214	Sheep	2 GPD	GPD		
	Goats and Hogs	3 GPD	GPD		
	Poultry, Rabbits, etc.	1 GPD	GPD		
		Livestock Total	GPD		
	(6) Irrigation (Type of Crop: _____)	Per Acre 0.5 AFY	AFY		
	(7) Commercial/ Industrial				
	(8) Other: _____				

DEFINITIONS:

GPD - gallons per day AFY - acre feet per year CFS - cubic fe per second

(1) SINGLE FAMILY - Water use necessary for a single household and the irrigation of up to 10,000 sq. ft. of yard and garden.

(a) Fully plumbed - Water piped into the residence for domestic uses. Hot water heater and water flush toilet included.

(b) Partially plumbed - Water piped into residence for limited domestic uses. Generally no hot water heater and no water flush toilet included.

(c) Unplumbed - No water piped into the residence. Water is hand carried for limited domestic use.

(2) DUPLEX - Water use necessary for two single households and the irrigation of up to 20,000 sq. ft. of yard and garden.

(3) MULTI-FAMILY - Water use necessary for three or more households. Apartment units included.

ALASKA
Ground-Water Resources

Alaska has abundant surface-water resources, but many of the streams and lakes are frozen for most of the year and most of the larger streams transport glacial silt that makes the water unacceptable for many uses. These factors lend special significance to ground water as a source of supply, even though permafrost (perennially frozen ground) profoundly affects the occurrence and availability of ground water in all but the south coastal regions (Williams, 1970; fig. 1). Permafrost forms a virtually impermeable layer that restricts recharge, discharge, and movement of ground water, functions as a confining layer, and decreases the volume of unconsolidated deposits and bedrock in which water may be stored (Zenone and Anderson, 1978, p. 1).

Ground water constitutes 22 percent of total water use in the State. Aquifers provide water to 276,000 people (69 percent of the population), of which 172,000 rely on public water-supply systems and 104,000 on rural (private) systems. Ground-water withdrawals for various uses in 1980 and related statistics are given in table 1.

Table 1. Ground-water facts for Alaska

[Withdrawal data rounded to two significant figures and may not add to totals because of independent rounding. Mgal/d = million gallons per day; gal/d = gallons per day. Source: Solley, Chase, and Mann, 1983]

Category of use	
Population served by ground water, 1980	
Number (thousands)	276
Percentage of total population	69
From public water-supply systems:	
Number (thousands)	172
Percentage of total population	43
From rural self-supplied systems:	
Number (thousands)	104
Percentage of total population	26
Freshwater withdrawals, 1980	
Surface water and ground water, total (Mgal/d)	220
Ground water only (Mgal/d)	49
Percentage of total	22
Percentage of total excluding withdrawals for thermoelectric power	26
Public-supply withdrawals:	
Ground water (Mgal/d)	23
Percentage of total ground water	47
Percentage of total public supply	43
Per capita (gal/d)	134
Rural-supply withdrawals:	
Domestic:	
Ground water (Mgal/d)	11
Percentage of total ground water	22
Percentage of total rural domestic	99
Per capita (gal/d)	105
Livestock:	
Ground water (Mgal/d)	0
Percentage of total ground water	0
Percentage of total livestock	0
Industrial self-supplied withdrawals:	
Ground water (Mgal/d)	14
Percentage of total ground water	31
Percentage of total industrial self-supplied:	
Including withdrawals for thermoelectric power	9
Excluding withdrawals for thermoelectric power	11
Irrigation withdrawals:	
Ground water (Mgal/d)	0
Percentage of total ground water	0
Percentage of total irrigation	0

GENERAL SETTING

Major landforms of Alaska include three great mountain ranges—the Coastal, the Alaskan, and the Brooks—from south to north; a broad interior lowland that is drained by large rivers and contains scattered highlands and plateaus; and large coastal plains, valleys, and river deltas (Wahrhaftig, 1965). The principal mountain ranges have cores of igneous and metamorphic rocks, which are overlain by younger sedimentary and igneous rocks. In most of the State, the bedrock is covered by unconsolidated deposits of glacial and alluvial origin.

Because of its large geographic area, climatic conditions differ considerably across the State. Average annual temperatures range from 10°F in northern Alaska to 45°F in the southeastern coastal areas; extremes range from -80° to 100°F, which occur in the interior lowland. Recorded annual precipitation ranges from about 5 inches (in.) on the north slope of the Brooks Range to 300 in. along the southeastern coast. A large amount of precipitation and relatively low temperatures in the coastal mountains of southeastern and south-central Alaska favor the formation and persistence of glaciers and perennial snowfields, which now cover nearly 30,000 square miles (mi^2), or about 5 percent of the State. Melting snow and ice in glaciated areas provide a water source not directly related in time to local precipitation. The meltwater has a regulatory or moderating effect on streamflow variability and, in turn, on ground-water recharge along alluvium-filled glacial valleys (Zenone and Anderson, 1978, p. 2).

PRINCIPAL AQUIFERS

Principal aquifers in Alaska consist of unconsolidated alluvium and glacial deposits, and consolidated clastic and carbonate sedimentary rocks. The aquifers are described below and in table 2; their areal distribution is shown in figure 1.

Table 2. Aquifer and well characteristics in Alaska

[Mgal/d = million gallons per day; gal/min = gallons per minute; ft = feet. Note: Permafrost restricts availability of ground water, especially in rocks of little permeability. Sources: Reports of the U.S. Geological Survey, Alaska Department of Environmental Conservation, and the Alaska Department of Natural Resources]

Aquifer name and description	Water withdrawals (Mgal/d)	Well characteristics: Depth (ft) Common range	Well characteristics: Yield (gal/min) Common range	Well characteristics: Yield (gal/min) May exceed	Remarks
Unconsolidated aquifers: Alluvial and glacial outwash deposits.	48	50 - 200	5 - 10		Individual private-supply wells in thin alluvium or mixed glacial deposits.
Confined to unconfined.		100 - 400	50 - 1,000	3,000	Major supply wells in thick alluvium, glacial outwash deposits. Provides public supply at Anchorage and Fairbanks, industrial supply for Kenai Peninsula.
Bedrock aquifers: Igneous metamorphic, and sedimentary rocks. Generally unconfined.	1	50 - 500	1 - 10	25	Source for most private wells in upland areas, particularly near Anchorage and Fairbanks.

Unconsolidated Aquifers

The greatest volume of ground water in Alaska is stored in alluvium of river valleys, including flood plains, terraces, and alluvial fans of major valleys and smaller mountain and upland valleys. Alluvial deposits in the valleys of the Yukon, the Tanana, the Kuskokwim, the Kobuk, and the Susitna Rivers have a large recharge potential because they are connected hydraulically to the extensive surface-water system. In the lower Tanana River basin, for example, the maximum known thickness of alluvium is 2,000 feet (ft) (Anderson, 1970), and wells less than 200 ft deep may yield as much as 3,000 gallons per minute (gal/min).

Coastal basins and valleys are filled by glacial till and fine-grained glaciolacustrine materials that are interbedded with more permeable, water-worked deposits of sand and gravel. The largest and best-known ground-water system of this type is that of the Cook Inlet lowland, particularly in the Kenai and Anchorage areas, where alluvium of glacial outwash origin that is confined by glacial, lacustrine, and estuarine deposits yields as much as 1,500 gal/min to wells.

Alluvium-filled coastal valleys along the Gulf of Alaska (such as those in the Seward area) and in mountainous southeastern Alaska (such as that of the Mendenhall River near Juneau) probably contain large, but as yet not fully explored ground-water supplies. However, freshwater aquifers in these areas may be connected hydraulically to the ocean, and extensive ground-water development potentially could cause saltwater intrusion.

Because most ground-water development in Alaska is from unconsolidated aquifers, virtually all available water-quality data are for those aquifers. Known dissolved-solids concentrations of water from unconsolidated aquifers range from about 25 milligrams per liter (mg/L) in shallow stream-channel alluvium to 64,000 mg/L in shallow coastal wells, but most sampled ground water contains less than 250 mg/L of dissolved solids and is suitable for most uses (Feulner, Childers, and Norman, 1971, p. 39). Very mineralized ground water occurs in the Copper River basin (reported dissolved-solids concentrations of 2,400 mg/L in a well and 14,500 mg/L in a spring, both near Glennallen) and in many parts of the continuous permafrost zone (fig. 1). Iron is present in objectionable concentrations (more than about 0.3 mg/L of iron causes staining of laundry and plumbing fixtures) in a large percentage of shallow wells in most areas of the State. Other constituents that are present locally in undesirable concentrations include nitrate as nitrogen (as much as 60 mg/L) and arsenic (as much as 10 mg/L) at Fairbanks (Johnson and others, 1978).

Bedrock Aquifers

Glacial and alluvial deposits are either very low in permeability, thin, or absent in approximately 75 percent of Alaska. In such areas, appreciable amounts of ground water are present only in consolidated rocks. Carbonate rocks in the northeastern Brooks Range in northern Alaska provide extensive reservoirs for ground water. Individual springs in these rocks discharge as much as 16,000 gal/min. Sandstone and alternating strata of sand, silt, and clay are widespread throughout the State, but such rocks have been explored for water only in the western Kenai Peninsula where they are poor aquifers because of low permeability. Presently, most intensive development of bedrock aquifers is in the uplands near Fairbanks (fractured schist) and in a few places in southeastern Alaska. These rocks generally provide only modest amounts of water (well yields of 10 gal/min or less) that are adequate for single household needs.

Ground-Water Withdrawals and Water-Level Trends

Much of the ground-water withdrawal in Alaska occurs within the municipality of Anchorage (location 4, fig. 2), where more than one-half of the State's population resides. About 50 other communities rely solely on ground water for their supply. The only areas outside Anchorage with large-scale ground-water use are the Tanana River valley in interior Alaska (locations 1, 2, fig. 2), and the industrial complex on the Kenai Peninsula (location 5, fig. 2).

The withdrawal and use of ground water are increasing with the growth of population and continuing industrial and commercial development. Analysis of observation-well data from the Anchorage, Fairbanks, and Kenai areas, however, indicates that past and present pumping has not resulted in such adverse effects as saltwater encroachment in coastal areas or excessive drawdown.

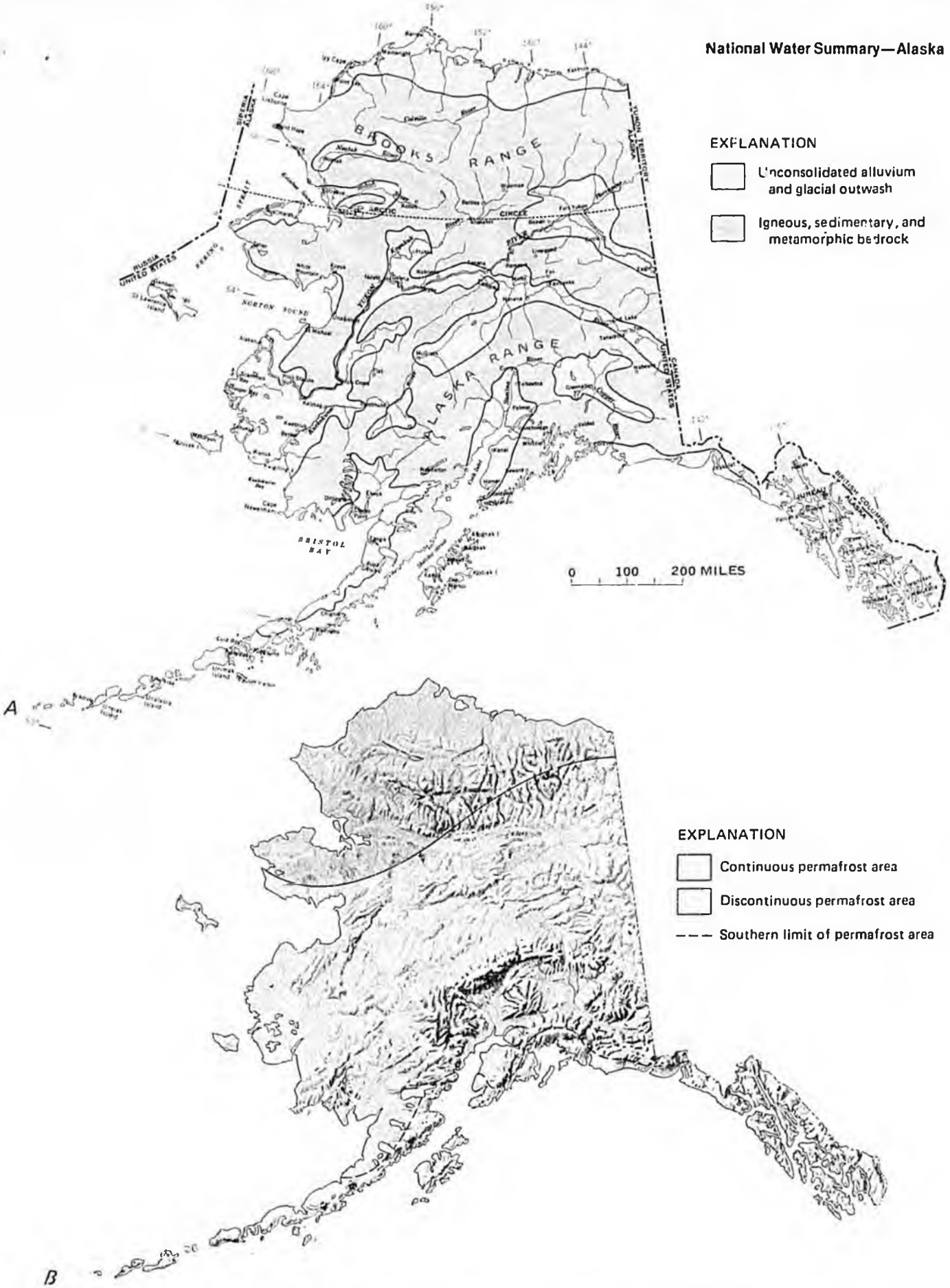

Figure 1. Principal aquifers in Alaska. *A*, Geographic distribution. *B*, Geographic distribution of permafrost areas. (See table 2 for a more detailed description of the aquifers. Sources: *A*, Wahrhaftig, 1965. *B*, Williams, 1970.)

GROUND-WATER MANAGEMENT

The Alaska Water Use Act, Alaska Statutes 46.15.010-270, was enacted in 1966 to regulate appropriation and use of water in the State. This Act gave statutory definition to the doctrine of prior appropriation (first in time, first in right) authorized by the State Constitution. The Act also established a procedure for maintaining existing rights and providing new rights to ground and surface waters of Alaska. The original regulations implementing the Water Use Act were amended extensively on December 29, 1979, and incorporated as 11 AAC 93, Water Management. Those of particular interest relate to the appropriation of water, water-well standards, and temporary water use. The latest amendments to the Alaska Water Use Act include legislation relating to geothermal development and reservation of water (Alaska Department of Natural Resources, 1981).

Alaska's Water Quality Standards, established in Title 18, Chapter 70 of Alaska Administrative Code, identify the uses of the State's waters and set criteria, which limit man-induced pollution, to protect these water uses. Procedures and criteria for changing the identified uses of a water body are included in the standards (Alaska Department of Environmental Conservation, 1979).

The Alaska Department of Natural Resources (ADNR), Division of Geological and Geophysical Surveys (DGGS) is the designated State agency responsible for water-data collection. The DGGS, in cooperation with the U.S. Geological Survey and other State and Federal agencies, has developed and implemented an Alaskan Water Resources Evaluation (AWARE) Plan to coordinate water-data collection and water resource study activities in the State (U.S. Geological Survey and Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys, 1984).

The ADNR's Division of Forest, Land and Water Management, Water Management Section, is responsible for planning and administering the appropriation of water in the State, and the Department of Environmental Conservation is responsible for implementation of the provisions of Alaska's Water Quality Standards. Future development, protection, and conservation of the State's water resources depend on these important functions.

SELECTED REFERENCES

Alaska Department of Environmental Conservation, 1979, Water quality standards: 34 p.

Alaska Department of Natural Resources, 1981, Water user's handbook: Water Management Section, Division of Forest, Land and Water Management, 48 p.

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Balding, G. O., 1976, Water availability, quality, and use in Alaska: U.S. Geological Survey Open-File Report 76-513, 292 p.

Feulner, A. J., Childers, J. M., and Norman, V. W., 1971, Water resources of Alaska: U.S. Geological Survey Open-File Report, 60 p.

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Solley, W. B., Chase, E. B., and Mann, W. B., IV, 1983, Estimated use of water in the United States in 1980: U.S. Geological Survey Circular 1001, 56 p.

U.S. Geological Survey and Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys, 1984, Alaska water resources evaluation, 5-year plan, 1984-1988: 40 p.

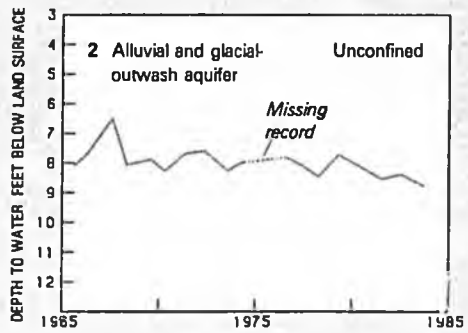
Wahrhaftig, Clyde, 1965, Physiographic divisions of Alaska: U.S. Geological Survey Professional Paper 482, 52 p.

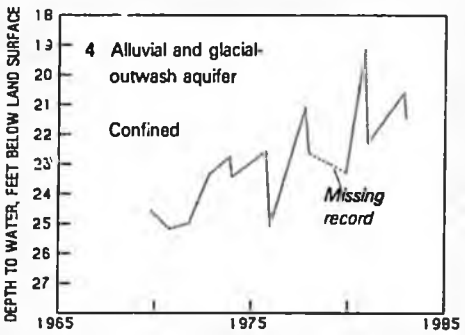
Williams, J. R., 1970, Ground water in the permafrost regions of Alaska: U.S. Geological Survey Professional Paper 696, 83 p.

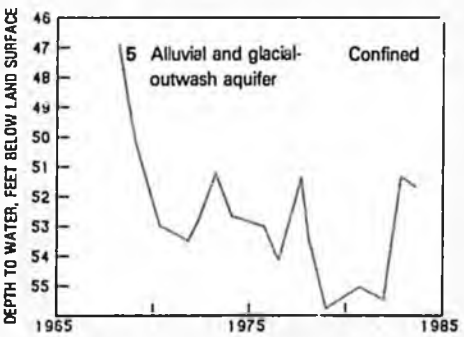
Zenone, Chester, and Anderson, G. S., 1978, Summary appraisals of the Nation's ground-water resources—Alaska: U.S. Geological Survey Professional Paper 813-P, 28 p.

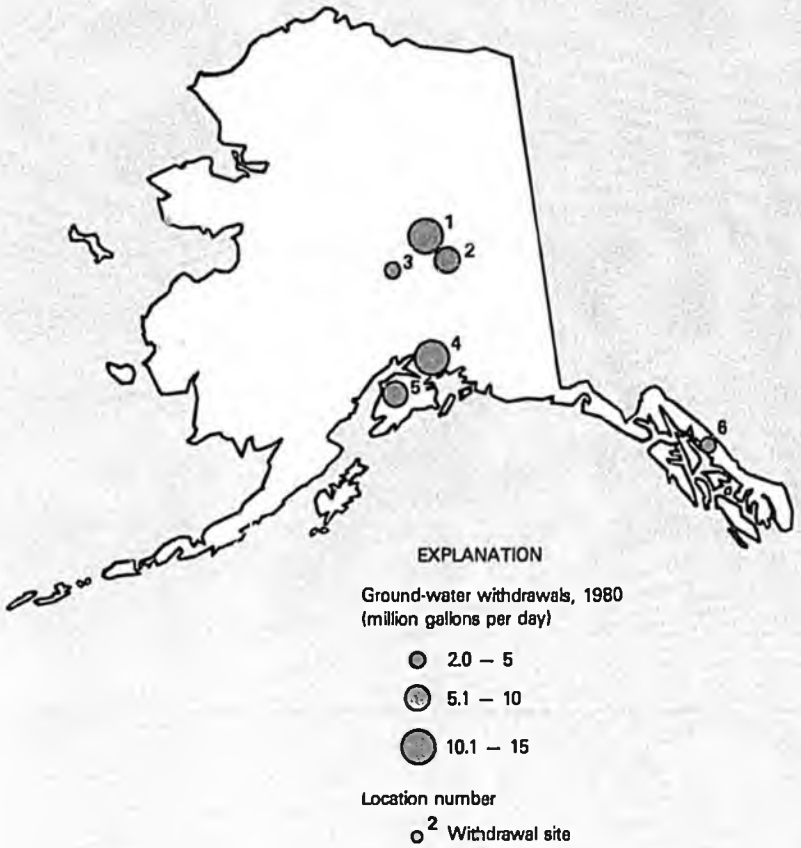
Prepared by Charles E. Sloan, Philip A. Emery, and Chester Zenone

For additional information contact District Chief, U.S. Geological Survey, 4230 University Drive, Anchorage, AK 99508-4664









WITHDRAWAL SITES

No. on map	Geographic area	Aquifer	Principal uses
1	Fairbanks	Alluvial and glacial-outwash	Public supply.
2	Eielson	do	Industrial.
3	Clear	do	Do.
4	Anchorage	do	Public supply.
5	Kenai	do	Industrial.
6	Juneau	do	Rural supply.

Figure 2. Areal distribution of major ground-water withdrawals and graphs of annual greatest depth to water in selected wells in Alaska. (Sources: Withdrawal and water-level data from U.S. Geological Survey files.)

AHTNA, INCORPORATED
Drawer G
Copper Center, Alaska 99573
Ph. No.: (907) 822-3476

Frank

July 29, 1985

Mr. Tom Hawkins, Director
State of Alaska
Department of Natural Resources
Division of Land and Water Management
550 Cordova Street
Pouch 7-005
Anchorage, Alaska 99510

RE: Navigability

Dear Tom:

On July 16, 1985 you sent a letter, along with maps of the Ahtna Region, asking Ahtna, Inc., to review all waterbodies or portions of water within our land conveyance areas and to indicate what Ahtna, Inc., thinks should be found navigable based upon use or susceptibility to use. This letter is in response to the above and other interests which Ahtna, Inc., feels a need to be addressed.

First of all, Ahtna, Inc., opposes any determination regarding the issue of navigability in our region. With the exception of the Copper and Chitina Rivers, we strongly disagree with your letter, regardless of whether the waterbodies are a lake, pond, stream or river. [illegible] we do not, at this time, see no reason why we should designate and classify water bodies for public access, public recreation and the like. Thirdly and lastly, while the State of Alaska wishes to classify water bodies for public and recreational use within the Ahtna region, it has erroneously taken the idea that Ahtna, Inc., would consent to such. Ahtna, Inc., at this time has not completed selection on a greater part of its lands, therefore, Ahtna, Inc., feels that there are no navigable waters within our region with the exception of the Copper and Chitina Rivers only! For your information, our interest on our lands, be it village or regional, supersedes the State of Alaska interests.

Ahtna, Inc., has been working extensively on the issue of navigability. We have done research into this subject and even to the point of assessing our rights in court. By way of your letter, we again feel encroached upon, without justification. These encroachments, in dealing with the State to name a few (excluding navigability), are as follows: A) Subsistence; B) R.S.2477's; C) Native Sovereignty; D) P.L.280; and E) Native Allotments, etc. We totally disagree with your definition of navigability and see it as only an excuse to win back (lands) what was taken when ANCSA was passed. In actuality, the only people who had a right of ownership to the lands were the Alaska Natives.

It may now be a good time to bring up the subject of Indian Water Rights. Although this subject has never been applied to the State of Alaska, it may just as well start now. There are many case laws in regards to Indian Water Rights, all in favor of the tribe which brought it before a court. I suggest that your department research into this important subject because it is of not only, primary importance to Alaska Natives, but also their subsistence culture, and their future commercial development -- too important for the ambiguity and uncertainty surrounding this issue to continue. Native rights to water on their regional and village corporate lands, dating from time immemorial, remain intact. Native rights to water, in Alaska, must be recognized now, because Alaska Natives hold Indian title which, for your information, are legally enforceable against every other entity but the United States. The United States as sovereign and as fiduciary, is required to protect these interests.

I as an Assistant Resource Manager for Ahtna, Inc., feels it is appropriate to clarify a few other areas. First of all, under Section 4 of ANCSA, there is no explicit mentioning of water rights. "Submerged lands underneath all water areas" is mentioned, but there is no reference to the right to use water. Given that fact, Native villages and regions should not be denied beneficial ownership of water resources within their boundaries, absent a clear impression congressional intent. A further, and perhaps, overriding purpose of ANCSA was to promote Natives self reliance and self-sufficiency. As stated in ANCSA, Congress declared that, "there needed to be a fair and just settlement of all aboriginal land claims of Alaska Natives in conformity with the real economic and social needs of Alaska Natives [illegible] to provide for certainty [illegible]

[illegible] -- water rights cannot be withdrawn [illegible]

It must be noted that the State of Alaska claims to submerged lands under navigable waters could potentially be challenged on a wholesale basis. As you are aware, the Submerged Lands Act operates only to grant Alaska title to certain designated submerged lands at the time of statehood. It was a statute of general application, operable only on "public lands", and one which did not purport to extinguish title. Thus, title should pass to Native regional and village corporations. Water rights are paramount to subsequent competing users, and are critical of the maintenance of native subsistence economies and continued commercial development. These water rights can and must be established forever now!

In conclusion, I want to express the concern Ahtna, Inc. holds to its property. Based upon a long standing use of water in our region, water rights in regards to any navigable decision, must be retained by the Ahtna Natives as a common law principle. The State of Alaska should treat water as a Alaska Native interest property right. The fact that the United States held legal title to aboriginal lands, means that the United States is under a moral and legal duty to preserve Native lands and protect them from third party intrusions. This guardianship role was continued under Section 11 of ANCSA.

We of Ahtna, Inc., will continue to pursue a good working relationship with you and your department. We welcome any opportunity in getting together to discuss this subject of navigability with you. Thank you for reading this letter and if I can be of further assistance or if you have questions, please do not hesitate to contact me. Have a nice day!

Respectfully,

Jameal R. Hicks

Jameal R. Hicks
Assistant Resource Manager

JRH/ttn

cc: Michael Sewright, BSD
Gary Stein, BLM
Regional Solicitor's Office
Regional Solicitor's Office
Regional Solicitor's Office
Robert B. Gerkoorg, Legal Counsel
Barry Law, Ahtna Resource Manager
Roy B. Ewan, Ahtna President
Alaska Federation of Natives

DELIVER TO: JPOM

ORIGINAL
SENT: 02/19/85 TIME: 09:18
FROM: PAULA GRAY
SUBJECT: POM
PRINT DATE: 02/19/85 TIME: 09:18

TO: SENATE RESOURCES COMMITTEE & HOUSE RESOURCES CMTE
SENS: STURGULEWSKI, FAHRENKAMP, ELIASON, ZHAROFF, HALFORD, COGHILL, V. FISCHER
REPS: HERRMANN, SHULTZ, WALLIS, SUND, THOMPSON, CATO, PEARCE, JENKINS

TO: INTERIOR DELEGATION
SENS: BENNETT
REPS: FRANK, DAVIS, KOPONEN, M.W. MILLER, RINGSTAD

FROM: "NGOOD-TOLOVANA MINING DISTRICT
JOX 73069
, AK 99707

FEB 19 1985

PHONE: ~~488-6453~~

RE: ~~SB 150~~ MISC AMENDMENTS TO AK WATER USE ACT, ETC...

A BILL IS NEEDED TO ADDRESS ADJUDICATION OF FEDERAL RESERVED WATER RIGHTS. HOWEVER, SB150 FAILS TO DIRECT COMMISSIONER OF NATURAL RESOURCES TO COMPLETE APPROPRIATE HYDROLOGY STUDIES TO FACILITATE BASIN-WIDE ADJUDICATION, AND IT FAILS TO RECOGNIZE THAT AN INDIVIDUAL'S WATER RIGHT IS A PROPERTY RIGHT THAT CAN BE LEASED, BARTERED OR SOLD AND NOT BE DECLARED INVALID BY THE STATE. MORE DETAILED COMMENTS FOLLOW.

Alaska State Legislature

ARLISS STURGULEWSKI, Chairman
BETTY E FAHRENKAMP, Vice Chairman
JACK COGHILL
DICK ELIASON
VIC FISCHER
RICK HALFORD
FRED ZHAROFF

POUCH V
JUNEAU, ALASKA, 99811
(907) 465-4907

Senate
Committee on Resources

M E M O R A N D U M March 7, 1985

TO: All Members
Senate Resources Committee

FROM: Staff FH
Senate Resources Committee

RE: SB 150 "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing a procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

SB 150 establishes procedures for the administrative and judicial adjudication of water rights and make miscellaneous amendments to the Alaska Water Use Act (AS 46.15).

The bill is an attempt to clarify and simplify the procedure for the adjudication of water rights. In many western states, thousands of lawsuits have arisen where there were more appropriators than water available. The conflicts arose where federal reserves existed and as a result of the McCarran Amendment those cases against the federal government could be heard in state courts. This placed a tremendous burden on the court systems of the various states. SB 150 is designed to try to avoid those problems.

Substantial differences, however, exist among interested parties as specified in the attached correspondence received by the committee. A brief overview of those portions is outlined below:

Governor's Bill	Alaska Miners Association Comments	Livengood/Tolovana Mining District Comments
Section 1		
Disclaimer section asserting that water rights are not guarantee of quality, volume, pressure or cost.	Not Necessary	Not Necessary

Governor's Bill	Alaska Miners Association Comments	Livengood/Tolovana Mining District Comments
Section 2		
Clarifies relationship of pending declarations to proposed procedures.	No Comment	No Comment
Section 3		
If water rights not used for five years may be declared abandoned.	Should not be changed from present statutes.	Should not be changed from present statutes.
Section 4		
Clarifies how commissioner may terminate an in-stream flow reservation for best interest of state.	Opposed to words "best interest of state."	Opposed to words "best interest of state."
Section 5		
Allows commissioner of DNR to initiate an administrative adjudication for state and federal water rights.	Federal reserved water rights should be in separate statute.	An administrative adjudication of federal reserved water rights only after a complete hydrology study.
Section 6		
DNR has authority to remove unsafe or unpermitted works of appropriation.	Not Necessary	Should be deleted.

Included in this packet are:

1. Governor's transmittal letter;
2. Department of Natural Resources fiscal note which is zero;
3. Letter from the Alaska Miners Association;
4. Letter from the Livengood/Tolovana Mining District;
5. Letter from the Alaska Court System.
6. Alaska Water Resources Board Resolution 84-5.

FEB 27 1985

ALASKA MINERS ASSOCIATION
Fairbanks Branch State Oversight Committee
P.O. Box 73069
Fairbanks, Ak 99707

RE: SB 150

Dear Resource Committees;

We are concerned about the implications of SB 150. We agree with the Alaska Resources Boards findings that the current statutes and regulations are adequate to implement basinwide adjudication of federal reserved water rights. We feel that SB 150 addresses issues that should not be addressed, while not adequately addressing the issues that should be addressed.

We are also concerned about the reported Department of Natural Resources estimate that the fiscal note is zero. The bill, as currently written, contains at least two sections that will be very costly to manage. These two sections are contained in Section 6 and deal with "Enforcement" and "Data Collection Authority". Several other sections will certainly carry a high price tag if implemented. We fear that the Department of Natural Resources will be forced to shift their work load from other areas that are critical to orderly development of the State.

The following comments are addressed to specific sections of the bill:

SECTION 1: Since this specific "disclaimer" wording has never been upheld in a court of law, according to the Governor's transmittal letter, we feel that it is not necessary to include it in our statutes. It could lead to costly court battles that are extremely unnecessary.

SECTION 3: Sec. 46.15.140 (c) states that the Failure to use beneficially, etc. The word beneficially is a buzz word that is hard to define, and should be deleted from that section. We believe that the entire section should remain as it currently appears in the Statutes, and the proposed change should not be considered.

SECTION 4: The term "in the best interests of the state" is one that has been difficult to define. It leaves room for arbritrary and capricious decisions. We suggest that this term be deleted and the term "in accordance with AS 46.14.140(b)" be left in that section.

SECTION 5: We feel that the federal reserved water rights should be properly adjudicated. However, we believe that by adding the federal reserved water rights to the water use act, the Governor has only confused issues. We would suggest that the federal reserved water rights be addressed in a seperate statute. Thus Sec. 46.15.165, Sec. AS 46.15.166 Sec. AS 46.15.167, Sec. 46.15.168, and Sec. 46.15.169 could all be incorporated into a seperate statute dealing only with federal reserved water rights, and not infringe upon the current Water Use Bill and the rights and priviledges granted under it.

SECTION 6: This entire section should be deleted. Other agencies have enforcement powers, and the addition of this power to DNR would only be a duplication of effort.

MAR 1 1 1985

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February 28, 1985

Michael J. Frank, Esq.
Assistant Attorney General
Office of the Attorney General
Suite 200
1031 West Fourth Avenue
Anchorage, AK 99501

MAR - 4 1985
Director's Office

RE: Senate Bill No. 150
(Amendments to Alaska Water Use Act)
Our File No. 1515-1

Dear Mike:

I have reviewed Senate Bill No. 150, which has now been introduced at the request of the Governor, and I think that it represents a very desirable addition to the Alaska Water Use Act. Perhaps we both should have some satisfaction of authorship, and you have done an excellent job in refining it and including a number of housekeeping measures which should be addressed by the Legislature.

However, I have noted one possible ambiguity. The amendment to AS 46.15.140 sets forth the procedure for the Commissioner to deal with abandonment, forfeiture, and reversion of appropriations. Under this provision, all appropriations are subject to revocation if the appropriator does not make beneficial use or all of a part of the appropriation. As you know, the reservation of in stream flows is handled separately in AS 46.15.145, and there are separate standards for periodic review of these reservations, and their reduction or elimination based upon necessity and changing conditions.

However, as the amendment to AS 46.15.140 is now written, it applies to all "appropriations". AS 46.15.260(2) defines an "appropriation" as,

LIVENGOOD/TOLOVANA MINING DISTRICT

P. O. BOX 73069 - FAIRBANKS, ALASKA 99705

February 23, 1985

Dear Legislator:

The Livengood/Tolovana Mining District expressed concerns to you regarding SB 150 in a Public Opinion Message on February 19. This bill would have an impact upon the General Public of Alaska, as there are many different type of water appropriations issued for the State. We would like to submit the following comments on SB 150.

In the opening paragraph of the Governor's letter of transmittal dated February 12, 1985, he stated, "The bill comes as a result of the Alaska Water Resources Board resolution 84-5, dated March 14, 1984, recommending the adoption of specific statutory procedures for the administration and judicial adjudication of water rights, particularly federal reserved water rights."

In the minutes from the Alaska Water Board dated March 13-14, 1984, the following comments are made:

> Resolution to the Commissioner of DNR to propose legislation for basinwide adjudication. Current statutes and regulations are adequate to implement basinwide adjudication of federal reserved water rights. However, more explicit statutes are needed to establish the Superior Court's duties and responsibilities and to set the limits of the court's authority, since this type of case has not previously occurred in Alaska.

Although the Governor has the authority to introduce legislation resolving perceived problems such as the Water Board indicated, the proposed legislation goes far beyond the recommendations of the Board. The Board found that current statutes and regulations are adequate to implement a basinwide adjudication of federal reserved rights, and requested statutes only to establish the Superior Court's duties and responsibilities. We believe the recommendations of the Water Resource Board are valid, and SB 150 should only address the Superior Court's duties and responsibilities.

The February 12, 1985 Senate Journal, page 279, regarding SB 150 reads: "Department of Natural Resources fiscal note is zero." We are concerned that if the fiscal note is indeed zero, the Department of Natural Resources will be forced to shift their work load from critical areas into administration of the bill. We therefore feel the bill should be submitted to the Finance Committee for appropriate budgetary appropriations. Section 6 AS 46.15.255 (ENFORCEMENT) and 256 (DATA COLLECTION AUTHORITY) are extremely costly sections to administer.

The bill seriously amends the Water Use Act in established areas. The following comments are addressed to specific sections of the bill.

SECTION 1: In the letter of transmittal Governor Sheffield admitted that this concept had never been upheld in a court of law. Why waste the courts time with an indefensible law? If Section 1 is amended as suggested by SB 150, it makes an appropriation of a specific amount of water meaningless. How can a developer of any type proceed with engineering and funding a venture under such circumstances?

> . . . the diversion, impounding or withdrawal of a quantity of water from a source of water for a beneficial use or the reservation of water in accordance with AS 46.15.145; . . .

Unless I am mistaken, I do not believe that your amendments dealing with abandonment, forfeiture and reversion were intended to apply both to "true" appropriations in which the water is applied to a beneficial use directly, and also to in-stream flow reservation, in which the mere reservation of the water in place is an "appropriation" and a beneficial use by statutory definition only. If my interpretation is correct, you may wish to add a proviso to AS 46.15.140 which will exempt reservations made pursuant to AS 46.15.145 from the coverage of the abandonment provisions of Section 140.

I would be interested to learn if this is your reading of the statute, and if my assumptions regarding the intended coverage of the abandonment provisions are correct.

Also, with regard to proposed AS 46.15.140(d), I presume that this paragraph does not, by ambiguity, imply that a state agency (DNR) may not declare the abandonment or forfeiture of any other water right (non-State public, or private) without prior public notice. In fact, perhaps there should be prior notice before DNR declares any abandonment or forfeiture. Also, shouldn't other water rights held in the name of the public (municipal, federal, etc.) be subject to the same protection given state-held water appropriations?

Sincerely yours,

BURR, PEASE & KURTZ

Thomas E. Meacham

TEM/lsf

cc: Mr. Thomas Hawkins
Mr. Larry Dutton

SECTION 3: This section does not appear to recognize that a water right is a property right that can be leased or sold. This section, by regulation, would divest the property owner of his entire water right, or an unused portion, if that appropriation, or portion thereof, were not used over a 5 year period. (See Sections 46.15.255 and 256). AS 46.15.140 as it currently appears in the Statutes is appropriate without change.

SECTION 4: We feel that by the addition of the words "best interests of the state" and deletion of "in accordance with AS 46.15.140 (b)" this section provides for arbritrary and capricious decisions.

SECTION 5: We feel that water should be adjudicated, especially with respect to federal reservations. We suggest the following change of wording:

> Sec. 46.15.165 ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of (ALL) Federal Reserved water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems following a complete hydrology study.

SECTION 6. This entire section should be deleted. Article VIII Section 16 of the Constitution of Alaska states, "No person shall be involuntarily divested of his right to the use of waters, his interests in lands, or improvements affecting either, except for a superior beneficial use or public purpose and then only with just compensation and by operation of law."

We sincerely appreciate your consideration of these comments. If we can be of assistance to you in any manner, please do not hesitate to call on us.

Sincerely yours

Rose Rybachek

Rose Rybachek, President

MAR 4 1985

Alaska Court System
State of Alaska

OFFICE OF ADMINISTRATIVE DIRECTOR

KARLA L. FORSYTHE
General Counsel

303 K Street
Anchorage, AK 99501

February 26, 1985

Senator Arliss Sturgulewski
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Sturgulewski:

I am writing to bring to your attention a minor concern with SB 150, an act establishing procedures for administrative and judicial adjudication of water rights under the Alaska Water Use Act.

Proposed Sec. 46.15.166(c) (page 7, lines 4- 14), provides that in an action, the court may initially appoint a designee of the commissioner as a master. The master may be an employee of the state.

If the master is a state employee, I assume that the costs of the master will be absorbed as part of the employee's regular salary. However, it would be helpful if the legislation provided that if the master is not a state employee, the costs of the master and any related expenses incurred by the master shall be paid by the parties to the adjudication.

Thank you for your consideration of this comment. If there are any questions, I will be glad to provide further information.

Sincerely,

Karla L. Forsythe

Karla L. Forsythe
General Counsel

KLF:smh

cc: Arthur H. Snowden, II
Art Peterson

TO: Governor Bill Sheffield

FROM: ~~David Vanderbrink~~ CYRIL R Wanamaker

Dear Governor Sheffield:

This letter comes to you in response to a matter that the Alaska Water Resources Board discussed during its March 4-7 meetings.

As you are no doubt aware, Alask has recently become a fully participating member of the Western States Water Council (WSWC). Our membership allows Alaska to send three delegates to the Council meetings. Representatives from the the Alaska Department of Natural Resources, the Alaska Departme Conservation and the Alaska Department of Law are the appropriate delegates to the Council. Nevertheless, numerous other state agencies have or should have a substantial interest in water issues addressed by the Council.

The members of the Alaska Water Resources Board have asked me to convey to you the importance of providing a vehicle to these agencies that they may participate with the appointed delegates in developing Alaska's positions at Council meetings.

Although we do not forsee the need for the creation of a special task force, it is recommended that:

1) The Governor's Office inform these various agencies of Alaska's involvement in the WSWC.
2) The Governor's Office urge these various agencies to become and <u>remain</u> actively involved in the development of these issues.

The Alaska Water Resources Board further recommends that one agency, the Alaska Department of Natural Resources, be assigned the responsibility to coordinate this activity. In addition this agency should be given the position as lead agency representing the Alaska Delegation at the Western States Water Council.

Sincerely,

David Vanderbrink

b. The State of Alaska's response to the EPA's proposed placer mining national standards are coordinated and expressed through the Office of the Governor.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

David Vanderbrink, Chairman

Resolution No. 85-9

EPA NATIONAL PLACER MINING STANDARDS

The U.S. Environmental Protection Agency will be issuing proposed national standards for placer mining in April, 1985. These proposed standards have never before been issued for this industry, and ~~as a result~~ in the interim the State of Alaska's minimum water quality standards have been applied to placer mining. The existing standards have not been technologically achievable, and do not reflect economic factors. The national placer mining standards will represent a very beneficial and realistic step forward. They should, a reflect ~~the maximum~~ ~~of~~ coordinated ~~thorough~~ State response to EPA.

THE ALASKA WATER RESOURCES BOARD urges the Governor to insure that:

a. Every state agency with an interest in water allocation and quality, including the Department of Natural Resources, the Department of Environmental Conservation, the Department of Fish and Game, the Department of Commerce, the Attorney General's Office, the Department of Community and Regional Affairs and the Office of Management and Budget are encouraged to thoroughly review and respond to the proposed EPA placer mining standards.

Resolution No. 85-10

CLEAN WATER ACT FIELD LABORATORY

Placer mining and other industries have a long history in Alaska and have provided a large economic contribution to the state. These industries may no longer be viable due to recent EPA regulations.

Section 208 of the Clean Water Act (CWA) mandated EPA to conduct studies to provide alternatives to economically meet the goals of the Clean Water Act. Section 104E of the CWA states "The Administration shall establish, equip, and maintain field laboratory and research facilities, including, but not limited to . . . one in the State of Alaska for the conduction of research, investigations, experiments, field administration, and studies and training relating to the prevention, reduction and elimination of pollution."

Technology has not yet been developed under Section 208 or 104E to enable placer mining and other industries to meet current EPA permits. Concerned citizens meeting with Senator Murkowski in February, 1985, discussed this subject and the Senator recommended that a field laboratory under Section 104E of the CWA should be funded as a means of arriving at a solution to the problem facing water users in Alaska.

THE ALASKA WATER RESOURCES BOARD urges Federal funding of this project with 205 (j) monies or other appropriate funding.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

David Vanderbrink, Chairman

Resolution 85-11

ADMINISTRATION OF WATER APPROPRIATION PERMITS AND

INSTREAM FLOW APPLICATIONS

An application to appropriate water by means of an instream flow reservation under AS 46.15.145 has in the past been treated differently from the more traditional water appropriation application for a diversionary use. While the traditional appropriator establishes his or her priority date at the time of initial application, the priority date for an instream flow applicant is not assigned until all data has been collected and a certificate has been issued. This, in practice, places the instream flow applicant at a disadvantage because there is no assurance, after the studies have been completed, that the water originally applied for will still be available.

The Department of Natural Resources has informally applied guidelines to the duration of water appropriation permits for various uses. after which the appropriation applied for, if it is not perfected, will lapse. However, the fact that these policies or guidelines have not been adopted as regulations raises questions about their validity.

THE ALASKA WATER RESOURCES BOARD resolves:

a. The Department of Natural Resources is encouraged to adopt regulations which set duration limits for perfecting the various types of water appropriation rights under all appropriation permits which the Department may issue.

b. The Department is encouraged to develop regulations treating instream flow applications under AS 46.15.145 as applications initiating the appropriation permit process, with a priority date from the date of initial application.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

David Vanderbrink, Chairman

Resolution No. 85-12

RECREATIONAL RIVERS BILL-HB93

Over the years The Alaska Water Resources Board has expressed concern about overuse and abuse of certain Recreational Rivers, and has supported improved management of recreation rivers by Division of Parks.

The Alaska Water Resources Board support HB93 which establishes a system of Recreation Rivers.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

David Vanderbrink, Chairman

Resolution No. 85-13

WATER MANAGEMENT STAFFING

Alaska's future is directly dependent upon its water resources. Many communities are already expressing water shortages. and many capital projects, land disposals and resource development involve serious water ramifications. Effective water management requires adequate, knowledgeable, and experienced personnel.

THE ALASKA WATER RESOURCES BOARD urges the Department of Natural Resources make every effort to reduce personnel turnover in the Water Section and to retain the existing positions within the section.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

David Vanderbrink, Chairman

Resolution No. 85-14

DAM SAFETY: SB 95

The Alaska Water Resources Board has followed the progress of the dam safety inspection program in Alaska. The continuation of the dam safety program is of vital importance to ensure the safety and well being of Alaskan citizens and property.

THE ALASKA WATER RESOURCES BOARD urges the Alaska legislature to pass SB 95, an act establishing a dam safety program for Alaska.

Adopted this 8th day of March, 1985

ALASKA WATER RESOURCES BOARD

David Vanderbrink, Chairman

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March 12, 1985

Honorable Arliss Sturgulewski, Chair
Senate Resources Committee
Pouch V
Juneau, AK 99811

RE: Senate Bill No. 150 (Amendments to Alaska Water Use Act, AS 46.15); Our File No. 1515-1

Dear Ms. Sturgulewski:

I am a member of the Alaska Water Resources Board, established under AS 46.15.190. I attended the semi-annual meeting of the Water Resources Board in Juneau on March 5-7, 1985. The Board met with the Senate Resources Committee on water resource matters (including SB 150) on March 8; however, I was unable to participate in that meeting because I had to return to Anchorage early.

In this letter, I would like to offer these observations concerning SB 150, and some proposed amendments. These views are my own, though they were discussed among the Water Resources Board. Some of them are, I believe, contained in a letter to you from the Board. The principal author of that letter is Mike Neimeyer, who is an attorney and a member of the Board.

I believe that the proposed amendments to the Alaska Water Use Act which are contained in SB 150 are necessary for the efficient administration of water rights in Alaska. These include federal reserved water rights which are presently

unquantified and pose the greatest unknown factor in the future allocation of water resources in Alaska. My involvement in water issues, and in the dilemma of unquantified federal reserved water rights, began during my service as an assistant attorney general for the State of Alaska in the late 1970's. I represented the State in litigating the case of Pauq-Vik, Inc., Ltd. v. LeResche, 633 P.2d 1015 (Alaska 1981), which was the first Alaska case dealing with aboriginal-title and federal reserved right water claims.

In 1980, based in part upon the realization that the existing Alaska Water Use Act contained no procedures for the effective, binding adjudication of these claims in a manner which complies with the McCarran Amendment, 43 U.S.C. Sec. 666 (which grants the state jurisdiction over federal entities to determine their water rights), I drafted the precursor of Senate Bill 150. That bill has undergone significant refinement since that time, and has been modified to reflect other states' experiences in adjudicating federal reserved rights. At the present time, I believe the bill generally represents a "state of the art" procedural statute to enable the adjudication of federal water rights in state courts. I urge its adoption by the Legislature.

I do have some specific suggestions for amendments which would resolve the concerns raised by Water Board members at our recent meeting. As you know, Sections 1 through 4 of SB 150 are general, "housekeeping" measures which clarify existing portions of the Alaska Water Use Act, while Section 5 of the bill comprises the procedural measures to deal with basin-wide water adjudications, including federal reserved water rights within those basins. My proposed amendments are as follows:

Page 2, Section 46.15.140(d): This proposed amendment should be removed from the "abandonment" provision of the Water Use Act (46.15.140), and placed in AS 46.15.145, which deals with the administration of in-stream flow reservations. The proposed subparagraph (d) states,

> (d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

I understand that this provision was originally intended to deal with in-stream flow reservations granted to the State under AS 46.15.145. If so, it should be moved to that section, as AS 46.15.145(g). I would recommend that the provision be

broadened to cover all in-stream flow appropriators, public and private, since their in-stream flow reservations are required to be made in the general public interest. I recommend that the provision, placed in Section 145, read as follows:

> (g) An in stream-flow certificate may not be abandoned or forfeited in whole or in part except after public notice.

Alternatively, if it is not the intention of SB 150 to confine the abandonment by a state agency of a water certificate to in-stream flow reservations, but instead to include all types of water rights held by the State (as the amendment presently implies), the amendment should remain in its existing Section 140. However, it should be broadened to cover both the state and municipalities. The provision would then read,

> (d) A certificate of appropriation may not be abandoned in whole or in part by a state agency or a municipality except after public notice.

This change would prevent the involuntary loss of a water appropriation held in the name of the general public, as a result of the errors or omissions of individual public officials. In other words, failure to timely use a water allocation, or to file some document with the State indicating an intention to maintain a use, should not result in the loss of water rights held by the State or by a municipality in the name of all of its residents.

Based upon these considerations of the public interest, it might be best to leave the provision in Section 140(d), as broadened to cover municipal governments, and at the same time to add the suggested provision concerning in-stream flow reservations at subsection (g) of Section 145.

Page 3, Section 46.15.165(c): This section should be amended by inclusion of the following additional category of persons entitled to receive service of notice of an administrative adjudication of basin-wide water rights.

> (5) Serve the order on any other person or corporation claiming a federal reserved water right;
>
> (renumber the existing subparagraph (5) as subparagraph (6)).

Page 4, AS 46.15.165(c)(5): I recommend that to prevent the inadvertent omission of notice to Native allotment owners in a basin-wide water rights adjudication, or to prevent the later default of these claimants, that the Native regional and village corporations which own land within the basin be notified of any general water rights adjudication (regardless of whether the corporations are themselves asserting a claim to water rights). The proposed amendment would read,

> (5) serve the order on each Native regional and village corporation organized under the Alaska Native Claims Settlement Act which owns any land within the adjudication area;

The Native regional and village corporations do not have the burden of keeping a Native allottee informed of the progress of a water rights adjudication. However, they have in many cases been helpful in guaranteeing that Native allottees within their area are not overlooked, and that they receive adequate legal and practical advice to protect their interests in such matters. Therefore, it is desirable that in addition to serving the Native allottee with notice, that the Native corporation within the area also receive notice, to better insure that the allottee's interests will be protected.

Page 6, Section 46.15.166: I suggest that the "judicial adjudications" section at AS 46.15.166 be similarly amended to add a category of persons whose federal reserve right claims may be adjudicated judicially in state court, as follows:

> (a)(3) by or on behalf of any person ~~or corporation~~ who claims a federal reserved water right.

These two changes, will permit the adjudication of any federal reserved water right claims which may be asserted by Alaska Native corporations, or by any other entity which is not already included in the proposed legislation (and which, by statutory interpretation, would otherwise be presumed to be excluded). Without this amendment, Alaska Native corporations and others who may claim federal reserve water rights will be forced to bring separate litigation in federal court, which defeats the entire purpose of a basin-wide state-court adjudication of all water rights, including federal reserved rights. The inclusion of this category in the legislation would not be an admission by the State that Native corporations legally possess federal reserved water rights, since the disclaimer in proposed AS 46.15.169 of the bill specifically denies that

adoption of the legislation is an admission by the State that federal reserved water rights exist within the State.

Page 8, AS 46.15.168(b): I recommend that this provision be amended to require that any administrative adjudication on remand from a court be confirmed judicially, if federal reserved water rights are involved. This will complete the judicial adjudication requirements of the McCarran Amendment, 43 U.S.C. Sec. 666. Without this confirmation, a decision after administrative remand may not be binding upon the federal claimants. Therefore, I recommend that this subsection (b) be amended to read as follows:

> (b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165, subject to judicial confirmation of any federal rights which have been adjudicated.

I hope that my concerns with some details of SB 150 can be eliminated by adoption of the amendments I have listed in this letter. However, with or without these amendments, I believe that SB 150 is a vital piece of procedural legislation which is necessary to allow the State to take full advantage of its jurisdiction over federal water claims. When the need arises, the State will be able to react in a timely manner, without any question concerning the procedures to be applied. I urge that your committee recommend the passage of Senate Bill 150.

Sincerely yours,

Thomas E. Meacham

TEM/lsf

cc: Commissioner Esther C. Wunnicke

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

MAR 25 1985

DEPARTMENT OF NATURAL RESOURCES

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

OFFICE OF THE COMMISSIONER

March 19, 1985

Honorable Arliss Sturgulewski, Chair
Senate Resources Committee
Pouch V
Juneau, AK 99811

Re: SB 150, Thomas E. Meacham's March 12, 1985 letter

Dear Senator Sturgulewski:

The Department of Natural Resources fully endorses all of the suggestions in the subject letter without exception.

Referring to Section 3 of SB 150 and the proposed amendment to AS 46.15.140(d) on Pg. 2, Mr. Meacham offered alternative wording (see Pg. 3 of his letter). This particular subsection was discussed at some length at the recent Water Resources Board meeting. It was felt that the original intent of this section was to prevent state agencies from abandoning instream-flow reservations and thus the Board recommended that the subsection, in its present form, should be deleted from Section 46.15.140(d) and to be reinserted as Section 46.15.145(g). We now realize that, while our original intent with this subsection was to protect the public interest in instream flow reservations, many other forms of agency and municipal appropriations, e.g., public water supply, provide a direct public benefit. Therefore, we now agree that Mr. Meacham's alternative proposal to leave the subsection in 46.15.140(d) and covering municipal governments through use of the wording or similar wording to that in Mr. Meacham's suggestion is the better way to deal with this section and will best serve the public interest.

We believe the other amendments to the bill proposed by Mr. Meacham in his letter are excellent and their incorporation will greatly improve this proposed legislation.

Sincerely,

Esther C. Wunnicke
Commissioner

cc: Tom Meacham
Tom Hawkins
Mike Frank
L. A. Dutton
Water Resources Board

10-J9 LH

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

WATER RESOURCES BOARD

555 Cordova Street
Pouch 7-005
Anchorage, AK 99510
(907) 276-2653

MAR 1 0 1985

March 14, 1985

The Honorable Alaska Sturgulewski
Alaska State Legislature
Pouch V (MS 3100)
Juneau, Alaska 99811

Re: The Alaska Water Resources Board's Comments on SB 150

Dear Senator Sturgulewski:

Attached are comments regarding SB 150 prepared by the Alaska Water Resources Board during its March 4-8 Board meetings.

I would like to emphasize that this Board supports SB 150 provided the enclosed suggested changes are incorporated in the proposed legislation.

The Board as a unanimous body supports the adoption of a systematic water adjudication process. If the bill, as amended herein, is not adopted in this legislation, the Alaska Water Resources Board will do everything within its power to see that legislation addressing this issue is introduced in the next session.

Thank you for your kind consideration of these recommendations.

Sincerely,

For Cyril R. Wanamaker, Chairman
Alaska Water Resources Board

By: L. A. Dutton, Chief
Water Management Section

cc: Governor Sheffield
Senate Resources Committee

Alaska Water Resources Board
Recommendations for changes to
SB 150 "An Act making miscellaneous
amendments to the Alaska Water Use Act."

Although the following proposed changes to SB 150 may not be procedurally correct, the Alaska Water Resources Board requests that the Senate Resources Committee review the substantive changes requested in this document.

The State of Alaska is in need of a workable and systematic water adjudication system. This Board therefore supports the basic principles espoused in SB 150. We do, however, have some reservations about the present draft as it relates to notice requirements and water appropriation abandonment. The Board makes the following recommendations:

I. Delete Section 46.15.140(d) and replace it with Section 46.15.145(g) which would read:

> "A state agency may not abandon or forfeit an instream flow certificate in whole or in part except after public notice."

II. Add a new subsection to AS 46.15.165 to read:

> "AS 46.15.165(c)(c) serve The Alaska Native Village and Regional Corporation whose lands fall within the adjudication area."

III. Add a new sub-section to AS 46.15.166 to read:

> "AS 46.15.166(a)(3) by any person or party asserting a federal reserve water right."

Although these are the only recommended changes of the Board, we would like to point out one section of SB 150 that may have the potential to create future problems. This section is AS 46.15.165(d) as it applies to native allotees served under AS 46.15.165(c)(3).

This board recognizes that one of the primary purposes of SB 150 is to create an adjudication system which satisfies the requirements of the McCarren Amendment 43 U.S.C. Sec. 666, thereby providing for state adjudication of federal reserve water rights. Federal agencies have the resources and responsibility to assert and defend their reserved water rights. This state should not be responsible for a federal agency's failure to assert its rights.

The Bureau of Indian Affairs (BIA), as trustee, has the primary responsibility of protecting a native allotee's property interests in a native allotment. It has been suggested, however, that because of any number of reasons, such as the vast number of allotments in the state, other BIA priorities, the failure of the BIA representatives to properly judge the significance of a water adjudication to the allotment holder, inadvertent ommissions, etc., federal reserve water rights which may be a legitimate property interest of the allottee may be forfeited due to BIA failure to assert water right as required in this subsection.

If a pattern of forfeitures of federal reserve water rights on native allotments does emerge as a result of this subsection, it is this Board's recommendation that the state's position should be flexible enough to assure that the necessary amendments will be made to protect any legitimate rights of the native allottees.

We wish to make it clear, however, that this Board does not take the position that the state is responsible for asserting a federal reserve water right for a native allottee. Furthermore, we are not suggesting that the state is responsible for affecting any repairs that are necessary to correct an injury created by a federal agency's failure to perform its responsibilities.

The point that we wish to make is that native allottees are state residents. Any federal reserve water rights that they may be entitled to as an appurtanence to their real property, acquired pursuant to the Native Allotment Act, is a valuable and necessary property interest. Forfeiture of real property interests should not be taken lightly. The forfeiture of a legitimate property interest for a failure to respond to service in a timely manner as required by this subsection is a drastic action and should not, therefore, be taken lightly.

Although we are not suggesting any changes to this subsection at this time, we do wish to demonstrate to the Senate Resources Committee that this subsection may have serious consequences to an identifiable group of longtime Alaska residents and not just to the myriad federal agencies which manage numerous and vast federally withdrawn lands.

APR 04 1985

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

POUCH M
JUNEAU, ALASKA 99811
PHONE: 907-465-2400

April 3, 1985

The Honorable Arliss Sturgulewski
Chair, Senate Resources Committee
Pouch V
Juneau, AK 99811

Dear Senator Sturgulewski:

During your committee's meeting on March 8 for the Water Resources Board, and the hearing on SB 150, you asked if the committee wanted to consider this bill without a fiscal note because adoption would require funding for data collection and enforcement. We failed to address this in our previous correspondence on this bill.

The reason a fiscal note was not included with the bill when introduced was that, even though we are facing a period of declining revenue and the real likelihood of reduced budgets, it was important to have this proposed legislation enacted. We are concerned that the State could soon be forced into federal reserved water rights adjudication and without having judicial procedure established by law, the State could be at a great disadvantage. We hope to be able to complete the Indian River (Sitka) basinwide adjudication within the limits of our regular operating budget.

Considering the possible future application of this bill, we recognize that the cost of administrative and judicial basinwide adjudications for water rights will be expensive and our intention is to create separate budget projects for these adjudications in our annual budget requests. In this way, except for preliminary research and project planning, administrative and judicial basinwide adjudications will be subject to available funds specifically appropriated by the legislature for each separate project. The funds, when requested, will cover basin boundary determination, hydrology reports, data collection, information research, service of notice, special masters fees, attorneys fees, court costs, etc., -- all within DNR (DGGS and DLWM), the Department of law, and the Judicial Branch. Using this approach, funding for a particular project will expire when the project has been completed.

10-J9 LH

If the State does not enact this legislation and prepare itself to deal with federal reserved water rights, we will run grave risks of:

1. Having our water rights appropriation system come to a standstill in different areas around the State because we have failed to quantify the federal reserved rights through the adjudicative process (no other alternative is available to the State -- McCarren Amendment, 43 U.S.C. 666).

2. Losing state court jurisdiction over the adjudication of federal reserved water rights through the federal agencies filing in federal court.

Referring to the second of these two reasons, federal agency filings in federal court could be a real possibility within a very few years (2-5) if federal agencies are successful in obtaining funds to quantify their reserved rights. We know, for instance, that the Bureau of Land Management, the Fish and Wildlife Service, and possibly the Forest Service are actively seeking funds at this time. If the State does not take the initiative in developing a process for adjudicating federal reserved water rights, e.g., SB 150, it is unlikely that the federal courts will remand these cases to state court as they have done in other states.

In summary, under the State's system of allocating water rights based on prior appropriation, there is no way that dealing with federal reserved water rights can be avoided. We will either adjudicate through state courts, through the Legislature and Congress (state-federal compact), or in federal court -- those are the choices as we see them. Adjudication in state court using the procedures that would be provided by enactment of SB 150 is most likely the least expensive alternative.

Please let me know if there is additional information I might furnish you.

Sincerely,

Esther C. Wunnicke

Esther C. Wunnicke
Commissioner

cc: Tom Hawkins
Mike Frank
L. A. Dutton
Water Resources Board

If you would like to discuss this further, please give me a call. E.

APR 12 1985

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April 10, 1985

Honorable Esther C. Wunnicke,
Commissioner, Alaska Department of Natural Resources
Pouch M
Juneau, AK 99811

RE: Proposed Amendments to Alaska Water Use Act (SB 150)
Our File No. 1515-1

Dear Commissioner Wunnicke:

Thank you for sending me a copy of your April 3, 1985 letter to Senator Sturgulewski regarding Senate Bill 150. Apparently Senator Sturgulewski had asked some questions regarding the absence of a fiscal note for SB 150 at the March 8 meeting of the Senate Resources Committee, with the Water Board in attendance. (I had to leave Juneau a day early, and regret that I was unable to attend that meeting).

Your letter explains very well the disadvantages to the State if it is not ready with an enacted statutory procedure for adjudicating federal reserved water rights. Of the two disadvantages you stated, I believe that the loss of clear state-court jurisdiction for federal agencies and individuals who assert federal reserved water rights is the most disadvantageous to the State. Your letter explained that if SB 150 is adopted, administrative or judicial adjudications of water basins would be done through the creation of a separate budget project for each adjudication as it became necessary. Using this approach, the Department of Natural Resources, in conjunction with the Department of Law, could determine which water basins in Alaska were of such a priority (such as Ship Creek in the Anchorage area) as to require commencement of a basin-wide adjudication. As you know, there are only a handful of basins in the State which might require a basin-wide adjudication in the foreseeable future; in other words, this will not be an everyday occurrence, and would only happen when the State decides that there is a real possibility that the existing water demands exceeded the known supply.

One circumstance which was not mentioned in your letter, and which I believe is an important reason to enact SB 150, is that enactment of the bill will put the State in the "driver's seat" concerning state-court basin adjudications. In addition to offering a reasonable (and even advantageous) alternative to basin-wide litigation in federal court, SB 150 would give strong indication that any basin to be adjudicated will be one which is high on the priority list of the Departments of Natural Resources and Law -- and not merely any water basin which an individual may wish to have adjudicated, whether or not the circumstances in that basin deserves the expenditure of money and effort which a basin-wide adjudication entails.

In Washington State, I understand, the procedures for basin-wide adjudication in state court have been developed ad hoc, and may not be part of a well-considered procedural framework. As a result, regardless of the priorities of Washington's Department of Natural Resources concerning water management, any individual water appropriator may initiate a basin-wide adjudication in a Washington state court. The result is that the natural resources and legal efforts of the State are directed toward researching and defending basin-wide "brush fires" which pale in significance to the more pressing water allocation problems which face the State. Once begun, however, a basin-wide adjudication must be followed to a conclusion because the State and private appropriators may be disadvantaged if they do not participate fully.

Senate Bill 150 would avoid this result by giving the Commissioner (and no one else) the authority to initiate a basin-wide administrative or judicial adjudication under the procedures contained in the bill. Any person attempting to start an adjudication of basin-wide rights outside these procedures would, by definition not be initiating a legitimate, competent basin-wide adjudication.

I have taken the liberty of sending a copy of this letter to Senator Sturgulewski, to indicate this additional reason to support enactment of SB 150.

Sincerely yours,

Thomas E. Meacham
(Member, Alaska Water Resources Board)

TEM/lsf

cc: Michael J. Frank, Esq.
Thomas J. Hawkins, Esq.
Mr. Lawrence A. Dutton
Members, Water Resources Board
Honorable Arliss Sturgulewski

APR 19 1985

LIVENGOOD/TOLOVANA MINING DISTRICT

P. O. BOX 73069 - FAIRBANKS, ALASKA 99705

April 12, 1985

Senator Arliss Sturgulewski
Pouch V
Juneau, Ak 99811

Dear Arliss:

I have received copies of several letters to you regarding SB 150. I agree with most of the comments made regarding the wisdom in passing legislation dealing with federal reserved water rights. I believe the questions regarding the fiscal note,as well as other areas of the section dealing with fedeal reserved water rights have been sufficiently answered to move that section of the bill.

However, I still have the same concerns with section 1-4 of SB 150 as I previously had. This is the so-called housekeeping portion. This section would deprive Alaskans of rights granted to them under the Constitution as well as current water rights law. This portion of the bill still carries a major fiscal note. If the Department of Natural Resources covers the fiscal note internally, then there must be a portion of the duties they are currently budgeted to perform that will not get done...or else they are currently over-budgeted (which I find strange to believe). This portion of the bill should be deleted.

Is there any possibility that you Committee could delete the section dealing with the housekeeping measures (sections 1-4), and pass the portion only dealing with federal reserved water rights? If that is a possibility, I would strongly urge that you do so.

If I can be of any type of assistance to you, please don't hesitate to call.

Keep up the good work.

Sincerely yours,

Rose Rybachek

Rose Rybachek, President

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF LAND AND WATER MANAGEMENT

POUCH 7-005
ANCHORAGE, ALASKA 99510-7005
PHONE: (907) 561-2020

October 9, 1985

The Honorable Arliss Sturgulewski
1957 Sheldon Jackson
Anchorage, AK 99508

Re: Senate Bill 150

Dear Senator Sturgulewski:

Enclosed are four articles and our new Fact Sheet discussing federal reserved water rights. Senate Bill 150, dealing with federal reserved water rights, was introduced during the past legislative session. A copy of the bill is enclosed for your reference. SB 150 was not passed out of the Senate Resources Committee. None-the-less, we think it is a crucial piece of water legislation for Alaska because it would establish judicial procedures to adjudicate federal reserved water rights. We will encourage the legislature to give this issue a high priority next year.

Currently, the Water Use Act, AS 46.15, has no procedures for basin-wide adjudication of state administered water rights or claimed federal reserved water rights. The proposed bill would provide a state superior court procedure for efficiently adjudicating federal reserved water rights through the use of existing state agencies expertise. The bill also sets up an administrative basin-wide adjudication procedure for state administered water rights when a controversy exists between appropriators, such as the scarcity of water within a river basin or ground water aquifer.

A federal reserved water right is one created either expressly or by implication when the federal government withdraws land for a specific purpose. The U.S. Supreme Court first recognized federal reserved water rights in Winters v. United States, 207 U.S. 564 (1908), an Indian reservation case. Since that time court cases have extended the doctrine to national forests, parks, refuges, and monuments. Since federal reserved water rights are most often created by implication, no specific quantity of water and no priority date for the water right is established until the court does so by decree. Congress passed the McCarren Amendment, 43 U.S.C.§666, to allow water adjudication suits to be brought against the federal government in state courts to determine the quantity and priority date of federal reserved water rights.

While allowing state court adjudication of federal reserved water quantities and priority dates, the McCarren amendment also requires the adjudication of all rights within a hydrologic basin where a federal reserved water right may exist. This has created lawsuits involving literally thousands of defendants in some of the western states, where there are many appropriators and not enough water. The complexity and expense of such litigation has prompted many western states to enact legislation establishing procedures for determining federal reserved water rights. Our proposed bill draws from the experiences of other states and their statutory schemes.

Federal land reservations make up almost 49 percent, or more than 178 million acres of Alaska's total land mass of 367.7 million acres, and may carry federal reserved water rights.

While competition for water resources in the locale of many of Alaska federal reservations is limited, we have recently encountered instances where a procedure for adjudication would improve opportunities for state economic development. Applications for additional hatchery water in Sitka were shelved pending study of federal rights to Indian River water. Of more immediate consequence are National Park Service requests for Nuka River appropriations which could reduce Bradley Lake power production potential. These situations will continue to pop up and require a resolution mechanism.

We summarize the bill briefly as follows: Section 1 of SB 150 adds a disclaimer to the Water Use Act that a right to appropriate water which the state grants is not a guarantee of a particular water quality, volume, or pressure, or that water may be withdrawn at a particular cost. This is needed because the state cannot always guarantee the quantity or quality of water due to insufficient hydrologic data in our state.

Sections 2 and 3 of the proposed bill amend AS 46.15.140 to clarify the existing abandonment and forfeiture provisions. It creates a rebuttable presumption so that an appropriator who does not beneficially use water granted by a certificate for five successive years, bears the obligation to prove to the commissioner that the appropriation has not been abandoned. Section 4 of the proposed bill clarifies how the commissioner may terminate an instream flow reservation.

Section 5 contains the body of the proposed basin-wide adjudication provisions. It creates a new AS 46.15.165, which would allow the Commissioner of Natural Resources to initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a particular hydrologic basin. Section 5 also creates a new AS 46.15.166 providing that when a federal reserved water right may be involved, and the claimant refuses to consent to an administrative

adjudication, the commissioner could initiate the adjudication in superior court consistent with the McCarren Amendment. In that instance the proposed bill gives the Superior Court authority to appoint a designee of the commissioner as a master to perform the same functions a master would have in an administrative adjudication, but under the court's supervision. While the design of the adjudication bill is to provide a procedure for the adjudication of both state granted and claimed federal reserved water rights, a new AS 46.15.169 makes clear that nothing in the Alaska Water Use Act is to be construed as an admission against the State of Alaska that a federal reserved water right exists in any particular context.

Section 6 of the bill adds a new AS 46.15.255 and AS 46.15.256, to clarify the Department of Natural Resources' authority to take action to remove unsafe or unpermitted works of appropriation such as dams or diversions where the appropriator refuses to do so, and to inspect records of an appropriator pertinent to water use under the Act.

Legislation for basin-wide adjudication was first submitted to the Legislature in 1981, but it received little attention. SB 150 was prepared by the Attorney General's Office after extensive review of that initial bill and other western states' laws dealing with federal reserved water rights adjudication. The drafts of this bill were reviewed by the Departments of Fish and Game and Environmental Conservation, members of the Alaska Water Resources Board, the U.S. Forest Service, the Western States Water Council, and the states of Idaho and Wyoming. During the past legislative session, there was one hearing by the Senate Resources Committee on SB 150 and we received a number of written comments. While some questions were raised about several housekeeping amendments included in the bill, the major portion dealing with administrative and judicial basin-wide adjudication was supported by the Alaska Water Resources Board as well as by individual Board members and by the Livengood/Tolovana Mining District.

The first of the enclosed articles, "The Winters of Our Discontent: Federal Reserved Water Rights in the Western States", presents background on the doctrine of prior appropriation and the development of the Winters Doctrine of Federal Reserved Rights. This article is relevant to Alaska because our system of allocating water is the doctrine of prior appropriation. The article presents an analysis of reconciling the prior appropriation doctrine and the Winters Doctrine. The second paper, "Introduction to Reserved Water Rights" by Ralph W. Johnson, discusses the origin of the reservation doctrine and decisions held in some of the major federal reserved water rights cases. These court cases are important to Alaska because federal reserved water rights are a judicial creation and Alaska will be bound by decisions made in courts outside our state.

The final two articles, "Reserved Instream Flows in the National Forests: Round Two", and "The New Rules for National Forest Water" address federal reserved water rights on national forests. These articles are pertinent to Alaska because of the two national forests in Alaska, the Tongass and the Chugach, which are the two largest in the country. These reserved water rights will eventually be adjudicated.

A unique feature affecting federal reserve water rights in Alaska is that so much of Alaska's water resources are undeveloped and unappropriated. Thus, unlike the other western states, federal agencies in Alaska may encounter little competition for their water needs. For this reason, we may find that the courts in Alaska may be more lenient in adjudicating federal reserved water rights for the amounts claimed by the federal government. The state's challenge will be to persuade the courts to apply the same standards in Alaska that have been applied outside--granting the minimum amount of water needed for the primary purposes of the land reservation. This is important to ensure that developable water resources are available for the continued growth and development our state.

In summary, under the State's system of allocating water rights based on prior appropriation, there is no way that dealing with federal reserved water rights can be avoided. We will either adjudicate through state courts, through the Legislature and Congress (state-federal compact), or in federal court -- those are the choices as we see them. Adjudication in state court using the procedures that would be provided by enactment of SB 150 is most likely the least expensive alternative.

I hope you find these articles enlightening. Please contact us if we may provide more information to you on these subjects.

Sincerely,

Tom Hawkins

Tom Hawkins
Director

Enclosures

cc: Esther C. Wunnicke
Mike Frank
Laura Davis

Alaska State Legislature

ARLISS STURGULEWSKI, Chairman
BETTYE FAHRENKAMP, Vice Chairman
JACK COGHILL
DICK ELIASON
VIC FISCHER
RICK HALFORD
FRED ZHAROFF

POUCH V
JUNEAU, ALASKA. 99811
(907) 465-4907

Senate
Committee on Resources

M E M O R A N D U M January 21, 1986

TO; All Members
Senate Resources Committee

FROM; Staff
Senate Resources Committee

RE; SB 150 "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

SB 150 establishes procedures for the administrative adjudication of water rights in Alaska and makes miscellaneous amendments to the Alaska Water Use Act (AS 46.15).

Section 1 adds a disclaimer to the Water Use Act asserting that a right to appropriate water is not a state guarantee of a particular water quality, volume or pressure, or that water may be withdrawn at a particular cost.

Section 2 adds a new subsection setting out procedures for handling water right declarations existing before 1966.

Section 3 clarifies the existing abandonment and forfeiture provisions.

Section 4 clarifies how the commissioner may terminate an instream flow reservation.

Section 5 allows the Commissioner to initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a particular hydrologic basin.

Section 6 clarifies the enforcement authority of the Department of Natural Resources.

This bill was heard last session. During the interim the Department of Natural Resources chaired the Federal Reserve Water Rights Work Group, and based on those meetings has suggested several amendments which are included in the proposed committee substitute. In addition, amendments are included from the Alaska Water Resources Board and from Tom Meacham, a member of the Alaska Water Resources Board, whose amendments were concurred in by the Commissioner of Natural Resources.

Enclosures:

Feb. 12, 85	Transmittal letter from Governor
Jan. 31, 85	Fiscal Note
Mar. 04, 84	Resolution from Alaska Water Resources Board
Mar. 14, 85	Letter of support from AWRB with amendments
Mar. 12, 85	Letter from Thomas Meacham with amendments
Mar. 19, 85	Letter from DNR supporting Meacham letter
Apr. 03, 85	Letter from DNR explaining fiscal note
Apr. 10, 85	Letter from Tom Meacham supporting SB 150
Apr. 12, 85	Letter from Rose Rybachek opposing sect. 1-4
Oct. 09, 85	Letter from DNR with further data
Jan. 09, 86	Letter from DNR with amendments
	Excerpt from Western Energy Newsletter
	DNR Fact Sheet - Water Rights in Alaska
	DNR Fact Sheet - Federal Reserve Water Rights
	DNR Fact Sheet - Reserving Water for Instream Use

Alaska State Legislature

ARLISS STURGULEWSKI, Chairman
BETTYE FAHRENKAMP, Vice Chairman
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Senate
Committee on Resources

M E M O R A N D U M January 27, 1986

TO: All Members
Senate Resources Committee

FROM: Staff, Senate Resources Committee

RE: CSSB 150

Based on the SRC recommendation of January 22, 1986, the following amendments were prepared for CSSB 150:

1) AS 46.15.040 is amended to clarify that this section does not preclude actions against the state or later appropriators.

2) AS 46.15.165(c) is amended to add that all mining claimants be served notice. This amendment will be subsection 7.

3) AS 46.15.165(c)(6) is also amended to clarify that land under ANCSA means selected and conveyed.

4) AS 46.15.165(c)(3) is amended to clarify that holders of Native allotments are notified including those government agencies holding allotments in trust.

Two other items that were discussed are:

1) Line 27 page 4 states that a person must respond in a timely manner. No amendment is offered here because this section will require the adoption of regulations, and these regulations will be the subject of public hearings. It is felt that the public hearing process will provide opportunity for the determination of the appropriate time frame.

2) Concern was raised that AS 46.15.140(a) might be cause for some appropriators to lose their water rights. Section (b) clarified that water rights can only be forfeited if an appropriator voluntarily fails or neglects to make use of water. As it is now written, this failure has to be for a period of five years before the commissioner can declare water rights abandoned. The legal advice is that a person must walk away from a water right without any intent to return before it can be considered abandoned.

Enclosures:
Letter from AWRB supporting CS
Letter from Dept. of Fish and Game supporting CS

JAN 24 1986

ALASKA WATER RESOURCES BOARD
P.O. BOX 2234
JUNEAU, ALASKA 99803

January 24, 1986

Honorable Arliss Sturgulewski
Chairman, Senate Resources Committee
Pouch V
Juneau, Alaska 99811

RE: Committee Substitute for SB 150 Testimony

Dear Senator Sturgulewski:

Senator Fahrenkamp asked if the Water Resources Board had been polled and if the majority supported the testimony in favor of the Committee Substitute for SB 150 that I gave on January 22, 1986. I indicated that all but one member had been polled by phone and all but that one member supported the testimony and the Committee Substitute.

Since that testimony the one member who was not available called and discussed the Committee Substitute with me. I am pleased to confirm in writing that all of the voting members of the Alaska Water Resources Board supports the testimony and the Committee Substitute.

Respectfully,

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman
Alaska Water Resources Board

cc: Alaska Water Resources Board

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 3-2000
JUNEAU, ALASKA 99802
PHONE: 907 / 465-4100

JAN 24 1986

January 23, 1986

The Honorable Arliss Sturgulewski
Alaska State Legislature
P. O. Box V
Juneau, AK 99811

Dear Senator Sturgulewski:

The Department of Fish and Game supports the January 20 version of Senate Bill 150, which will allow the state to adjudicate Federal Reserved Water Rights.

The adjudication process permits the state to ensure that proper consideration is given to reserving adequate water supplies for fish and wildlife when Federal Reserved Water Rights allocations are determined administratively or through the state court system.

As you may know, we have been working with the State/Federal Federal Reserved Water Rights Work Group to incorporate our input into this legislation.

We believe there is a critical need for this legislation and we urge you to support it.

If you have any questions pertaining to our comments, please do not hesitate to contact me.

Sincerely,

Don W. Collinsworth
Commissioner

cc: Commissioner E. Wunnicke, ADNR
Chairman C. Wanamaker, Alaska Water Board

11-K11LH

BILL SHEFFIELD
GOVERNOR

SB. 50

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

2/12/85

The Honorable Don Bennett
President of the Senate
Alaska State Legislature
Pouch V
Juneau, AK 99811

Dear Senator Bennett:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the adjudication of water rights and making miscellaneous amendments to the Alaska Water Use Act (AS 46.15). The bill comes as a result of the Alaska Water Resources Board resolution 84-5, dated March 14, 1984, recommending the adoption of specific statutory procedures for the administrative and judicial adjudication of water rights, particularly federal reserved water rights.

A federal reserved water right is one created by implication when the federal government withdraws land for a specific purpose, such as for a national forest, Indian reservation, or national monument. The United States Supreme Court first recognized federal reserved water rights in Winters v. United States, 207 U.S. 564 (1908), an Indian reservation case. Since that time, court cases have extended the doctrine to many other types of federal withdrawals. Since a federal reserved water right is created by implication, no specific quantity of water and no priority date for the water right is established until the court does so by decree. To facilitate the ascertainment of the existence of a federal reserved water right, its quantity, and its priority date, Congress passed the McCarran Amendment, 43 U.S.C. sec. 666, allowing water adjudication suits to be brought against the federal government in state courts. The statute requires the adjudication of all rights within a hydrologic basin where a federal reserved water right may exist. This has created lawsuits involving literally thousands of defendants in some of the western states, where there are many appropriators and not enough water. The complexity and expense of such litigation has prompted many western states to enact specific adjudication legislation to facilitate the determination of water rights. The attached bill accord-

ingly draws from the experience of other states and their adjudication statutory schemes.

Section 1 of the bill amends AS 46.15.040 to add a disclaimer to the Water Use Act, asserting that a right to appropriate water which the state grants is not a state guarantee of a particular water quality, volume, or pressure, or that water may be withdrawn at a particular cost. Appropriators in adjudications in other western states have raised this "guarantee" argument. While courts that have reached the issue have rejected the argument, nonetheless it would serve the expeditious resolution of water disputes in Alaska if the lack of guarantee were specified in the Water Use Act.

Section 2 of the bill adds a new subsection to AS 46.15.065, the current statute setting out the procedures for handling individual declarations of water rights existing before July 1, 1966. Under AS 46.15.065(b)(1), the commissioner of natural resources set the deadline for filing those declarations, and approximately 15 are pending. This new subsection makes clear the relationship between the procedures for handling those declarations and the proposed procedures (AS 46.15.165 and 46.15.166 in the bill) for handling basinwide water rights adjudications.

Section 3 of the bill amends AS 46.15.140 to clarify the existing abandonment and forfeiture provisions and to create a rebuttable presumption that if an appropriator does not beneficially use the water covered under a certificate for a period of five successive years, it is the appropriator's obligation to prove to the commissioner that the appropriation has not been abandoned.

Section 4 of the bill clarifies how the commissioner may terminate an in-stream flow reservation.

Section 5 contains the body of the adjudication provisions. It first creates a new AS 46.15.165, which would allow the commissioner of the Department of Natural Resources to initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a particular hydrologic basin. Under AS 46.15.165, the commissioner would give notice to all relevant appropriators and landowners, including governmental agencies. When the hydrologic basin includes land or water held in trust by the United States for Alaska Natives, such as the Annette Island Reserve, notice would also be sent to relevant authorities in order to protect the Natives' interests, if any, in a federal reserved

water right. A person or entity claiming a federal reserved water right who is served with notice, but who fails to consent to an administrative adjudication, would be excluded as a participant. Under AS 46.15.165 the commissioner would have authority to adopt procedural regulations and to appoint a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; and to make recommendations to the commissioner. Any final determination of water rights the commissioner makes would be subject to an administrative appeal to superior court. Section 5 also creates a new AS 46.15.166 providing that when a federal reserved water right may be involved, and the claimant refuses to consent to an administrative adjudication, the commissioner could initiate the adjudication in superior court, consistent with the McCarran Amendment, 43 U.S.C. sec. 666. In that instance, the bill gives the superior court authority to appoint a designee of the commissioner as a master to perform the same functions a master would in an administrative adjudication, but under the court's supervision.

While the design of the adjudication bill is to provide a procedure for the adjudication of both non-federal and federal reserved water rights, a new AS 46.15.169 makes clear that nothing in the Alaska Water Use Act is to be construed as an admission against the State of Alaska that a federal reserved water right exists in any particular context.

Section 6 of the bill adds a new AS 46.15.255 and 46.15.256, to clarify the Department of Natural Resources' authority to take action to remove unsafe, as well as unpermitted, works of appropriation if the appropriator refuses to do so, and to inspect records of an appropriator pertinent to the permitted or certificated use of water under the Water Use Act.

Given the experience of states other than Alaska in adjudicating water rights and the large number of federal reservations in Alaska, a sound statutory system for adjudication is imperative. Therefore, I urge your prompt action on this bill.

Sincerely,

Bill Sheffield
Governor

STATE OF ALASKA 1985 LEGISLATIVE SESSION

FISCAL NOTE

Revision Date:

REQUEST

Bill/~~Resolution~~ No.: SB 150

Title: Water Use Act

Sponsor:

Requestor:

Date of Request:

FISCAL DETAIL

Agency Affected: Natural Resources

Program Category Affected: NRMEC

BRU, Program or Subprogram(s) Affected:

Land and Water Management

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90
OPERATING						
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 SUPPLIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS						
800 MISCELLANEOUS						
TOTAL OPERATING		-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL		-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: Attach a separate page if necessary

No fiscal impact.

Prepared By: Ned Farquhar Phone: 465-2400

Division: Commissioner's Office Date: January 31, 1985

Approved by Commissioner: Date: January 31, 1985

Agency: Natural Resources

Distribution (by Agency preparing fiscal note):

Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

7/1/84

Resolution No. 84-5

FEDERAL RESERVE WATER RIGHTS —
BASIN-WIDE ADJUDICATION

The federal government is vested with reserved water rights on numerous federal land withdrawals in Alaska. Federal legislation establishing the reserves specifies the purposes of the reserved water rights and the enacting date establishes their priority date. These water rights include both diversionary and instream uses.

Of the 367.7 million acres in Alaska, federal reserve water rights exist on almost 60 percent of the land mass or over 215 million acres. From a miniscule 2.5 million acres of military land, to 50 and 75 million acres of land for national parks and fish and wildlife refuges respectively, federal reserve water rights issues and problems have the potential to be large as well as complex.

In order for DNR to adequately manage the state's water and adjudicate water rights, it will ultimately be desirable to integrate federal reserved water rights with state adjudicated water rights. The federal government has indicated it will await requests from the states before initiating quantification of federal reserved water rights. Adjudication of claimed federal reserved water rights must be undertaken pursuant to the requirements of the McCarran Amendment (43 USC 666(a)) which requires that the adjudication be basin-wide and judicially determined. The Water Use Act, AS 46.15 does not specifically provide for basinwide court adjudication for federal reserved water rights.

THE ALASKA WATER RESOURCES BOARD, therefore, urges that the Commissioner of the Department of Natural Resources propose legislation for basin-wide adjudication. Current statutes and regulations may be adequate to initiate a basinwide adjudication of federal reserved rights using a declaratory judgement suit in Superior Court. However, more explicit statutes are needed to establish the Superior Court's duties and responsibilities and to set the limits of the Court's authority. This type of case has not previously occurred in Alaska. In addition, the Department of Natural Resources should review existing provisions of the Water Use Act and propose any needed amendments to improve and update the Act

ADOPTED this 14th day of March, 1984

ALASKA WATER RESOURCES BOARD

David Vanderbrink

David Vanderbrink, Chairman

THE *WINTERS* OF OUR DISCONTENT: FEDERAL RESERVED WATER RIGHTS IN THE WESTERN STATES

INTRODUCTION

Water is the life-blood of the American West. Like other people, westerners need water for basic human sustenance and for a variety of other purposes. But unlike most other Americans, westerners must fill their needs from an extremely limited supply of water.[1] As a result, westerners face a problem that may seem incomprehensible to nonwesterners who live in areas with abundant water supplies: they must decide how to allocate the limited quantity of available water among all the users and uses.

To deal with this problem, the western states[2] developed the doctrine of prior appropriation as a basic scheme for allocating the available surface water among various users.[3] This prior appropriation system, based on continued beneficial use of appropriated water and strict quantification of the rights of users,[4] insists that water may not be wasted or go unused. In the land-rich and water-poor West, any other system would probably be wasteful and inefficient.[5]

Through application of the prior appropriation doctrine, the western states seek to apportion their limited water resources in a fair and

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1 The United States Water Resources Council's Second National Water Assessment graphically illustrates the critical water shortage in the western states. For example, in 1975, the Rio Grande water resources region showed 78% present streamflow depletion from all demands, and the Lower Colorado region showed 82% depletion. 2 WATER RESOURCES COUNCIL, THE NATION'S WATER RESOURCES: 1975-2000 (pt. 4), at 48 (1978). The Water Resources Council projects that 91% of the surface water in the Rio Grande region will be in use by 1985. More dramatically, the council predicts that the surface water supply in the Lower Colorado region will be overdrawn by 26% in 1985. The council summarized its concern over western water supply:

> Competing offstream uses of water for energy, agricultural, domestic, and industrial needs coupled with associated environmental and instream flow uses have resulted in basinwide and local problems throughout the United States . . . . The problem of inadequate surface-water supply is or will be severe by the year 2000 in 17 [water resources] subregions located mainly in the Midwest and Southwest.

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2 The "western" states referred to in this Note are: Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

3 *See infra* note 11 and accompanying text.

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trine and prior appropriation necessitates some acquaintance with the workings of prior appropriation systems.

The foundation of the prior appropriation doctrine is its requirement of beneficial use.[12] A user acquires an appropriative right by putting the water he claims to some beneficial use. Moreover, he loses his right if he does not continue to use his appropriated water beneficially.[13] In this respect, the appropriative rights system differs strikingly from the English common law riparian system generally employed in the eastern states. Riparian rights accrue to an owner of land adjoining a stream merely by virtue of his property ownership and thus exist independently of any use at all.[14]

Prior appropriation works by strict chronological priority. A senior appropriator, whose priority date[15] is earlier in time, may take his entire entitlement of water before a junior holder may take any water at all. In this priority system, junior holders bear the entire brunt of any shortage.[16]

All appropriative rights are determined by means of an *in rem* proceeding called a water adjudication,[17] which determines the priority

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Because appropriative rights accrue by virtue of beneficial use, they need not be appurtenant to land. *Id.* Ownership of land adjoining a stream is not considered a basis for an appropriative right. *Id.* Water obtained by appropriation may generally be used at any place, regardless of its distance from the stream, so long as the use is beneficial. *Id.*

All of the western states except Montana and Colorado impose the additional statutory requirement that the appropriator must obtain a permit from the proper state administrator before he may acquire an appropriative right. *See, e.g.,* WYO. STAT. §§ 41-4-501 to -516 (1977). For an extended discussion of these permit schemes, see 5 R. CLARK, *supra* note 11, § 409, at 99-107.

13 5 R. CLARK, *supra* note 11, §§ 413.1, 429.2.

14 The riparian system would be inappropriate as the *primary* means of allocating available water resources in the West because riparian rights do not depend on beneficial use of the water, and the West can ill afford the luxury of owned but unused stream flow. Riparian law evolved in England, where water is plentiful. The English (and the Americans living in the water-rich East) had no incentive to develop a more thrifty and efficient water use scheme. *See* McGowen, *The Development of Political Institutions on the Public Domain,* 11 WYO. L.J. 1, 14 (1956).

15 The priority date of a holder's right is usually the date on which the holder initially diverted the water. Although such an appropriation is not technically "complete" until the appropriator actually puts the water to some beneficial use, the relation back doctrine provides that if he completes the appropriation with due diligence, the appropriator's priority date is the date of the initial act of diversion. *See, e.g.,* COLO. REV. STAT. § 37-92-305(1) (1973); *see also* Ellis, *Water Rights: What They Are and How They Are Created,* 13 ROCKY MTN. MIN. L. INST. 451, 458-59 (1967); Comment, *Determining Priority of Federal Reserved Rights,* 48 COLO. L. REV. 547, 551 (1977).

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17 The western states are again split into two groups. The Colorado system, employed only by Colorado and Montana, leaves the entire process of adjudication to the courts. An appropriative claimant files a petition in state court, and all other owners or claimants are served with notice as required by statute. *See, e.g.,* COLO. REV. STAT. § 37-92-302 (1973 &

THE *WINTERS* OF OUR DISCONTENT: FEDERAL RESERVED WATER RIGHTS IN THE WESTERN STATES

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rational way. The prior appropriation doctrine conflicts, however, with the doctrine of federal reserved water rights, which the United States Supreme Court announced in *Winters v. United States.*[6] The *Winters* doctrine provides that in reserving public land for a federal enclave such as an Indian reservation, national forest, or military reservation, the federal government also implicitly reserves a sufficient quantity of water to carry out the purpose of the reservation of land.[7] Federal reserved rights exist independently of beneficial use or quantification; they are therefore fundamentally different in character from rights established by prior appropriation.

From 1908 through the 1970s, the Supreme Court expanded the scope of the *Winters* doctrine of federal reserved rights, thereby aggravating the inherent conflict between appropriative rights and reserved rights.[8] More recently, however, the Court has attempted to ease the conflict by narrowly defining the *Winters* doctrine's scope.[9] Both reserved rights and prior appropriation serve important purposes, and therefore both doctrines, and their conflict, will persist.[10] By strictly defining federal reserved rights to make them mesh as smoothly as possible with the water law systems of the various states, the Court's well-directed efforts to harmonize the two doctrines can ease the tension between the *Winters* doctrine and the prior appropriation doctrine.

I
BACKGROUND

A. Water Rights in the Western States: The Doctrine of Prior Appropriation

The doctrine of prior appropriation provides the basic framework for the statutory water use schemes of the western states.[11] A complete understanding of the conflict between the federal reserved rights doc-

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6 207 U.S. 564 (1908).

7 *See infra* notes 23-25 and accompanying text.

8 *See infra* notes 20-57 and accompanying text.

9 *See infra* notes 58-96 and accompanying text.

10 *See infra* note 122 and accompanying text.

11 The western states can be divided into two doctrinal categories: the Colorado doctrine states and the California doctrine states. The nine Colorado doctrine states (Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming) recognize only appropriative rights to surface water. 5 R. CLARK, WATERS AND WATER RIGHTS § 405, at 50 (1972). The nine California doctrine states (California, Kansas, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Texas, and Washington) recognize some riparian rights as well as appropriative rights to surface water. *Id.* § 420, at 232.

The statutory water law systems in the West vary considerably from state to state. A detailed examination of these different systems is beyond the scope of this Note. For a thorough comparative discussion, see *id.* §§ 400-33.

For a basic discussion of the riparian system, see 7 R. CLARK, WATERS AND WATER RIGHTS § 610, at 28 (1976).

trine and prior appropriation necessitates some acquaintance with the workings of prior appropriation systems.

The foundation of the prior appropriation doctrine is its requirement of beneficial use.[12] A user acquires an appropriative right by putting the water he claims to some beneficial use. Moreover, he loses his right if he does not continue to use his appropriated water beneficially.[13] In this respect, the appropriative rights system differs strikingly from the English common law riparian system generally employed in the eastern states. Riparian rights accrue to an owner of land adjoining a stream merely by virtue of his property ownership and thus exist independently of any use at all.[14]

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14 The riparian system would be inappropriate as the *primary* means of allocating available water resources in the West because riparian rights do not depend on beneficial use of the water, and the West can ill afford the luxury of owned but unused stream flow. Riparian law evolved in England, where water is plentiful. The English (and the Americans living in the water-rich East) had no incentive to develop a more thrifty and efficient water use scheme. *See* McGowen, *The Development of Political Institutions on the Public Domain,* 11 WYO. L.J. 1, 14 (1956).

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17 The western states are again split into two groups. The Colorado system, employed only by Colorado and Montana, leaves the entire process of adjudication to the courts. An appropriative claimant files a petition in state court, and all other owners or claimants are served with notice as required by statute. *See, e.g.,* COLO. REV. STAT. § 37-92-302 (1973 &

rights of the appropriators participating in the hearing as against the entire world. A water adjudication strictly quantifies a holder's rights and limits his entitlement to his original appropriation, unless he either claims further amounts of unappropriated water or purchases the rights of another appropriator.[18]

Principles of strict quantification and rigid control underlie the prior appropriation systems employed by the western states. Federal reserved water rights, on the other hand, are usually awarded without quantification and may exist independent of any use. Thus, when federal reserved rights are imposed upon these appropriative water use schemes, fundamental incongruities appear.[19]

B. The Development of the *Winters* Doctrine of Federal Reserved Rights

1. *Expansion of the Reserved Rights Doctrine: From* Winters *to* Cappaert

From 1908 through the 1970s, the United States Supreme Court steadily expanded the scope of the *Winters* doctrine of federal reserved water rights.[20] By nature, federal reserved rights differ fundamentally from appropriative rights established under state law.[21] The Court's expansive application of the reserved rights doctrine during this period aggravated this inherent conflict between the two types of water rights.[22]

The Supreme Court first announced the doctrine of federal reserved water rights in the 1908 case of *Winters v. United States*.[23] In 1888, one year before Congress admitted Montana to the Union, it established by treaty the Fort Belknap Indian Reservation in the Montana Territory. Winters and others sought to dam the Milk River, which flows

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Supp. 1983). Each participant is responsible for producing his own evidence at trial to protect or establish his water right. Ellis, *supra* note 15, at 462.

The other states, which employ permit systems, *see supra* note 12, use the New Mexico system of adjudication. This system also involves the courts, but the state engineer's office makes an initial determination of fact as to the rights of the parties. *See, e.g.*, ARIZ. REV. STAT. ANN. § 45-257 (Supp. 1983). This determination is then subject to challenge by the parties at the adjudication. Ellis, *supra* note 15, at 462.

18 Only a small amount of unappropriated water remains in the West. Many streams are overappropriated, which means that the aggregate quantity of all the water rights claimed from the stream exceeds the actual stream flow. *See supra* note 1 and accompanying text; Comment, *supra* note 15, at 551 n.26. Junior holders unable to draw water must wait until stream flow increases or until senior holders relinquish their rights. *See id.* at 551-52 & n.26.

19 *See infra* notes 102-15 and accompanying text.

20 *See infra* notes 23-57 and accompanying text.

21 *See infra* notes 102-15 and accompanying text.

22 *See infra* notes 116-20 and accompanying text.

23 207 U.S. 564 (1908).

through the Fort Belknap reservation.[24] The Court recognized the conflicting inferences arising from the treaty's silence as to the Indians' water rights; nonetheless, the Court held that the treaty had *implicitly* reserved a sufficient quantity of water for the Indians to irrigate their land.[25]

In *Federal Power Commission v. Oregon (Pelton Dam),*[26] to the astonishment of western water lawyers,[27] the Court indicated that the *Winters* doctrine might extend to non-Indian federal lands.[28] In *Pelton Dam,* the Federal Power Commission issued a license to the Northwest Power Supply Company, allowing it to build the Pelton Dam on the Deschutes River in Oregon. One terminus of the dam was to be on federal Indian land, and the other terminus was to be on federal non-Indian land.[29] The state of Oregon argued that under the Desert Land Act of 1877,[30] which requires the federal government to obtain water rights for federal lands in accordance with state law,[31] the state must give its consent before the dam could be built.[32] The Court distinguished between *public* lands, which belong to the federal government because no one has yet claimed them, and *reserved* lands, which the federal government has withdrawn from the public realm and which are no longer subject to private appropriation or disposal.[33] The Court then held that the Desert Land Act of 1877 applied only to *public* lands, and not to *reserved* lands.[34] Therefore, the sponsors of the Pelton Dam project did not need the permission of the state of Oregon to build the dam.[35] The Court

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24 *Id.* at 565.

25 *Id.* at 576-77. The Court declared that "[t]he power of the Government to reserve the waters and exempt them from appropriation under the state laws is not denied, and could not be. . . . That the Government did reserve them we have decided, and for a use which would be necessarily continued through years." *Id.* at 577 (citations omitted). The Court also held that Montana's subsequent admission to the Union had no effect on the treaty's implicit reservation of water. *Id.*

26 349 U.S. 435 (1955).

27 *See, e.g.,* Trelease, *Federal Reserved Water Rights Since PLLRC,* 54 DEN. L.J. 473 (1977). Professor Trelease was a practicing water lawyer when the Court decided *Pelton Dam* and his comments indicate the general chaos caused by the decision:

> At no time prior to 1955 did I ever hear a suggestion that the reserved rights doctrine was anything but a special quirk of Indian water law.
>
> . . . .
>
> This case was a real bombshell, and it certainly lit a fire under western water lawyers. . . . [A] number of western state water officials and others raised a chorus of protest at this reversal of what they had always thought to be the law.

Id. at 475-77 (footnotes omitted).

28 *Pelton Dam,* 349 U.S. at 448.

29 *Id.* at 437-38.

30 43 U.S.C. §§ 321-39 (1976).

31 *Pelton Dam,* 349 U.S. at 448.

32 *Id.* at 446-47.

33 *Id.* at 443-44.

34 *Id.* at 446-48.

35 *Id.* at 452.

thus implied that federal reserved lands, both Indian and non-Indian, are not subject to state water law.[36]

The Court explicitly extended the *Winters* doctrine to non-Indian federal reservations in *Arizona v. California* (*Arizona I*).[37] *Arizona I* began as a dispute among several western states over each state's share of the waters of the Colorado River.[38] The United States intervened to protect its claims to water for five Indian reservations and several wildlife refuges, recreational areas, and national forests.[39] Writing for the Court, Justice Black declared that the federal government, through Congress and the executive,[40] had implicitly reserved a sufficient quantity of water to accommodate the purposes of the Indian reservations and the non-Indian federal lands.[41] Thus, the Court not only reaffirmed the viability of the reserved rights doctrine, but also expanded the doctrine's scope by applying it to non-Indian federal lands.

In *Arizona I,* the Court also questioned whether the special master appointed to the case correctly determined the quantity of water that the government intended to reserve for the federal enclaves.[42] In earlier reserved rights cases, the Court had not closely examined what quantity of water was necessary to satisfy the purposes of the reservations, perhaps because those purposes were clearly limited. Furthermore, in examining the purposes of the reservation, the Court seemed to stress the present purposes.[43] In *Arizona I,* however, the Court noted that the water set aside for the Indian reservations "was intended to satisfy the *future* as well as the present needs of the Indian Reservations and . . . that enough water was reserved to irrigate all the practicably irrigable acreage on the reservations."[44] The Court's language could mean that the "purpose" of a federal reservation might be expanded; thus, the

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36 *Id.* at 448. The Court noted that:

> The lands before us in this case are not "public lands" but "reservations." Even without [the] express restriction of the Desert Land Act to sources of water supply on public lands, these Acts would not apply to reserved lands. . . . [I]t is enough . . . to recognize that these Acts do not apply to this license, which relates only to the use of waters on *reservations* of the United States.

Id. (emphasis added).

37 373 U.S. 546 (1963).

38 *Id.* at 550-51 (the states involved were Arizona, California, Nevada, New Mexico, and Utah).

39 *Id.* at 551 n.3, 595.

40 *Id.* at 598. The Court had not previously had occasion to decide whether the executive could create a *Winters* right.

41 *Id.* at 600-01.

42 *Id.*

43 *See, e.g.*, United States v. Powers, 305 U.S. 527 (1939) (Indians and their successors in interest needed water for irrigation of limited acreage); Winters v. United States, 207 U.S. 564 (1908).

44 *Arizona I*, 373 U.S. at 600 (emphasis added).

quantity of the water guaranteed by the *Winters* right might also be increased.

The Court next addressed the reserved rights doctrine in the case of *United States v. District Court in and for the County of Eagle* (*Eagle County*).[45] In that case, the Court first showed concern with the federal-state tensions generated by judicial recognition of *Winters* rights. At issue was the scope of the McCarran Amendment,[46] which provides for a limited waiver of the United States' sovereign immunity in water rights adjudication.[47] The amendment allows the United States to be joined as a party defendant in state water adjudications, but in *Eagle County,* the government contended that this waiver of sovereign immunity applied only to water rights acquired under state law and not to reserved water rights.[48] Writing for a unanimous Court, Justice Douglas stated that the McCarran Amendment was an "all-inclusive statute" which made no exception for reserved rights and that the waiver of sovereign immunity therefore applied to federal reserved rights as well as nonreserved rights.[49] This case made the United States amenable to suit in *state* water adjudications and thus marked the Court's first step toward allowing the states to determine federal reserved water rights.

The Court again addressed the question of jurisdiction over reserved rights in *Colorado River Water Conservation District v. United States* (*Colorado River*).[50] The United States filed suit in federal district court in Colorado seeking a declaration of all reserved rights held by the federal government, in its own right and as a fiduciary for certain Indian tribes, in the San Juan River Basin.[51] The government named as defendants private irrigators who presumably would claim appropriative rights to the same water.[52] Several Colorado water conservation districts then intervened as defendants. One defendant subsequently filed suit in Colorado state court seeking adjudication of the same rights[53] and joined the United States as a defendant under the McCarran Amendment.[54]

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45 401 U.S. 520 (1971).

46 43 U.S.C. § 666 (1976) (also known as the McCarran Water Rights Suits Act).

47 The McCarran Amendment, 43 U.S.C. § 666 (1976), provides in part:

> Consent is given to join the United States as a defendant in any suit (1) for the adjudication of rights to the use of water of a river system or other source, or (2) for the administration of such rights, where it appears that the United States is the owner of or is in the process of acquiring water rights by appropriation under State law, by purchase, by exchange, or otherwise, and the United States is a necessary party to such suit.

See also infra note 96.

48 *Eagle County*, 406 U.S. at 523-24.

49 *Id.* at 524.

50 424 U.S. 800 (1976).

51 *Id.* at 805.

52 *Id.*

53 *Id.* at 806.

54 *Id.*

The water conservation districts then moved to dismiss the federal action, arguing that the McCarran Amendment vested the state courts with exclusive jurisdiction to determine the reserved rights of the United States.[55]

The Supreme Court held that the McCarran Amendment merely created *concurrent* jurisdiction in the state courts to determine federal water rights and did not divest the federal courts of jurisdiction.[56] Nevertheless, the Court held that dismissal of the federal proceeding was proper. The Court reasoned that if the state has a comprehensive system for water rights adjudication, federal water rights are more appropriately determined in state court for reasons of judicial efficiency and expertise.[57] The *Colorado River* doctrine thus creates a presumption that when both federal and state actions are pending for adjudication of federal reserved water rights, the federal action should be dismissed.[58]

Later in the same Term, the Court decided *Cappaert v. United States.*[59] The dispute in *Cappaert* centered on a pool of water, located fifty feet down inside a huge cavern that the President had reserved in 1952 as the Devil's Hole National Monument.[60] This pool was fed by groundwater and was the only known habitat of a rare species of desert fish known as the Devil's Hole pupfish.[61] In 1968, the Cappaerts, owners of a nearby ranch, began pumping groundwater from the same aquifer that fed the pool.[62] As a result of the Cappaerts' extensive pumping, the water level in the pool dropped, endangering the pupfish.[63] The United States filed suit seeking an injunction to limit the Cappaerts' pumping to an amount that would save the pupfish from extinction.[64] The Supreme Court unanimously decided for the pupfish and affirmed the modified injunction.[65]

Two aspects of Chief Justice Burger's opinion in *Cappaert* are noteworthy. First, although the Court's narrow holding sustained a *Winters* right, the opinion announced a "minimal need" standard for determin-

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55 *Id.*

56 *Id.* at 807-09.

57 *Id.* The Court noted that "[t]he clear federal policy evinced by [the McCarran Amendment] is the avoi 'ance of piecemeal adjudication of water rights in a river system." *Id.* at 819. The Court further recognized "the availability of comprehensive state systems for adjudication of water rights as the means for achieving these goals." *Id.*

58 *Id.* at 818-20.

59 426 U.S. 128 (1976).

60 *Id.* at 131 & n.1.

61 *Id.* at 132.

62 *Id.* at 133.

63 *Id.* at 133-34.

64 *Id.* at 135.

65 The district court permanently enjoined Cappaert from lowering the water level of the pool below 3.0 feet, but the court of appeals modified the injunction to allow the Cappaerts to pump as long as the water level did not drop below 3.3 feet. *Id.* at 137 n.3, 138.

ing the quantity of water reserved by the federal government.[66] Second, the Court had a clear opportunity to extend the *Winters* doctrine to groundwater but refused to do so.[67] The *Cappaert* case thus marked a turning point in the Court's reserved rights jurisprudence.

2. *Narrowing the Scope of the* Winters *Doctrine: Reserved Rights after* Cappaert

In 1978, the Supreme Court decided *United States v. New Mexico (Mimbres)*.[68] At issue was the Rio Mimbres, which originates in the

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66 *Id.* at 141. Chief Justice Burger noted that:

> The implied-reservation-of-water-rights doctrine . . . reserves only that amount of water *necessary* to fulfill the purpose of the reservation, no more . . . . Devil's Hole was reserved "for the preservation of the unusual features of the scenic, scientific, and educational interest." . . . The pool need only be preserved . . . to the extent necessary to preserve its scientific interest . . . . Thus . . . the level of the pool may be permitted to drop to the extent that the drop does not impair the scientific value of the pool. . . . The District Court thus tailored its injunction, very appropriately, to *minimal need*. . . .

Id. (emphasis added) (citation omitted) (quoting the presidential proclamation that established the national monument).

67 The Ninth Circuit had explicitly held below that the *Winters* doctrine applied to groundwater as well as to surface water. United States v. Cappaert, 508 F.2d 313, 317 (9th Cir. 1974), *aff'd*, 426 U.S. 128 (1976).

The Supreme Court essentially evaded this issue by dealing with it ambiguously:

> No cases of this Court have applied the doctrine of implied reservation of water rights to groundwater . . . . Here, however, the water in the pool is surface water. The federal water rights were being depleted because . . . the "[g]roundwater and surface water are physically interrelated as integral parts of the hydrologic cycle" . . . . [S]ince the implied-reservation-of-water-rights doctrine is based on the necessity of water for the purpose of the federal reservation, we hold that the United States can protect its water from subsequent diversion, whether the *diversion* is of surface or ground water.

426 U.S. at 142-43 (emphasis added) (citations and footnote omitted).

68 438 U.S. 696 (1978). On the same day, Justice Rehnquist, the author of the *Mimbres* majority opinion, also announced the opinion of the Court in California v. United States (*New Melones Dam*), 438 U.S. 645 (1978). In *New Melones Dam*, the United States applied to the state of California for permits to appropriate water for the New Melones Dam, a new reclamation project on the Stanislaus River. *Id.* at 651-52. California issued the permits but limited the amount of water that the project could impound. *Id.* at 652-53. The federal government then sought a declaratory judgment in federal district court to allow the United States to impound all of the previously unappropriated water it needed for the project without obtaining state permission. *Id.* at 647. The district court held that, as a matter of comity, the federal government should seek a permit from California, but that California should unconditionally grant the permit if sufficient unappropriated water existed. *Id.* The Ninth Circuit affirmed but held that § 8 of the Reclamation Act of 1902, 43 U.S.C. §§ 372, 383 (1976), compelled the federal government to seek state approval before making the appropriation. *Id.*

Although *New Melones Dam* did not deal directly with the doctrine of federal reserved rights, it did shed some light on the relationship between the western states and the federal government in the area of water law. The Supreme Court held that § 8 of the Reclamation Act of 1902 requires the United States to acquire its appropriative rights to water for projects in accordance with state law, even if the state imposes conditions upon the water's use. *Id.* at 665-75. This holding gave the states great control over federal reclamation projects, illustrating the Court's newfound concern for the states interest in controlling the water within their

Gila National Forest in New Mexico and flows through private land before "disappearing in a desert sink just north of the Mexican border."[69] The state of New Mexico initiated a general adjudication of water rights in the Rio Mimbres.[70] The United States was joined as a party because it claimed *Winters* rights to the Rio Mimbres for use in the Gila National Forest.[71] Justice Rehnquist, writing for a majority of five justices, affirmed the "minimal need" standard set forth in *Cappaert*[72] and scrutinized the government's proposed uses for the water.[73] Contrary to its decision in *Arizona I*,[74] the Court held that national forests exist for only two purposes: to preserve a supply of timber and to protect and maintain adequate water flow.[75] Therefore, the government's reservation of water from the Rio Mimbres could not exceed the amount necessary to accomplish these two purposes. The general tenor of the *Mimbres* opinion is quite unsympathetic to the government's *Winters* rights claims.[76]

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borders. *See* Winston, *Reborn Federalism in Western Water Law: The* New Melones Dam *Decison*, 30 HASTINGS L.J. 1645, 1672-73 (1979).

69 *Mimbres*, 438 U.S. at 697.

70 *Id.* at 697 & n.1.

71 *Id* at 697-98. The United States was joined pursuant to the McCarran Amendment, 43 U.S.C. § 666 (1976). 438 U.S. at 697 n.1; *see supra* note 47 and accompanying text.

72 438 U.S. at 699-700; *see supra* note 66 and accompanying text.

73 438 U.S. at 698-718.

74 The Court in *Arizona I* expressly adopted the special master's conclusion that the national forests are reserved for five purposes. Arizona v. California, 373 U.S. 546, 595 (1963). The special master found that the national forests exist for: "(1) the protection of watersheds and the maintenance of natural flow in streams below the sheds; (2) production of timber; (3) production of forage for domestic animals; (4) protection and propagation of wildlife; and (5) recreation for the general public." Note, United States v. New Mexico: *The Beginning of a Trend Toward Favoring State Water Rights over Federal Water Rights*, 9 N.M.L. REV. 361, 364 (1979) (quoting Special Master Report at 96, Arizona v. California, 373 U.S. 546 (1963)).

75 *Mimbres*, 438 U.S. at 705-13. The United States Forest Service's enabling act, the Organic Administration Act of 1897, 16 U.S.C. §§ 473-78, 479-82, 551 (1982), provides in part: "No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber . . . ." *Id.* § 475. In *Mimbres* the government argued that the Act established national forests for three purposes: to preserve a supply of timber, to protect water flow, and additionally to improve and protect the forest in general. 438 U.S. at 707 n.14. This third objective would be accomplished by reserving "minimum instream flows for aesthetic, recreational, and fish-preservation purposes." *Id.* at 705. The Court, construing the Act narrowly, however, recognized only the first two purposes: "Forests [will] be created only 'to improve and protect the forest within the boundaries,' or, *in other words*, 'for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber.'" *Id.* at 707 n.14 (emphasis in original) (quoting 16 U.S.C. § 475 (1982)). The Court's restrictive reading of the Act is certainly plausible, but persuasive arguments can be made from the legislative history of the Act in support of the government's reading. *See, e.g.*, Note, *Water Rights and National Forests—Narrowing the Implied Reservation Doctrine:* United States v. New Mexico, 40 OHIO ST. L.J. 729, 743-47 (1979); Note, *Reserved Water Rights on National Forests After* United States v. New Mexico, 1979 UTAH L. REV. 609, 617-24.

76 Professor Trelease's comments on the *Mimbres* case are illustrative:

> [The Court] emphasized that the quantities allowed would be limited to "only that amount of water necessary to fulfill the purpose of the reservation,

that a *Winters* right, once quantified, cannot be increased. In 1913, the United States instituted an action to adjudicate the reserved rights of the Pyramid Lake Indian Reservation and the planned Newlands Reclamation Project. These rights were finally quantified in a 1944 consent decree.[83] The United States sued again in 1973 to obtain additional rights for both federal enclaves.[84] Justice Rehnquist, speaking for a unanimous Court, invoked res judicata to bar relitigation of the United States' reserved rights.[85]

The Court's most recent decision in the area of federal reserved rights, *Arizona v. San Carlos Apache Tribe of Arizona (San Carlos Apache),*[86] is essentially a sequel to *Colorado River.*[87] Several water rights claimants initiated general water adjudications in Arizona state courts in the mid-1970s.[88] The United States, on behalf of itself and various Indian tribes, was joined as a defendant.[89] Later, some of the Indian tribes whose rights were implicated in the state proceedings removed the state court actions to federal court and sought declaratory and injunctive relief to block further adjudication of their reserved rights in state court.[90] The federal district court, relying on *Colorado River,* remanded the removed actions back to state court and dismissed the other federal actions without prejudice.[91] The tribes appealed from these dismissals and the Ninth Circuit reversed, holding that the Arizona statehood enabling act[92] deprived Arizona state courts of jurisdiction over the Indians' water claims.[93]

The Supreme Court held that despite the statehood enabling act's provision that the federal government reserved exclusive jurisdiction

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83 *Id.* at 2909-10.

84 *Id.*

85 *Id.* at 2925. The Ninth Circuit held below that the Tribe and the Project were neither parties nor coparties to the original action: "They were non-parties who were represented simultaneously by the same government attorneys." United States v. Truckee-Carson Irrigation Dist., 649 F.2d 1286, 1309 (9th Cir. 1981). The court of appeals reasoned that the Tribe and the Project were not adverse parties bound by the first action because "[a]s a general matter, a judgment does not conclude parties who were not adversaries under the pleadings." *Id.* The Ninth Circuit further cautioned that "[i]n representative litigation we should be especially careful not to infer adversity between interests represented by a single litigant." *Id.* Therefore, the court reasoned, the earlier litigation did not conclude the dispute in the later action between the Tribe and the Project. *Id.* at 1309-11.

The Supreme Court disagreed: "We hold that . . . the interests of the Tribe and the Project landowners were sufficiently adverse so that both are now bound by the final decree entered in the [first] suit." *Truckee-Carson,* 103 S. Ct. at 2925.

86 103 S. Ct. 3201 (1983).

87 *See supra* notes 50-58 and accompanying text.

88 *San Carlos Apache,* 103 S. Ct. at 3209.

89 *Id.*

90 *Id.*

91 *Id.*

92 Act of June 20, 1910, ch. 310, 36 Stat. 557, 569 (1910).

93 San Carlos Apache Tribe v. Arizona, 668 F.2d 1093 (9th Cir. 1982), *rev'd,* 103 S. Ct. 3201 (1983); *see San Carlos Apache,* 103 S. Ct. at 3209.

In 1983, the Supreme Court had three occasions to address the reserved rights doctrine. In *Arizona v. California (Arizona II),*[77] five Indian tribes represented by the United States petitioned for an increase in the quantity of water guaranteed by their *Winters* rights. The petitioners contended that the quantity of their rights did not conform to the Court's 1963 decree in *Arizona I.*[78] That decree measured the Indians' reserved rights by the amount of water necessary to irrigate all of the "practicably irrigable acreage" on the reservations.[79] In *Arizona II,* the tribes contended that the special master's report in *Arizona I* underestimated this acreage.[80] The Court invoked principles of res judicata to bar the Indians from reopening the 1963 decree, citing a strong public interest in finality.[81]

In *Nevada v. United States (Truckee-Carson)*,[82] the Court again held

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no more"; it held that reserved rights exist not for "secondary" or "supplemental" purposes, but only for those that qualified as "direct." "Necessary" was amplified to "essential"; the test applied was whether, if water were not provided, "the purposes of the reservation would be entirely defeated."

This was a substantial victory for the water users of the West.

Trelease, *Uneasy Federalism—State Water Laws and National Water Uses*, 55 WASH. L. REV. 751, 759 (1980) (footnotes omitted) (quoting from the *Cappaert* and *Mimbres* opinions).

77 103 S. Ct. 1382 (1983). *Arizona II* is a continuation of *Arizona I*, 373 U.S. 546 (1963). *See supra* notes 37-44 and accompanying text.

78 *Arizona II*, 103 S. Ct. at 1385.

79 In the original action, the Court, endorsing the master's conclusion, held that the federal government had implicitly reserved enough water to allow the Indians to irrigate all of the "practicably irrigable acreage" on the reservations. *Arizona I*, 373 U.S. at 600-01.

80 The Indian tribes claimed that certain irrigable lands had been "omitted" from the master's calculations. *Arizona II*, 103 S. Ct. at 1391. The United States contended that these omissions had occurred inadvertently due to "the complexity of the case." *Id.* at 1391 n.6. The states claimed, however, that the omission was a deliberate "tactical decision made to portray the irrigable acreage standard as a reasonable basis for calculating the reservations' water needs." *Id.*

81 Res judicata was technically inapplicable because *Arizona II* was a continuation of the *Arizona I* litigaton, rather than a separate action. *See* C. WRIGHT, THE LAW OF FEDERAL COURTS 680 (4th ed. 1983); *see also* RESTATEMENT (SECOND) OF JUDGMENTS §§ 17(1), 18(1) (1980). The Court found, however, that the principles of finality behind the doctrine of res judicata compelled its holding in *Arizona II*. 103 S. Ct. at 1392-95. The Court said:

> Recalculating the amount of practicably irrigable acreage runs directly counter to the strong interest in finality in this case. . . .
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> . . . .
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> . . . The record demonstrates that it was the understanding of the parties and Master Rifkind's intention that the calculation of practicably irrigable acreage be final. That was our understanding as well . . . .
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> . . . Our long history of resolving disputes over boundaries and water rights reveals a simple fact: This Court does not reopen an adjudication in an original action to reconsider whether initial factual determinations were correctly made. . . .
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> . . . .
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> . . . [W]e have determined that the principles of res judicata advise against reopening the calculation of the amount of practicably irrigable acreage. . . .

Id. (citations and footnotes omitted).

82 103 S. Ct. 2906 (1983).

over Indian lands in Arizona, the McCarran Amendment[94] gave the state courts jurisdiction in comprehensive water rights adjudications.[95] The Court also reiterated the *Colorado River* doctrine, which established state courts as the preferred fora for water adjudications involving federal reserved rights.[96]

II
ANALYSIS: RECONCILING THE PRIOR APPROPRIATION DOCTRINE AND THE *WINTERS* DOCTRINE

The western states developed the prior appropriation doctrine to apportion their limited surface water supplies fairly and efficiently among competing users.[97] The prior appropriation system depends upon quantification and strict control of the rights of all users.[98] In contrast, the *Winters* doctrine awards water rights of uncertain dimension, thus injecting a large measure of uncertainty into the western states' water use schemes.[99] The courts can minimize the tension between the *Winters* doctrine and prior appropriation by treating federal reserved rights in the same manner as ordinary appropriative rights.[100]

A. The Inherent Conflict Between Prior Appropriation and the *Winters* Doctrine

An ordinary appropriative right, once obtained, occupies a place in the state water system based on its relative seniority.[101] A *Winters* right, however, does not fit so neatly into the state water systems. A federal reserved right differs in three important ways from an ordinary water

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94 43 U.S.C. § 666 (1976); *see supra* note 47.

95 103 S. Ct. at 3212. The Court stated that "we are convinced that, whatever limitation the Enabling Acts or federal policy may have originally placed on state court jurisdiction over Indian water rights, those limitations were removed by the McCarran Amendment." *Id.* (footnotes omitted).

96 *Id.* at 3212-16. The Court summarized the policy behind the *Colorado River* doctrine and applied it to the instant case:

> The McCarran Amendment, as interpreted in *Colorado River*, allows and encourages state courts to undertake the task of quantifying Indian water rights in the course of comprehensive water adjudications. . . .
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> . . . [A]ssuming that the state adjudications are adequate to quantify the rights at issue in the federal suits, and taking into account . . . the expertise and administrative machinery available ot the state courts, the infancy of the federal suits, the general judicial bias against piecemeal litigation, and the convenience to the parties, we must conclude that the District Courts were correct in deferring to the state proceedings.

Id. at 3214-15 (footnotes omitted); *see also supra* note 57 and accompanying text.

97 *See supra* notes 11-19 and accompanying text.

98 *See id.*

99 *See infra* notes 101-21 and acompanying text.

100 *See infra* notes 122-35 and accompanying text.

101 *See* Trelease, *supra* note 27, at 474.

right established under the prior appropriation doctrine.[102]

First, the creation and maintenance of a *Winters* right does not depend on any use, beneficial or otherwise.[103] The reserved right may lie dormant for many years, set aside for some future use.[104] The priority of such a reserved right dates from the establishment of the federal reservation.[105] Junior holders of water rights may use this federally reserved water during "dormant" periods, but the federal government may exercise its reserved right and preempt these junior users at any time.[106] In contrast, holders of ordinary appropriative rights must maintain a beneficial use of their water or lose their rights.[107]

Second, a *Winters* right generally is not quantified.[108] To determine the quantity of a reserved right, a court must examine the purposes of the reservation of land set aside by Congress.[109] Until quantified in an adjudication, the size of a *Winters* right remains completely uncertain.[110] Nevertheless, the right exists, with its priority dating from the establishment of the reservation of land.[111] Ordinary appropriative rights, however, are not legally recognized *until* they are quantified and adjudicated.[112]

Third, a federal reserved right need not be recorded.[113] In the reserved rights cases, the Supreme Court has consistently recognized unrecorded federal reserved rights.[114] Claimants of ordinary appropriative rights, by contrast, will lose their rights if they do not fix them in a water adjudication.[115]

Because of the striking differences between federal reserved rights and appropriative rights, the continuing coexistence of the two poses serious questions. The tension between federal reserved rights, which

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102 *Id.*

103 *Id.*; *see also* Abrams, *Reserved Water Rights, Indian Rights and the Narrowing Scope of Federal Jurisdiction: The* Colorado River *Decision*, 30 STAN. L. REV. 1111, 1113 (1978).

104 *See* Trelease, *supra* note 27, at 474.

105 Trelease, *supra* note 76, at 756; *see* Comment, *supra* note 15, at 560; Comment, *Federal Reserved Rights in Water: The Problem of Quantification*, 9 TEX. TECH L. REV. 89, 93 (1977) ("[M]ost reservations were created around the turn of the century and have that time as a priority date.").

106 Trelease, *supra* note 76, at 756.

107 *See supra* notes 12-13 and accompanying text.

108 Trelease, *supra* note 27, at 474.

109 *See, e.g.*, Cappaert v. United States, 426 U.S. 128, 141 (1976) ("The implied-reservation-of-water-rights doctrine . . . reserves only that amount of water necessary to fulfill the purposes of the reservation, no more.").

110 Comment, *supra* note 105, at 93-94.

111 Trelease, *supra* note 76, at 756; Comment, *supra* note 15, at 560; Comment, *supra* note 105, at 93.

112 *See supra* notes 17-18 and accompanying text.

113 Trelease, *supra* note 27, at 474.

114 *See, e.g.*, Arizona v. California, 373 U.S. 546, 598-600 (1963); United States v. Powers, 305 U.S. 527, 532-33 (1939); Winters v. United States, 207 U.S. 564, 577 (1908).

115 *See supra* notes 17-18 and accompanying text; *see also* Comment, *supra* note 15, at 551.

exist "in a state of uncorrelated mystery,"[116] and appropriative rights, which are strictly quantified and controlled, is all too clear. *Winters* rights threaten the West in two ways: because they are not based on use, *Winters* rights allow water to go unused; because they are uncertain, they interfere with public and private decisions. The resulting uneasiness and frustration that western water users feel has led to melodramatic descriptions of the *Winters* doctrine as " 'a first mortage of undetermined and indeterminable magnitude' "[117] and as a " 'sword of Damocles' hanging over 'every title to water rights to every stream which touches a federal reservation.' "[118] The reserved rights doctrine has not yet caused western appropriative water users any substantial harm.[119] Nevertheless, future assertion of reserved rights may cause serious problems in the West, as more users compete for less available water.[120]

The Supreme Court, demonstrating some sensitivity to the states' concerns over reserved rights, has begun to circumscribe the scope of the *Winters* doctrine. The Court's new decisions make federal reserved rights mesh more smoothly with the states' prior appropriation water law systems.[121] These efforts have eased the tension between *Winters* rights and appropriative rights.

B. Reconciliation of Prior Appropriation and the *Winters* Doctrine in Western Water Law

Both the *Winters* doctrine and the doctrine of prior appropriation serve important functions in the West: federal reservations of land would be useless without sufficient water to fulfill their purposes, and prior appropriation has developed as a matter of necessity to provide for prudent and beneficial use of the West's most vital and scarce resource. Surely neither system is likely simply to vanish, thereby eliminating the conflict. Furthermore, the likelihood that Congress will enact comprehensive legislation to effect a reconciliation is small.[122] Thus, a judicial compromise seems to be the only possible solution. The Court's efforts to make *Winters* rights inoffensive to western states' prior appropriation schemes have been a significant step in the right direction.

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116 United States v. District Court in and for the County of Eagle, 169 Colo. 555, 580, 458 P.2d 760, 772 (1969), *aff'd*, 401 U.S. 520 (1971).

117 Address by Northcutt Ely to the National Water Commission (Nov. 6, 1969), *quoted in* Trelease, *supra* note 27, at 475.

118 *Id.*

119 *See* Trelease, *supra* note 27, at 474-75, 491-92.

120 *See supra* note 1.

121 *See supra* notes 45-49, 56-96 and accompanying text.

122 Numerous bills have been proposed since 1955, but Congress has passed none of them. *See* Morreale, *Federal-State Conflicts Over Western Waters—A Decade of Attempted "Clarifying Legislation,"* 20 RUTGERS L. REV. 423 (1966); Trelease, *supra* note 27, at 475.

Federal reserved rights and appropriative rights conflict in three major areas: use,[123] quantification,[124] and adjudication and recordation.[125] By molding reserved rights to make them resemble ordinary appropriative rights as closely as possible, the Court can protect both the interests of the United States in supplying its reservations and the states' interest in controlling their water supplies.

The federal reserved rights doctrine and the prior appropriation doctrine clash most strikingly in the area of use.[126] Appropriative rights terminate if the appropriated water is no longer put to a continuous beneficial use. Appropriative rights, therefore, are concrete and ensure that water not go unused. *Winters* rights, however, exist independently of any use, present or future, beneficial or otherwise. In reserving land for a particular purpose, Congress may have contemplated the reservation of the water required to carry out that purpose. Therefore, the courts should limit *Winters* rights to the amounts of water required by the government or the Indians to carry out the *present* purposes of the reservation. Since the *Arizona I* case,[127] in which the Supreme Court last expressly stated that the quantity of a *Winters* reservation may accommodate future as well as present uses, the Court has limited this expansive interpretation of reserved rights by strictly construing the purposes of the federal reservations.[128] The Court's next step may be to limit reserved rights to those needed for immediate beneficial uses in the federal enclaves while eliminating *Winters* rights reserved for future purposes.

The prior appropriation doctrine and the *Winters* doctrine must be reconciled not only on the issue of use, but also on the issue of quantification. At present, the controlling standard for quantifying *Winters* rights is that of "minimal need" put forth in *Cappaert*.[129] This standard requires the examination of the purpose of the reservation whose "minimal need" must be met. Again, a court need determine only the present water needs of the federal enclave. The courts should eliminate such forward-looking standards as the "practicably irrigable acreage" measure employed by the Supreme Court in *Arizona I*, because they generate uncertainty and therefore hinder decisionmaking. In addition to avoiding forward-looking standards, courts should follow the Supreme

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123 *See supra* notes 103-07 and accompanying text.

124 *See supra* notes 108-12 and accompanying text.

125 *See supra* notes 113-15 and accompanying text.

126 *See supra* notes 103-07 and accompanying text.

127 Arizona v. California, 373 U.S. 546 (1963).

128 *See* United States v. New Mexico, 438 U.S. 696, 705-13 (1978) (The Court noted that Congress intended to reserve water for "domestic, mining, milling, or irrigation purposes" but not for recreational purposes (quoting 16 U.S.C. § 481 (1976))).

129 *See supra* note 66.

Court's lead in *Arizona II*[130] and *Truckee-Carson,*[131] and invoke principles of strict finality to deny reopening the issue of quantification of *Winters* rights.

The final step is to decide how best to subject legitimate reserved rights to the states' systems of adjudication and recordation. Although various administrative[132] and legislative[133] schemes have been suggested, the Court's instincts, in delegating this responsibility to the state courts through the *Colorado River*[134] doctrine and the *Eagle County*[135] interpretation of the McCarran Amendment, are correct. The best way to integrate reserved rights into the states' prior appropriation systems is to determine these reserved rights in the state systems. By means of water adjudications, reserved rights can be recorded and defined in the same manner as ordinary appropriative rights.

CONCLUSION

The doctrine of federal reserved water rights has the potential to greatly disrupt the prior appropriation systems of the western states. The Supreme Court, after allowing a steady expansion of the *Winters* doctrine up through the 1970s, has since shown increased solicitude for the rights of the states to determine how best to allocate their scarce waters. By strictly defining *Winters* rights, the Court has made the federal government's presence as a western water user much less disruptive. By continuing this trend and further circumscribing the scope of the reserved rights doctrine, the Court perhaps can largely eliminate this source of federal-state tension in the western states.

Todd A. Fisher

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130 103 S. Ct. 1382 (1983).

131 103 S. Ct. 2906 (1983).

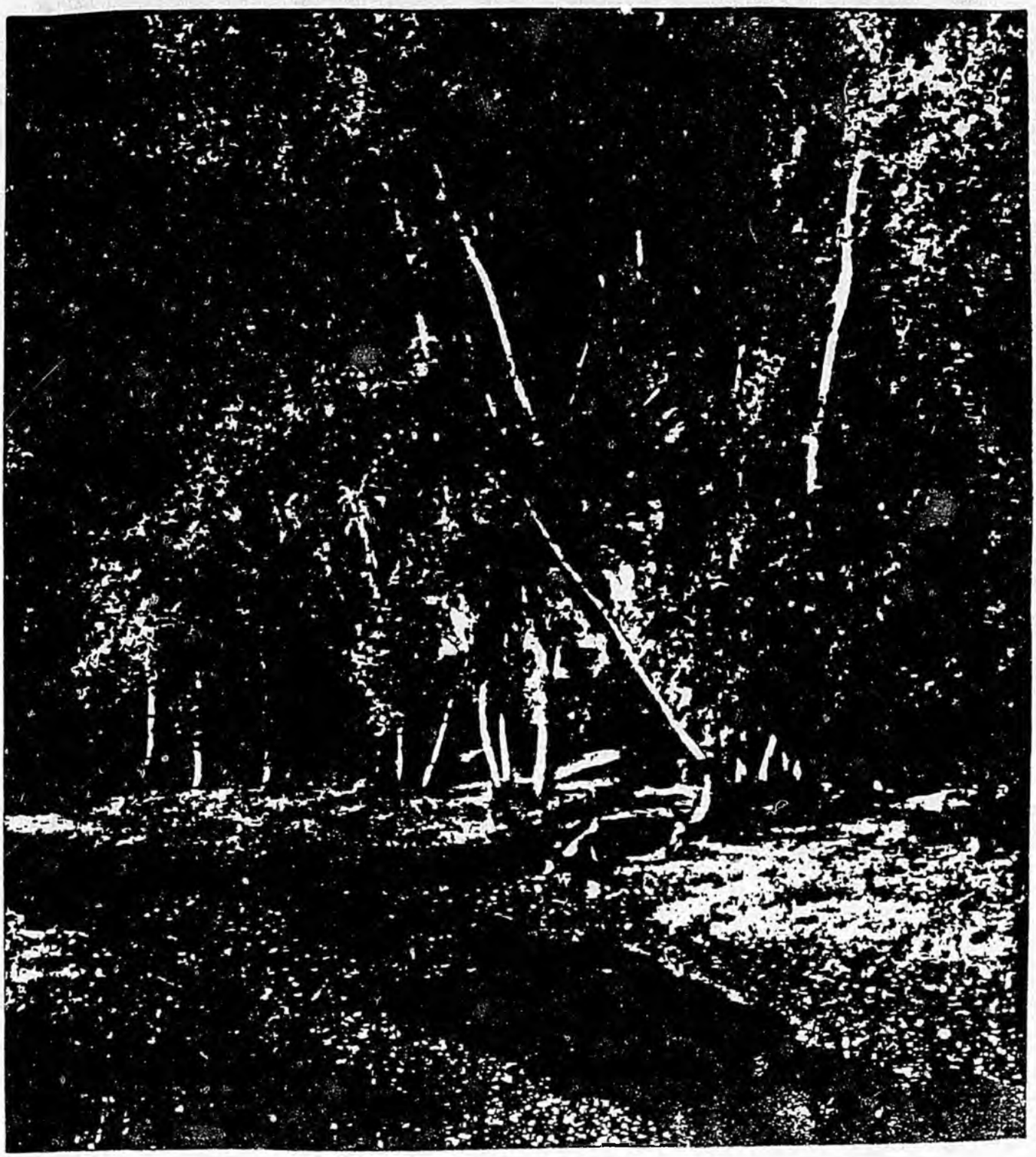
132 *See, e.g.*, Ranquist, *supra* note 12, at 710-24.

133 *See, e.g.*, U.S. Dep't of Justice, A Proposed Bill for the Inventorying and Quantification of the Reserved, Appropriative and Other Rights to the Use of Water by the United States (June 20, 1974 draft); *see also* Little, *Administration of Federal Non-Indian Water Rights*, 27B ROCKY MTN. MIN. L. INST. 1709, 1772-79 (1982) (discussing adjudication alternatives).

134 424 U.S. 800 (1976); *see also supra* notes 55, 58 and 96 and accompanying text.

135 401 U.S. 520 (1971); *see also supra* notes 47-49 and accompanying text.

The New Rules For NATIONAL FOREST WATER



By Jeff Romm and Kathleen Bartoloni

The Forest Service responds after the Supreme Court weakens its powers for multiple use.

In 1978, the U.S. Supreme Court handed down a decision that has profound implications for future management of national forestlands.

Commonly known as the Rio Mimbres decision, it arose from conflict for water in the highlands of New Mexico, where the Rio Mimbres flows through the Gila National Forest and interspersed agricultural areas. The Forest Service had claimed rights to the river's water for stock watering and for fisheries, wildlife, aesthetics, and recreation on the Gila.

The upstream Mimbres Valley Irrigation Company, which had used the river since the 1920s, successfully contested the Forest Service claim in the court system of New Mexico. The company based its claim on the principle of "first in time, first in right," on which New Mexico's "appropriative rights" doctrine of water law is based. When the Forest Service appealed to the Supreme Court in the case known legally as *U.S. v. New Mexico* (438 U.S. 696), the agency argued its entitlement to the water by virtue of the "federal reserved water right." In short, the Forest Service claimed the legal right to enough water to satisfy the purposes for which Congress had authorized reservation of forestland from the public domain. The Court disagreed and, in doing so, substantially changed the legal basis for multiple-use planning on the national forests.

The federal reserved right, said the Court, applied to the explicit purposes for which Congress had authorized forest reserves. The Court interpreted the original authorization, the Organic Act of 1897, to mean that Congress had intended reserves only for the purposes of maintaining timber supplies and favorable water flows; the reserved right did not apply to other purposes of national forest management. The Court opined that this judgment held after 1960 as well for purposes that Congress had added to the Forest Service mandate in the Multiple Use–Sustained Yield Act of that year, although the irrigators' pre-1960 claim rendered the act irrelevant to the Rio Mimbres case. If the Forest Service needed water for such purposes, it would have to obtain it through state water-rights procedures (Fairfax and Andrews 1979).

The Rio Mimbres reversed a trend in decisions that had expanded the application of the federal reserved right, at the apparent expense of state power, over the course of this century. The Supreme Court first used the reserved rights doctrine in its 1908 *Winters v. U.S.* decision (207 U.S. 564), which said that the federal government would not create an Indian reservation without implicitly reserving rights to the water [illegible] claims under state law. Notwithstanding the Court reaffirmed the doctrine as it applied to forest reserves in its 1963 decision of *Arizona v. California* (373 U.S. 564). Using that decision, the Forest Service had subsequently asserted federal rights to water that had not been claimed under state law before the date of a forest's reservation and that was needed to accomplish the purposes of the reserve.

As a land manager, the agency's interpretation of these purposes had broadened as public demands upon the national forests had grown and diversified. The Multiple Use Act transformed into law the longstanding administrative policy of managing national forestlands for recreation, range, fisheries, and wildlife, as well as for timber and watershed quality. The National Forest

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The Rio Mimbres, which flows through the Gila National Forest, sparked the case leading to the Supreme Court decision.

Arkansas River, San Isabel National Forest. States have been given greater authority over water—authority lost by the federal government.

Management Act of 1976 strengthened this policy by establishing a system for multiple-use planning on each national forest. But in 1978, the Rio Mimbres decision shifted water powers back toward the states and, in the process, appeared to sever the link between the uses of a national forest and the federal rights to water that those uses required.

As foresters know, uses of land depend on the availability of water; a land-use plan is also a prescription of water needs. An agency that loses rights to water loses some of its power to manage land. After the Rio Mimbres decision, the Forest Service apparently was no longer able to claim reserved rights to water for recreation, grazing, fish, or wildlife. Instead, the agency was required either to procure needed water within the procedures of state law, possibly in competition with other applicants for water rights, or to obtain water through its powers of eminent domain, compensating existing rights-holders. Since Rio Mimbres, the Forest Service has been applying for state permits to secure water for uses from which the Court withdrew the reserved right. Where national forest plans cannot be implemented without state permits for water, future state influence on national forest management could be significant.

As for most laws and policies, however, the effects of a court decision may rely less upon what the decision says than upon the responses it provokes. The Rio Mimbres decision has been provocative: it reversed the expansion of federal water rights at a time in history when the politics were sympathetic, but did so upon questionable interpretations of congressional intent. For good or ill, the Supreme Court has thrown the institutions of forest water rights into considerable disarray. In what follows, we explore one set of responses to Rio Mimbres—those of the Forest Service.

The agency has used four strategies thus far to recover the security of water rights that it had previously enjoyed, each with different implications for the agency.

Hydrological Argument

In the Rocky Mountain states, the Forest Service has used a hydrological argument to enlarge the federal reserved water right within the Court's narrow interpretation of the 1897 Organic Act.

The Rio Mimbres decision denied reserved rights to instream uses of water for fisheries, aesthetic, or recreational purposes. But the Court also stated that "securing favorable conditions of water flows" was one of the two explicit purposes of forest reservations, and therefore carried an implied federal right to sufficient water to satisfy that purpose. Responding to this interpretation, the Forest Service has attempted to define the amount of instream flow that is, necessary, as Justice Department lawyer John Hill has written, "to maintain the national water collection and delivery system in a condition to deliver water to appropriators under 'favorable conditions' " (Hill 1982). If instream flows are shown to merit the reserved right for this purpose, then other forest uses that depend upon them will gain some degree of associated protection.

To validate the relationship between levels of instream flow and qualities of forest drainage systems, Region 2 hydrologists have determined the annual streamflow regime—the distribution of flows over the year—that would maintain the existing condition of stream channels. Because the capacity of a channel changes when streamflows deposit more or less sediment than they remove, the hydrologists have used general principles of geomorphology and fluid mechanics to identify the regimes that balance sediment removal and deposition over the course of the year. Lesser flows would cause channel filling, vegetative encroachment, and consequent loss of drainage capacity. By determining the flow regime that would maintain the existing balance, the hydrologists have been able to estimate the amount of water that is required to prevent a decline in the drainage capacities of several basins (Rosgen and Silvey 1983). The amount forms the basis for claims of instream flows under federal reserved water rights.

The Forest Service first tested this hydrological approach in the 1982 adjudication of Wyoming's Big Horn River, where the agency estimated that about 78 percent of average annual water yields was necessary for maintenance of the drainage system (Rosgen and Silvey 1983). The Forest Service settled its claims out of court after several months of negotiation with the state of Wyoming because the agency did not think the method of measurement was ready to withstand a court test. Although the Forest Service settled for only 25 percent of the amount of water that it had claimed, the settlement established a precedent for acceptance of the instream flow principle. The principle would protect Forest Service water from upstream private claims and would use the Rio Mimbres interpretation of purpose to broaden the uses to which the federal reserved right applies.

Measurements of physical instream flow requirements are likely to become increasingly influential in the future. The Forest Service feels that the method may now be strong enough to withstand legal scrutiny, and the agency is testing it in adjudications of the Rio Grande River (Rio Grande National Forest) and the Arkansas River (Pike and San Isabel national forests) in Colorado.

Riparian Rights

The Forest Service has pursued a second strategy in California, where property owners have "riparian rights" to make reasonable use of water that flows through or adjacent to their lands. The agency has argued that national forestlands qualify for riparian rights.

Riparian rights have significant advantages over the "appropriative rights" the Forest Service would other-

Rio Grande, Santa Fe National Forest: "After the Rio Mimbres decision, the Forest Service apparently was no longer able to claim reserved rights to water for recreation, grazing, fish, or wildlife."

wise have to obtain under state law. Appropriative rights are established by the "beneficial use" of water wherever the use occurs. Their strength in the event of scarcity depends on when they were established relative to others on the same stream. They are formalized by a permit from the state Water Resources Control Board, which certifies the actual quantity that is used beneficially and the date on which the use was confirmed. Riparian rights do not require a state permit; they attach to land ownership rather than to water use, and their entitlement in times of scarcity is usually not determined by a permit date. Although subject to administrative and adjudicative proceedings of the Water Resources Control Board, riparian rights can be defended in the courts—the state board does not have ultimate jurisdiction over them, as it does for appropriative rights. Finally, riparian rights can be applied to any use, as long as it is reasonable under state law. This provides an advantage over the narrowly interpreted reserved right of the Rio Mimbres decision.

The Forest Service has asserted riparian rights in about 65 percent of its claims to the state of California since Rio Mimbres. In recent adjudications of Hallett Creek (Plumas National Forest) and Roaring Creek (Shasta-Trinity National Forest), for example, the agency claimed riparian rights for enhanced flows on a high-country spring for wildlife and for watering a protected elk herd. The state Water Resources Control Board rejected these claims in its 1983 decision on Hallett Creek. The Forest Service appealed the decision in the state superior court (Lassen County Superior Court Case 16291) and gained a favorable judgment in June 1984. The state is planning its appeal.

This quiet dispute over a small spring displays how much national forest management has become influenced by state law since the Rio Mimbres decision. The Forest Service argues that a federal reservation possesses at least the same water rights as a private landholding and that its nonconsumptive uses are therefore protected by the riparian doctrine. The agency's position is supported by California court rulings since 1886, which evolved the principle that "the United States, with respect to the lands which it owns in this state, is a riparian proprietor as to the streams running through such lands" (*Palmer v. Railroad Commission*, 167 Cal. 162 [1917]).

The Water Resources Control Board argues a contrary legal principle based on California's assertion at statehood of full powers to govern the rights that apply to property, whether federal or private: "Riparian rights do not attach to lands held by the government until such land has been transmitted to private ownership," or unless they are explicitly granted by the state (*McKinley Bros. v. McCauley*, 215 Cal. 229 [1932]). Although riparian rights attach to land that was once public domain and now is privately owned, the Water Resources Control Board rejects the Forest Service view that the reservation of a national forest from the public domain is analogous. If the Forest Service wins its point in the Hallett Creek case, the agency would recover much of the security that it lost in Rio Mimbres for uses that are deemed reasonable under state law.

The final decision on this issue will affect the legal status of about 23 million acres of federal reserved land in California and the water that drains from it. Interpreted more broadly, the outcome could affect federal water rights on reserved forestlands throughout the nation. It may clarify the extent to which the federal government "owned" water prior to reservation or relinquished its rights upon granting statehood and when opening the public domain to private settlement.

In short, a small spring has resurrected some basic issues about relationships within a federal system of government.

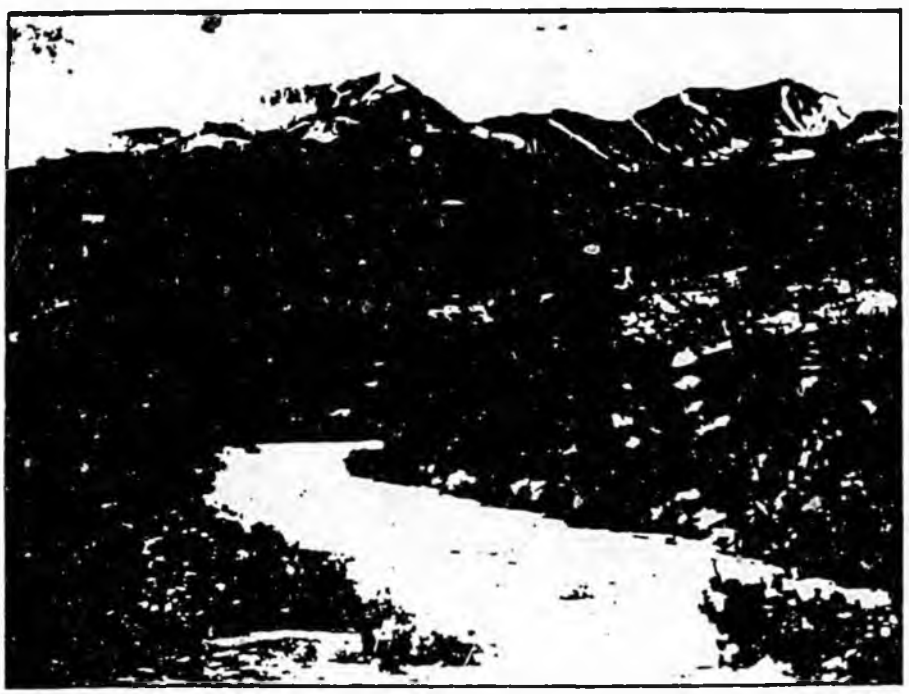
Controlled Access

As a third strategy, the Forest Service is testing the extent of its powers to regulate private uses of national forest water under the Federal Land Policy and Management Act of 1976. That act authorized the agency to permit or deny private access to water and other natural resources for uses on sites within national forest boundaries. The Forest Service grants special-use permits on the basis of projects' environmental soundness. The permit authority may allow the Forest Service to confine the scope of private water rights and to expand its control of water allocation.

Small-scale hydroelectric developments in the Pacific Coast states, and trans-mountain diversions of national forest water to urban areas in the Rocky Mountain states, are the major water projects that require Forest Service special-use permits. The agency has denied permits for trans-mountain diversions that did not meet environmental standards. Thus far, no one has challenged a denial. The Forest Service has also stipulated conditions before granting a permit. Although these have been challenged as a "taking" of private water rights, all such cases have been settled out of court with the conditions intact. The agency has not yet denied permits for hydroelectric projects, except in one case where a site had been selected in a primitive area. Officials may be reluctant to test the possibly superior authority of the Federal Energy Regulatory Commission.

The Forest Service has thus far considered applications for permits on a case-by-case basis. Some permit-granting personnel know which sites in their forest are suited or not for various water projects, and have a mental map that helps them respond to or guide permit requests. Nevertheless, the approach places the initiative for water and related land-management decisions with the applicant rather than the agency. The policy also makes it difficult to assess the cumulative environmental and management effects of individual projects.

As an alternative, the Forest Service might identify opportunities for water projects that do not conflict with its management objectives. The agency might specify these opportunities in national forest plans. It could also treat water development as an explicit objective in the forest planning process. Both alternatives may advertise opportunities for water development and thereby increase pressures on national forest resources to an extent that the Forest Service would prefer to avoid. But identifying or planning prospective water developments would also allow the agency to grant permits that conform with its national forest plans and to strengthen the power of its permits with whatever authority forest plans have or may gain in the future. The choice between maintaining management flexibility and increasing control of water management decisions would seem to depend on how strongly state and other federal authorities attempt to modify the agency's options on the national forest domain.



Arkansas River, San Isabel National Forest: The Colorado supreme court decided against federal reserved water rights for "supplemental" uses.

Subsequent Reserved Rights

The fourth Forest Service strategy seeks reserved rights for purposes of the national forests that Congress legislated subsequent to the 1897 Organic Act. According to the Multiple Use–Sustained Yield Act:

> It is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The purposes of this Act are declared to be supplemental to, but not in derogation of, the purposes for which the national forests were established as set forth in the Act of June 4, 1897 [the Organic Act].

The Supreme Court, in its Rio Mimbres decision, interpreted the "supplemental" purposes to be "secondary" to those specified in the Organic Act. The Court stated further that these other purposes were not entitled to reserved rights because they were not specified as reasons for the original forest reservation.

However, the Multiple Use Act was not directly at issue in the Rio Mimbres case, and need not have been interpreted to achieve the decision. This aspect of the Court's opinion, therefore, seems particularly vulnerable to challenge.

The Forest Service contends that the Multiple Use Act implied the same reserved rights for "supplemental" purposes after 1960 as the Organic Act implied for the maintenance of timber supplies and favorable stream flows

Alamogordo, New Mexico: "An agency that loses rights to water loses some of its power to manage land."

The agency has challenged, or has implied potential challenge to, the Court's interpretation wherever western courts have considered Forest Service water rights.

The Forest Service brief for the 1979 adjudication of [illegible] Rivers [illegible] and the Act's appropriation system with [illegible] priority subsequent to June 12, 1960, the day that Congress passed the Multiple Use Act. The agency's briefs for California's Hallett and Roaring Creek adjudications refer to the Act's provisions as a basis for possible Forest Service claims in the future. Although the Colorado Supreme Court relied on Rio Mimbres and decided against federal reserved water rights for "supplemental" uses [*U.S. v. City and County of Denver*, 656 Pacific 2d 1 (1982)], the Forest Service has continued to press its claim in Utah, in adjudications of the Bear (Cache National Forest) and San Rafael (Manti National Forest) rivers and of the Lower Colorado tributaries (Fish Lake, Dixie, and Manti national forests).

Implications

When the Supreme Court decided that the Mimbres Valley Irrigation Company had greater right to the limited flows of the Rio Mimbres than did the Gila National Forest for stock watering and the maintenance of instream uses, the court removed the absolute security of federal water claims for multiple uses. In requiring that future claims be governed by state law, the court put them to test against the losses they might cause to private and state interests. The decision increased the costs of fulfilling a multiple-use plan.

Responses that the Rio Mimbres decision provokes will almost certainly moderate its effects. The liberties of judicial interpretation that the decision contains make it vulnerable to future court challenge, to clarifying legislation and, as the Forest Service is demonstrating, to administrative reaction.

The Forest Service has responded in diverse and imaginative ways to regain control, and reduce the costs, of water that it requires to fulfill its long-term mission. In addition to the four strategies described, the agency may apply others as well—depending upon the responses of the states, the courts, Congress, other federal agencies, and the administration. The agency could exercise its power of eminent domain, paying just compensation to buy rights to the water it needs. It might charge or share costs with the states for watershed management services. State and Forest Service officials might form water councils for joint planning of forest water management and of the financial allocations management requires. The Forest Service might develop cooperative arrangements with the Federal Energy Regulatory Commission for joint land- and water-management planning on the national forests.

The Forest Service may curtail the planned mix of outputs to match the availability of water—or it may propose to shift the mix toward timber production, for which the agency's reserved right remains undiminished. The Forest Service may possibly use its authority for such decisions to gain state concession of water for purposes that the national forests satisfy on the states' behalf. The current administration's emphasis on timber and its exceptionally large cuts of water-related Forest Service budgets—which are responsive to the conservative winds that shaped the Rio Mimbres decision in the first place—may have the ironic effect of discouraging states from aggressively pursuing the potential expansion of states' rights that the Rio Mimbres offers.

Whatever the responses to it, the Rio Mimbres has had one effect that seems certain to endure: It closed a previously open-ended federal reserved right that had become an anachronism in water-scarce and increasingly populated states of the West. The most successful attempts to expand Forest Service rights will not regain the scope and security that those rights previously enjoyed. In adjusting to the constraint of the new rules, the Forest Service can shift or reduce its planned outputs, develop water-related arrangements with state, private and other federal interests, or increase its allocations of staff and funds to secure the water conditions that its national forest plans require. The agency's choices among these possibilities are bound to affect the future character of its organization as well as its management of national forestlands. ■

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Ted Spiegel/Black Star

THE WATER WARS

From the Missouri River to the Pacific Ocean, Lawyers for Indians, Industries and Inhabitants Are Struggling Over Dwindling Liquid Resources

BY JOHN RILEY

THE BATTLE IS FOR the future — a battle over too many dreams and too little water that threatens to make a shambles of the American West's system of water law.

From the Missouri to the Pacific, in the 17 states where an arcane legal doctrine called "prior appropriation" has allocated Western water's power and wealth for more than a century, lawyers for miners, farmers, Indians and governments are in the midst of a changing historical moment which is testing that system as never before.

Demand is gradually outstripping supply. In state after state, the water bar is grappling with complex new groundwater issues, regulatory schemes and complicated "general adjudications" of conflicting water rights in stream basins. Established water rights are suddenly threatened by environmental and conservationist restraints. Traditions of state hegemony are being tested by grandiose plans for out-of-state water export.

And all those issues are merely lightning bolts and thunder to the West's darkest and most tumultuous legal storm cloud: Indian water-rights claims.

About 60 of those cases, large and small, are already in court. Combined with potential claims in virtually every major Western stream basin, the estimated total — 45 million acre feet annually, equivalent to three times the flow of the Colorado River — could, quite simply, undercut many existing rights and profoundly affect the balance of economic power in the resource-rich West.

That, however, won't happen easily. The tribal claims are being hotly contested in litigation that some compare, in its acrimony and complexity, to a "Civil War battlefield."

In that sense, lawyers agree, the high-

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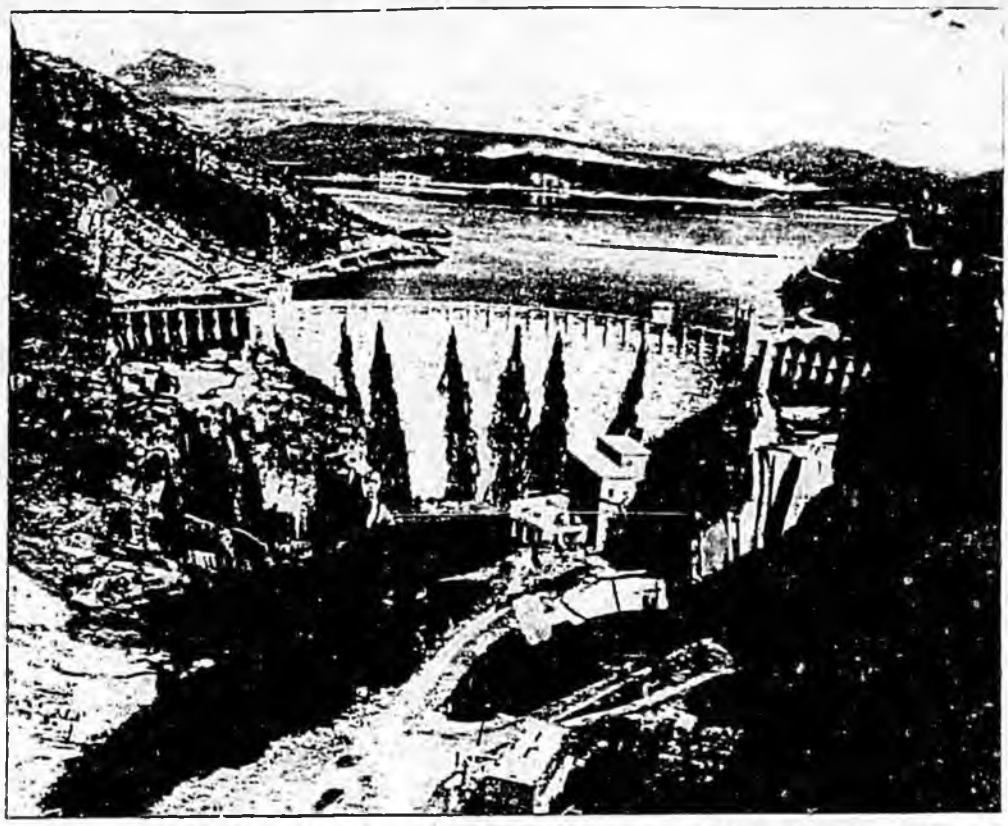
THE THEODORE Roosevelt Dam (right), 80 miles northeast of Phoenix, Ariz., is part of the Salt River Project — a good example, lawyers say, of the massive federal public works that fueled Western growth but now are turning out to be a double-edged sword.

In litigation in southern Arizona that began a decade ago and now encompasses an estimated 80,000 parties in the Salt and Gila river basins, Indian tribes are claiming the federal project used their water as the engine of growth for cities like Phoenix and Tucson.

The litigation is among the most complex in the West, and some speculate it could continue for decades. 'The tensions between Indians and non-Indians are very high, and it would be very difficult to structure a negotiated settlement,' says Rodney T. Lewis, general counsel to the Gila River Indian Community, a major tribal claimant. 'We're committed to following it down to the end.'

'If they think for one minute they're going to get all that water, they're crazy,' answers James M. Bush of Phoenix's Evans, Kitchel & Jenckes, P.C., which represents major mining interests in the region. 'If you granted all the claims and they took the water someplace else, Phoenix would dry up,' adds Salt River Project attorney Jon L. Kyl of Phoenix's Jennings, Strouss and Salmon.

Mr. Lewis faults such 'hysteria.' He says the real fight is future growth, between Indians 'and people from Minnesota who want to retire here.'



The West: Whose Water Is It?

profile tribal claims merely reflect the pervasive effects of growing Western water conflicts on the legal profession.

"You can't really talk about any activity — real estate, mining, electricity, agriculture — without being concerned about water," says James M. Bush, managing partner at the Phoenix, Ariz.'s Evans, Kitchel & Jenckes, P.C.

"It's an increasingly contentious, difficult field," adds Paul L. Bloom, a prominent Washington, D.C., water lawyer who counsels both public and private clients and law firms lacking water expertise. "The conflicts are increasing, and that's what keeps lawyers' kids in college."

FEW LEGAL RULES are so marbled into the political and social history of a region as the West's "prior appropriation" doctrine.

Eastern water law employed the "riparian" doctrine, which gave owners of land adjoining a water body the right to its shared use — so long as they did not unreasonably interfere with one another — and also gave some protection to water as an environmental resource.

The West was different. It was built around water-intensive industries — mining first, then irrigated farming. Water was short, and both industries required assured, certain supplies for locations that were often distant from the water, rather than supplies subject to future developments by other landowners along a stream.

The catchwords of the doctrine that emerged — "use it or lose it" and "first in time, first in right" — encouraged consumption by providing certainty. The more you used the more you owned, and junior users would be cut off in times of drought.

"The doctrine just flat out ignored any environmental values," adds Prof. Charles F. Wilkinson, an Indian and water law expert currently teaching at the University of Colorado School of Law. "Under prior appropriation, you can just take water out of a stream and drain it."

As the West developed, federal policies encouraged the consumptive philosophy. Federal law deferred to the state doctrines. The federal government left the states to work out their own disputes through interstate water compacts, and encouraged development with massive, subsidized dam, reclamation and irrigation projects.

Now, lawyers say, the hands that fed the West are turning around to bite it.

After a century of stimulating agricultural, industrial and population growth through water projects, the federal spigot is running dry. And, with water supplies already strained, the freewheeling approach of prior appropriation is proving to be a double-edged sword.

Indeed, by most accounts the new tight-water legal landscape in the West is filled with assaults on most of prior appropriation's most sacred themes: certainty and stability, state control and encouragement of consumption.

NOWHERE IS THAT clearer than in the Indian claims fight — an issue that, lawyers say, has made a mockery of stability and certainty.

"We have more than 50 lawsuits that impact on every major water system," says Mr. Bush, who heads an Indian water-rights committee of the Western Regional Council, a consortium of major resource-oriented businesses. "Those lawsuits will result in the slowing down if not the complete frustration of every economic development proposal in the West — Indian and non-Indian — because of uncertainty about who owns what."

"What's new," adds Susan M. Williams, an Indian law specialist with Fried, Frank, Harris Shriver & Kampelman in Washington, D.C., "is that tribes are increasingly aware that they have these rights and are making claims in greater numbers than ever before at exactly the time when development interests are becoming keenly aware of possible shortages. We're in the eye of the storm."

Ironies abound in the history of the claims. In the 1908 case of *Winters v. U.S.*, 207 U.S. 564, the Supreme Court ruled that Indian reservations carried with them a "reserved right" to all water necessary to fulfill the reservation's purpose, and gave the tribal rights a priority date as of the creation of the reservation.

That made them senior and superior to most state-recognized prior-appropriation rights. Moreover, the tribal claims assert, at the same time the federal government should have been protecting Indian water rights in its capacity as "trustee" for the tribes, it instead was using Indian water in the massive reclamation projects that fueled non-Indian Western development.

The result, says Professor Wilkinson, has been a "shadow body of law" clouding the validity of non-Indian water rights throughout the West — and a barely submerged resentment against the federal government on all sides of the fight. "The West ought to be walking hand in hand to Washington and saying, 'You created this problem. Now solve it,'" says Mr. Bush.

Washington hasn't, and the vacuum has been filled with litigation — ranging from damage suits by tribes against non-Indian development interests for past and ongoing misappropriation of their water to a rising number of massive "general adjudications" of all rights in a stream basin initiated by states or private parties to clear up uncertainties.

WHATEVER THEIR form, the cases frequently turn into legal nightmares. One reason is disagreement over the proper forum. Tribes invariably prefer to have their claims heard in federal courts while states and non-Indians press with equal vigor for state court general adjudications. The battles can last for years and the result, says Mr. Bloom, is that "enormous resources are expended over what is essentially a very sterile issue."

In southern Arizona, for example, Indian claims in the Gila and Salt river basin near Phoenix and Tucson exceed all available water, by some estimates, by a factor of three. Those claims spawned one of the nation's largest adjudications, now involving an estimated 80,000 parties.

It began in 1974. But it was just two weeks ago that the Arizona Supreme Court brought jurisdictional wrangling close to an end — subject only to an expected petition for certiorari — by resolving the key remaining issue in favor of a state forum. *U.S. v. Superior Court of the State of Arizona*, 17623-SA.

"We've been fighting over where we're going to fight for 10 years," notes Evans Kitchel's Alvin H. Shrago, who has represented two mining companies, ASARCO Inc. and Phelps Dodge Corp., in the case.

Although recent Supreme Court decisions clearing the way for state court adjudications may limit jurisdictional wrangling in the future, lawyers say, water adjudications promise to remain lengthy. In northern New Mexico's major Indian rights case, *New Mexico v. Aamodt*, CIV 6639-M (D.N.M.), for example, lawyers in the state engineer's office filed in federal court for the express purpose of avoiding a laborious fight over jurisdiction. That was in 1966 — more than 18 years ago.

Part of the problem is their historical complexity. In New Mexico, for example, the status of land and water rights under Spanish colonial administration is a pivotal issue, and the Arizona case involves challenges to 1910 and 1935 decrees agreed to by the Depart

ment of Justice on behalf of some Indian tribes.

But observers and participants in Indian claims suits agree that the key cause of delays is uncertainty — both legal and technical — about how to quantify Winters rights.

The clearest standard came in a 1963 case, when the Supreme Court declared that Indians were entitled to all water needed to irrigate the "practicably irrigable acreage" on their reservations. *Arizona v. California*, 343 U.S. 546. And debate over that standard is at the core of the massive tribal claims currently before the courts.

Putting numbers to a standard that is equal parts agricultural economics and hydrological science, lawyers say, usually turns into a costly war of experts that, in the context of a general stream adjudication, is fought between hundreds or thousands of parties with conflicting claims.

"It's like a free-for-all," explains Mr. Shrago.

AND THE COMPLEX technical issues are mirrored by vigorous legal debate over what the Supreme Court actually meant.

One unresolved issue, for example, is whether the water needed to cultivate all "practicably irrigable acreage" is to be measured by today's technology and economic circumstances, or those prevailing on reservations 80 years ago.

Such issues aside, however, lawyers for non-Indians generally acknowledge that if the 1963 standard were "cast in stone," the Indians would have a very strong case.

"Those who really understand the situation understand that the Winters claims are very, very serious," says Jon L. Kyl, a lawyer at Phoenix's Jennings, Strouss and Salmon who represents a major non-Indian water user in the southern Arizona litigation. "And under the Supreme Court's clearest enunciation of the standard to date they would be very substantial. But reality has to filter into this somewhere."

"Reality," to Mr. Kyl and others, means some recognition that the Supreme Court "didn't know how little water there was compared to the number of claims that might be made." And recent Supreme Court cases, while not overturning the old standard, have referred to Indian rights as a "reasonable apportionment" of water necessary to ensure their livelihood.

"My hunch," says Prof. Albert E. Utton, who teaches Indian and water law at the University of New Mexico School of Law, "is that the court is moving from strict adherence to the practicably irrigable standard to a more equitable, balancing approach."

While Indian advocates acknowledge the bad omens, they are a long way from giving up on the Winters claims. "I understand the concerns," says John E. Echohawk, a lawyer and director of the Native American Rights Fund in Boulder, Colo., "because of the growing conservatism of the court. But whether they will actually back down I don't know because it's a very clear precedent, and it's rare that they back down from a precedent."

"We're certainly going to press our claims," adds Rodney T. Lewis, general counsel to the Gila River Indian Community, one of several major tribal claimants in the southern Arizona adjudication. "But the court may change the law."

The uncertainties on all sides of the Indian claims issue have generated considerable talk in the West of negotiated settlements. Many feel that what the Indians really need is "wet water" — the Western term for water that can be used — and that can come only through settlements that would compromise the paper rights in return for federal, state, local and private financial assistance for development projects.

"The needs for wet water and clear title have the potential for bringing people together," says Ms. Williams of Fried Frank, who is currently involved in a negotiation in South Dakota. But the problem, she and others say, is the federal government. Although official policy is to encourage negotiated settlements, lawyers on all sides complain that the policy is not being backed up with money.

One issue is Indian representation. The federal government often has proprietary water claims as a major landowner and fiduciary responsibilities to multiple tribes with competing claims in the same stream basin. As a result, Indians don't trust the Justice Department and the Department of the Interior's Bureau of Indian Affairs to represent their interests effectively.

They say it's almost impossible for them to negotiate intelligently without more funding to hire their own independent lawyers and experts. The government, on the other hand, feels it neither can nor should delegate its trust responsibilities and can't afford to "duplicate" efforts, according to Timothy Vollmann, associate solicitor for Indian affairs at the Interior Department.

But the biggest problem, most agree, is budgetary restraint on money for Indian development projects.

"The Interior Department is steadfastly refusing to put any money on the table," says Randall T. Cox, a Wyoming assistant attorney general who has been trying to work out a settlement of Indian claims in the Big Horn River stream basin. "Their people come to seminars and continuing legal education meetings out here and give great speeches about settlement, but then when we try to put a solution together it's just categorically ruled out."

Indians, Expor

Riparian and Prior Appropriation States

Map: Water Policy Report of the Western Governors Association

James M. Bush

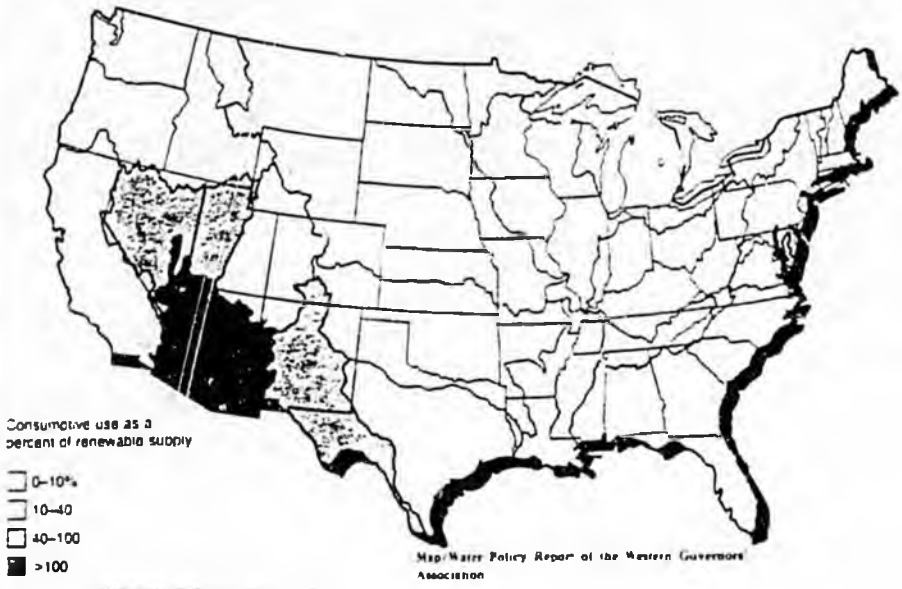
Mr. Bush, the managing partner at the Phoenix, Ariz., firm of Evans, Kitchel & Jenckes, P.C., heads an Indian water-rights committee of the Western Regional Council, a consortium of major resource-oriented companies. He urges negotiation and says pending lawsuits 'will result in the slowing down if not the complete frustration of every economic development proposal in the West because of uncertainty about who owns what.'

Randall T. Cox

An assistant attorney general in Wyoming who has been trying to work out a settlement of Indian claims in the Big Horn River basin; Mr. Cox's comments are typical of many who say the federal government created the problem and now isn't doing enough to solve it. 'The Interior Department is steadfastly refusing to put any money on the table,' he says. 'Their people come out here and give great speeches about settlement, but then when we try to put a solution together it's just categorically ruled out.'

Test Water Law

Use as Percentage of Renewable Water Supply



Map: Water Policy Report of the Western Governors Association

John E. Echohawk

Mr. Echohawk, a lawyer and director of the Native American Rights Fund, says the Indian water claims will be vigorously pursued but shares the concerns of others that the Supreme Court may be backpedaling on its standards for quantifying Indian water rights. 'Whether they will actually back down I don't know,' he says, 'because it's a very clear precedent and it's rare that they back down from a precedent.'

Charles F. Wilkinson

An Indian law and water law specialist currently teaching at the University of Colorado School of Law, Professor Wilkinson points out that Indian rights is not the only area of conflict in Western water law. A growing environmental ethic, he says, is making the water bar less monochromatic and challenging the consumptive philosophy that has long held sway. 'The pressures for development are creating scarcity, but so are the pressures for non-development,' he explains.

The result, argues Mr. Bloom, who was the attorney in the state engineer's office when New Mexico filed its Aamodt case in 1966, is "a mammoth Westwide legal gridlock."

WHILE IT ATTRACTS the most attention, the Indian water claims fight is hardly the only major legal battleground in Western water. Another key emerging issue, lawyers agree, is water export. With increasing regularity, proposals to take water from one state and use or sell it in another are challenging prior appropriation's tradition of state control.

"With increased water shortages, it has increased prominence," says Prof. Douglas L. Grant, who teaches water rights at the University of Idaho College of Law.

The area already has seen considerable controversy. A 1982 proposal, now on hold, to use available water from South Dakota in a coal-slurry pipeline to the East raised threats of litigation from downstream states.

A pending application from water-starved El Paso, Texas, to pump groundwater from southeastern New Mexico already has resulted in recent federal court decisions on two different anti-export statutes. And there is growing debate over a private consortium's plan to obtain water rights in Colorado and sell 300,000 to 500,000 acre feet a year to San Diego.

In 1982, the Supreme Court gave impetus to such plans with a ruling that water was an article of interstate commerce. Since then, lawyers say, it has become clear that long-standing "embargo" laws will be struck down, and the fate of subtler restrictions is increasingly unclear.

The trend has states with available water increasingly worried that they won't be able to husband it for their own future needs, and that prior appropriation — untrammeled by export restrictions — will allow the water to be gobbled up by out-of-state markets.

The prospect is not a popular one. In New Mexico, for example, Peter T. White, counsel to the state engineer, contends the El Paso plan will "undermine sovereignty," making his state's economic future a vassal to faster growth and poorer water management in Texas. So far, however, El Paso has had the better of the court battles. *El Paso v. Reynolds*, 80-730 (D. N.M.).

"If you put it in sovereignty terms, it was settled 200 years ago [when the interstate commerce clause was drafted] that you can not allow each state to be sovereign in economic terms," answers El Paso's lawyer, Pieter M. Schenkkan of the Austin, Texas, office of Houston's Vinson & Elkins. "We're going to get the water."

ALTHOUGH INDIAN RIGHTS and interstate export lead almost everyone's list of concerns, anticipated shortages have had broader effects on Western water law and lawyers.

In Arizona, for example, a comprehensive water-management code was adopted in 1980 as a condition for federal funding of the Central Arizona Project, an aqueduct bringing water from the Colorado River to the Tucson and Phoenix areas.

It includes mandatory conservation requirements for water users, notes Kathy Ferris, chief counsel to the state's Department of Water Resources, "and it's those kinds of things that create more need for lawyers."

In Texas, Mr. Schenkkan says shortages are creating "a lot of water-related business, and it's more and more varied." For example, he notes, as water costs have gone up, water rate cases — a mixture of contract law, utility law and water law — are "growing a great deal in importance."

To some, the changes represent the emergence of a conservationist and environmental ethic to challenge the consumptive philosophy that once held sway. "We are seeing an environmental perception of water clashing with the prior appropriation doctrine," says Professor Wilkinson.

He points, for example, to the gradual intrusion of federal environmental laws and policies into water quantity issues, and to a 1983 California Supreme Court case imposing a "public trust," senior to existing prior appropriation rights, to protect the environmental values of watercourses. *National Audubon Society v. Superior Court of Alpine County*, 656 P.2d 709 (1983).

"For people who see other uses than consumptive uses," he says, "it's a central case. The pressures for development are creating scarcity, but so are the pressures for non-development."

Mr. Bloom, who worked for a client on the losing side of the California case, agrees on its importance. "It could have a destabilizing, rippling effect throughout the West," he says. "I would be very surprised if environmental groups don't attempt to use it in other states."

And both men agree, as well, that such cases reflect the broader changes in what was once a narrow specialty.

"Even the nomenclature is changing," says Professor Wilkinson. "The water bar used to include only development lawyers, but now it includes lawyers for environmental groups, Indian tribes, all kinds of different people."

"When you serve notices on 1,000 people in Santa Fe [N.M.] for a general stream adjudication, lots of lawyers start getting questions and sooner or later they get a water practice," adds Mr. Bloom. "And that's what's happening throughout the West."

V

Resolution No. 86-5

Federal Reserved Water Rights Adjudication

The Alaska Water Resources Board fully recognizes the need for an administrative method of adjudicating Federal Reserved Water Rights. In the past, this Board has supported legislation which would implement an administrative procedure.

This support was given in the 1985 legislative session to SB 150. SB 150 would have provided the desired administrative adjudication process. It is this Board's understanding that the bill was not passed as a result of proposed general housekeeping revisions of the Alaska Water Use Act.

The ALASKA WATER RESOURCES BOARD supports legislation in the 1986 legislative session which would give Alaska an administrative process to adjudicate Federal Reserved Water Rights. Because of the problems associated with attaching the general housekeeping revisions to the adjudication bill, it is this Board's recommendation that the general revisions identified in SB 150 be removed from future legislation providing for administratively adjudicated Federal Water Rights.

Adopted this 13th day of September, 1985
ALASKA WATER RESOURCES BOARD

Cyril R. Wanamaker

Cyril R. Wanamaker, Chairman

SB 150 PROPOSED AMENDMENTS RESULTING FROM JANUARY 22, 1986 SENATE RESOURCES COMMITTEE HEARING

Section 46.15.040 (Note: Mike Frank is sending a letter clarifying the state liability question)

Amend subsection (d) to read: The commissioner's issuance of a permit under AS 46.15.080, or of a certificate under AS 46.15.065 or AS 46.15.120, does not represent a guarantee by the state to the permittee or certificate holder that water will be available for appropriation at a certain volume, quality, artesian pressure, or cost. This subsection does not, however, alter any rights a permittee or certificate holder may have against later appropriators, including governmental agencies.

Section 46.15.165(c)

Add a new subsection (7) to read: serve the order on all mining claimants of record with the United States and the State as of the date of the order initiating the administrative adjudication. Failure of the commissioner to notify mining claimants under this subsection shall not disable the commissioner from otherwise adjudicating the rights of parties in the adjudication

(Note: If there is a way to avoid opening the door to notice to special interests groups, we should do so. Records of mining claimants are fairly easy to obtain; however, title searches for other landowners within a basin would be very time consuming and expensive. However, Frank Homan advised me he doesn't believe Senator Fahrenkamp will accept the bill without this. The last sentence is to provide for the situation where DNR may miss a mining claimant during the record search and to allow the adjudication to continue given the omission.)

Section 46.15.165(c)(3)

Amend this subsection to read: (3) serve the order on any person who owns or claims land within the adjudication area if the land is held in trust by the United States for the person or if the patent, deed or certificate to the land from the United States was issued pursuant to 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), or any other allotment act, or the Alaska Native Townsite Act of May 25, 1926, 44 Stat. 629, and serve the order on the United States on behlf of any such person;

(Note: Bruce Landon, U.S. Dept. of Justice, worked with Mike Frank and has approved this language. We should explain in the letter that notice to specifically named agencies, such as the Bureau of Indian Affairs (BIA) can be named in the implementing regulations to keep the statute uncluttered by numerous references to numerous federal agencies. In any case, notice to the federal government of any trust land that might have federal reserved water rights must be served primarily on the U.S. Justice Department.

Section 46.15.165(c)(6)

Amend this subsection to read: (6) serve any regional corporation or village corporation established under the Alaska Native Claims Settlement Act, 43 U.S.C. §§1601-1628, which has pending land selections or acquired ownership to lands under that Act which are located within the adjudication area; and

MM FRANK

MEMORANDUM State of Alaska

Department of Natural Resources, Division of Land and Water Management

TO: Commissioner Wunnicke
Deputy Commissioner Arnold
Deputy Commissioner Barnett
Water Board Members
Regional Managers and Water Officers

DATE: June 5, 1985

FILE NO: FILE #610.4

PHONE NO: 265-4318

FROM: L.A. Dutton
Chief, Water Management

SUBJECT: "Reserved Instream Flows in the National Forests: Round Two"

This article, reprinted with permission from the Western Natural Resources Litigation Digest, provides some valuable insights to instream flow reservations as federal reserved water rights. The article is pertinent to Alaska's water resource managers because of the two national forests in Alaska (the two largest in the country) and because the federal reserved water rights in these national forests will eventually be adjudicated.

We thought you would find it of interest.

LAD:kmb

Enclosure

cc: Tom Hawkins
Mike Frank
Bob Martin
Dan Easton
Christopher Estes
Ann Puffer
Bill Long
Mike Vediner

RESERVED INSTREAM FLOWS IN THE NATIONAL FORESTS: Round Two

by Steven J. Shupe*

INTRODUCTION

The role of water arising upon federally owned lands is of critical importance to the economy and the environment of the Western states. It has been estimated that 61 percent of the West's water supply originates on federal land, with more than 95 percent of the population depending upon such water to some extent. 1/ In certain regions, this dependency is nearly absolute. For instance, in the Rio Grande area 77 percent of the average runoff originates on federal reservations, while 96 percent of the Upper Colorado River derives from such lands. 2/

The lands reserved within the National Forest system are by far the most significant factor in this water supply picture. Runoff from the National Forests account for nearly nine-tenths of the total water originating upon federal lands in the West 3/ — runoff that is critical to supplying the thirsty cities, farms, and industries throughout this region. Not only have water users come to depend upon utilizing this water after it flows down from the forests, but many users have also invested in diversion works that withdraw water from within the National Forest land itself. Traveling through the mountains of the West, thousands of such reservoirs, ditches, and canals are encountered in the National Forests of the region.

In 1970, the seeds of a threat to these diversions were planted during a general stream adjudication in New Mexico, wherein the United States claimed a reserved right to flows in the Gila National Forest for the purpose of maintaining the stream environment. Such instream flow rights were claimed to have a senior

1/ Public Land Law Review Commission, "One Third of the Nation's Land," A Report to the President and to the Congress, (1970) at 141.
2/ **United States v. New Mexico**, 438 U.S. 696, 699 (1978).
3/ Public Land Law Review Commission, (n.1) at 141.

* *Mr. Shupe is a water lawyer and consultant based out of Denver. He was formerly an Associate at the Denver law firm of Davis, Graham & Stubbs, before joining the Natural Resources Section of the Colorado Attorney General's Office, where he was involved in researching issues discussed in this article. He has also worked as an engineer for the Water and Land Resources Department of Battelle Northwest, Richland, Washington. He received a B.S. in Civil Engineering (1974) and an M.S. in Environmental Engineering (1975) from Stanford University and a J.D. from the University of Oregon (1982).*

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priority relating back to the date when the forest reservation was created. As a consequence, during times of water shortages, they would preclude continued diversions by those users who subsequently had come to rely upon withdrawing streamflows above or within the forest boundary. Such a claim for senior instream rights, if successful, would have had enormous implications upon Western water users. It is not surprising that many states joined as amica curiae when the case reached the Supreme Court.

A collective sigh of relief was breathed by numerous water interests in the West when the Supreme Court issued its decision in **United States v. New Mexico.** 4/ The Court held that no reserved instream flow rights for environmental purposes existed within the National Forests, since the primary purpose of the forest reservations was statutorily limited to protecting the watershed and the timber resources. This ruling appeared to free both current and future water development from the potential constraints and uncertainties posed by reserved instream flow rights within the National Forests. Such a conclusion, however, was soon to prove false.

In Colorado, Round Two of the battle for reserved instream flows is currently taking shape. This article describes that battle, detailing both the technical and legal bases for the new claims of the Forest Service to instream flow rights. The article begins by presenting a background for these claims, summarizing the reserved rights doctrine and the historical role of water in the establishment of the National Forest system. It then describes the status of the federal claims to instream flows in the National Forests, including the current battle in Colorado. The discussion concludes with an analysis of the probable outcome of Round Two of this conflict, and with some suggested alternatives to protracted litigation.

WATER IN THE ESTABLISHMENT OF THE NATIONAL FOREST SYSTEM

Based on military needs, the first forest legislation in the United States in 1817 gave authority to the president to preserve oak timber on public lands for the Department of the Navy. 5/ It was not until the middle of that century, however, that general concern developed in Washington over the destruction and waste of the nation's timber. The first official federal concern was expressed in 1849 in the Report of the Commissioner of Patents:

"The waste of valuable timber in the United States will hardly begin to be appreciated until our population reaches 50 million. Then the folly and shortsightedness of this age will meet with a degree of censure and reproach not pleasant to contemplate." 6/

Although much lip service was paid to the idea of forest protection, and a bit of weak legislation was enacted over the subsequent decades, it took until 1891 for a federal bill to pass which authorized the president to withdraw lands from the public domain as timber reserves. 7/ This legislation was superceded by the Organic Administration Act of 1897 (30 Stat. 34) which defined the parameters upon which forest reservations could be established:

"No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water

4/ 438 U.S. 696 (1978).
5/ 3 Stat. 347 (1817), as amended by 3 Stat. 607 (1820).
6/ Report, Com'r of Patents, 1849, Part II, p. 41.
7/ Creative Act of March 3, 1891; 26 Stat. 1095.

flows, and to furnish a continuous supply of timber..." 8/

Under the authority of the 1897 Organic Act, as limited by the above provision defining the purposes of the reservation, millions of acres of forested land were subsequently removed from the public domain.

In studying the legislative history of this important Act, it is clear that protection of timber and the timber industry was not foremost in many Congressional minds. Rather, a strong force behind the Organic Act was the knowledge that:

"As long as the forests stand, the branches, fallen leaves, and roots will hold much of the rain and snow until summer, and thus furnish water not only for navigation of our rivers, but also for the irrigation of the deserts." 9/

In succinctly paraphrasing his colleague from Colorado, Representative Ellis of Oregon concluded that "the purpose of his forest reservations is not to save the timber for future use so much as to preserve the water supply." 10/ This sentiment was echoed by the California delegate's statement that ". . .the only object of the forest reserves in this State of California is to retain the snows upon the mountains . . ." 11/

Lessons from many areas of the United States had made Congress painfully aware that forests "are necessary to prevent destructive spring floods, and [to supplement] periods of low water in summer and autumn when the agriculture of a large part of western North America is dependent upon irrigation." 12/

Because of this realization, Western legislators were willing to submit to the establishment of the forest reservations in order to protect their water resources. They also chose, however, to enact protections to insure their continued ability to use the water arising on these reserved lands. The Organic Act, as passed in 1897, included the provision that:

"All waters within the boundaries of national forests may be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such national forests are situated..." 13/

Protections were also enacted to insure the necessary access to make diversions of water from the National Forest lands. In the bill encompassing the Creative Act of 1891, provisions were included to allow public entry on reserved lands in order to gain rights-of-way for irrigation works. 14/ Then in the Act of February 15, 1901, 15/ Congress provided for rights-of-way in National Forests for water developments of any sort, not just for irrigation purposes. This was done in order to correct "the anamoly that while forest reserves are being set aside to preserve watersheds and increase the water supply, the same legislation has denied its use in and for the industries calculated to be

8/ Codified at 16 U.S.C. 475.
9/ Rep. McRae, 30 Cong. Rec. 966 (1897).
10/ Rep. Ellis, 30 Cong. Rec. 1007 (1897).
11/ Rep. Loud, 30 Cong. Rec. 1399 (1897).
12/ S. Doc. No. 105, p. 36, 55th Cong., 1st Sess. (1897).
13/ Codified at 16 U.S.C. § 481.
14/ 26 Stat. 1095.
15/ 31 Stat. 790.

benefitted thereby." 16/ The bill corrected this anamoly of access limitations by "extending the opportunities to use the waters to mining, electrical, domestic, public and other beneficial uses." 17/

As a consequence of these Congressional actions, including the reservation of millions of acres of forest lands, Western water users at the turn of the century felt secure in both their legal and physical ability to develop and use unappropriated water within the National Forests.

In 1908, however, the Supreme Court gave birth to a doctrine that has since put a cloud on this expectation.

THE RESERVED RIGHTS DOCTRINE

As miners and settlers moved West in the mid-Nineteenth Century, the common law system of riparian water rights proved to be inappropriate. Although vestiges of this system remain in the West, each of the Western states currently utilizes the prior appropriation system as its primary guide in allocating the use of water. This system is based upon that oft-quoted phrase, "first in time, first in right." In other words, limited water resources are allocated in accordance with users' respective priority dates — dates that are generally established in accordance with when the water was first applied to a beneficial use. The user with the earlier priority date (i.e., the one who first put the stream to beneficial use) has the senior right to utilize the water, thereby precluding junior users from any such use during times of shortfalls. This system differs from early common law in that under the riparian doctrine, upstream users are allowed to utilize the streamflow only to the extent that their use does not inhibit further utilization downstream.

By the late 1800's, the prior appropriation system was well established, having been recognized by the Supreme Court as a valid exercise of states' power to override an inappropriate common law doctrine. 18/ In the dicta of the **Rio Grande** case, however, the Court stated a limitation that would soon prove important to water users under the prior appropriation system:

"[I]n the absence of specific statutory authority from Congress a State cannot by its legislation destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses of the government property." 19/

In 1908, this concept blossomed into the **Winters** doctrine — and the reserved rights doctrine -- much to the dismay of many Western water users. 20/ In **Winters**, the court granted a water right associated with the Fort Belknap Indian Reservation with a priority date that was senior to water users who had already put water to beneficial use. The court looked to the date that the reservation had been established and concluded that, at the very least, Congress had at that time impliedly reserved sufficient water along with the land in order to fulfill the needs of the

16/ H. Rep. No. 1850, 56th Cong., 1st Sess. (1900).
17/ Ibid.
18/ **United States v. Rio Grande Ditch & Irrigation Co.**, 174 U.S. 690 (1899).
19/ 174 U.S. at 703.
20/ **Winters v. United States**, 207 U.S. 564 (1908). The Winters Doctrine is used to refer to water associated with Indian reservations while the Reserved Rights Doctrine is applicable to waters of non-Indian federal reservations. Although they are based on the same concept, subtle (but potentially important) distinctions exist between the two doctrines.

reservation. Such water was not available for later appropriation under state law; thus those non-Indians who had in fact been using it would now have to relinquish it to the tribes.

In 1939, the Court reaffirmed this concept regarding tribal lands, 21/ then later hinted that the doctrine may also apply to other types of federal reservations. 22/ It was not until 1963, however, that the reserved rights doctrine became firmly entrenched in all federal reservations. In **Arizona v. California**, 23/ the Court concluded that the principle espoused in the **Winters** case "was equally applicable to other federal establishments such as National Recreation Areas and National Forests."

The Court clearly affirmed this statement in Cappaert v. United States, 24/ when it protected well pumping in order to protect water that had been reserved to protect the ancient desert pupfish in Devils Hole National Monument. In its decision, the Court refined the reserved rights doctrine in several ways. It identified Congressional intent as the key factor in determining whether a reservation was made; it limited the quantity of water reserved to the minimum amount needed in order to fulfill the federal reservation's purpose; and it rejected balancing the equities in cases like this.

It was in this context that the Supreme Court in 1978 rejected the Forest Service's claim to reserved instream flow rights in **United States v. New Mexico.** Since preservation of the amenities of the forest environment was not a primary purpose under the Organic Act of 1897, no water was reserved for such use under the reserved rights doctrine. A reserved water right could only be established in order to further the primary purpose of the National Forests, which the Court found to be limited to the pragmatic function of timber protection and to secure favorable water flows for private and public uses. 25/ Thus ended Round One of the Forest Service's attempt to gain instream flow rights.

ROUND TWO: INSTREAM FLOWS FOR CHANNEL MAINTENANCE

The Forest Service quickly ascertained the direction in which Round Two would need to progress in its attempt to obtain reserved instream flow rights. Somehow, the requested instream flow would have to be claimed as being necessary to fulfill the primary purpose of the National Forests -- either to secure favorable condition of water flow or to furnish a continuous supply of timber.

The early attempts at developing this relationship between instream flows and the primary purpose of the forests were hastily conceived and proved uncompelling to the courts. For instance, it was argued that stream banks wetted by instream flows were less susceptible to erosion during high runoff and inhibited the spread of fire. 26/ In another case, Forest Service personnel defended the position that instream flows were necessary for timber protection because "trees growing next to

21/ **United States v. Powers**, 305 U.S. 527 (1939).
22/ **Federal Power Commission v. Oregon**, 349 U.S. 435 (1955).
23/ 373 U.S. 546, 601 (1963).
24/ 426 U.S. 128 (1976).
25/ 438 U.S. at 718.
26/ **State ex rel. Reynolds v. Lewis**, Case Nos. 20294 and 22600, Chaves County, New Mexico.

benefitted thereby." 16/ The bill corrected this anamoly of access limitations by "extending the opportunities to use the waters to mining, electrical, domestic, public and other beneficial uses." 17/

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the creek . . . are going to get more water." 27/

During the time that these arguments were failing to convince judges to decree reserved instream flow rights, hydrologists of the Forest Service were busy developing a more credible, scientific basis for these claims. What has resulted is the claim that: (1) instream flows of a certain magnitude are needed to transport sediment downstream; (2) transport of a stream's sediment load is required in order to maintain a viable stream channel; and (3) viable stream channels are essential in securing favorable condition of flow from the National Forests.

In short, the United States asserts that reserved instream flow rights exist in the National Forests to the extent necessary to move sufficient sediment to insure favorable water conditions. If such instream flows are not available, sediment clogs the stream channel which in turn leads to erosion of the stream banks, increased meandering, encroachment of vegetation, and the potential for flooding. The value of the water arising from the forest lands is therefore diminished in terms of both quality and timing, and the reserved lands lose their capacity to secure favorable conditions of flow. 28/

The United States first tested the waters with this argument in northern Wyoming. 29/ It claimed reserved instream flow rights in streams throughout the National Forest lands in the Big Horn Basin. The claim was based upon calculated flows of sufficient quantity to transport the suspended sediment downstream.

The Forest Service had determined that instream flows were needed year-round for this purpose. In quantifying its claims, the Service broke the annual runoff cycle into four components. 30/ The first component began during the early spring runoff when the stream flow first reaches the average annual flow rate. The U.S. claimed this flow and then increased the claim in small increments over the next month up to bankfull level, which is about ten times the average annual flow rate. This second component (called bankfull discharge) was then maintained for roughly three days. The recession component then followed, wherein the U.S. claimed incrementally less flow over the next month as the natural runoff diminished. During the remaining ten months of the yearlong cycle, a baseflow component was claimed amounting to 10 percent of the average annual flow rate.

The Forest Service estimated that the requested instream flows were responsible for transporting more than 80 percent of the total sediment load downstream, thereby insuring that the channel degradation would not occur. 31/ The cost in terms of the necessary water, however, was enormous; the requested instream flows amounted to 78 percent of the total average annual runoff from the

27/ **United States v. Denver**, 656 P.2d 1 (Colo. 1982), n. 35, at 22.
28/ United States Forest Service, "A Procedure and Ratio ale for SECURING FAVORABLE CONDITIONS OF WATER FLOWS on National Forest System Lands in Northern Wyoming," Draft Report (1982).
29/ **In re the General Adjudication of All Rights to Use Water in the Big Horn River System and All Other Sources**, Civil No. 4993, District Court of the Fifth Judicial District, State of Wyoming.
30/ United States Forest Service, n. 28.
31/ Id.

basin. 32/ Such a demand would severely limit diversions from within the National Forests and essentially foreclose the possibility of viable operation of major reservoirs within or above the forest boundaries.

The State of Wyoming did its homework in this case and effectively deterred the U.S. from taking these claims to trial. Depositions of Forest Service personnel were used effectively to highlight the fact that the channel maintenance theory was still in the formative stage, and that the instream flow claims based on the theory would be difficult to defend in court. Subsequently, Wyoming and the United States entered into a stipulation that many consider to be a complete victory for the state. Although the reserved instream flow claims are listed for numerous streams, the United States subordinated these rights to all existing water uses as well as to large scale future development that will cause additional depletions to the National Forest streams. 33/

THE BATTLE IN COLORADO

After learning the lessons of Wyoming, the United States has taken its channel maintenance theory and instream flow claims to Colorado with a good deal more preparation and confidence. In various water courts in the state the U.S. has filed for reserved instream flows and reserved lake levels using the following language:

"United States of America claims reserved rights to those instream flows in streams, creeks, and rivers and natural levels in lakes and other water bodies...which are necessary to fulfill the purposes for which this national forest was established, to wit: securing favorable conditions of water flows and to furnish a continuous supply of timber. The uses of water necessary to fulfill the aforestated purposes include, but are not limited to: growth, management, and production of timber; flood control; soil conservation; erosion control; and watershed and stream channel protection." 34/

After making these filings, Forest Service personnel worked to quantify the amount of water needed in the streams of the National Forests within Colorado in order to move the sediment and maintain channel integrity. In November, 1984, they submitted the first set of numbers to the Water Court with jurisdiction over water matters in the northeastern portion of the state. 35/ These claims were of the same basic nature as those seen in Wyoming, reflecting large quantities for instream flows during the spring runoff season and a smaller baseflow component during the remainder of the year. As was feared by many Colorado water users, the claims also amounted to a vast percentage of the total runoff available for diversion from the forest lands.

The State of Colorado and other objectors to the instream flow filings are attempting to win this Round Two without getting bogged down in the scientific aspects of the channel maintenance theory. Instead of hiring hydrologists for expert witnesses and gearing up for protracted litigation on the merits of instream flows' role in

32/ Id. at 49.
33/ Stipulation in Civil No. 4993, supra.
34/ E.g., **In the Matter of the Application of Water Rights of the United States of America in Water Division No. 2**, Case No. 81CW220, District Court, Water Division No. 2, State of Colorado.
35/ E.g., **Amended Application for Confirmation of Reserved Water Rights in Boulder, Gilpin, and Larimer Counties**, Case No. W-8439-76, District Court, Water Division No. 1, State of Colorado.

sediment transport and channel maintenance, the state has filed a motion for summary judgment. In the motion, the state asserts that even if the scientific theory is valid, no instream flows rights for sediment transport can be established under the reserved rights doctrine. The argument focuses on the Colorado Supreme Court holding in **United States v. Denver**, 36/ that Congress intended that the National Forests be established in order to protect and promote use of the water from the forest lands -- a goal that would in many instances be hindered by an instream flow reservation that precludes use of the lawful reservoirs and ditches established within the forest boundaries.

Although there has been some discussion of possible subordination of the instream flows to existing water diversions within the National Forests of Colorado, the United States has made it clear that it is not willing to consider the broad-brush subordination that was stipulated to in Wyoming. The Forest Service stands ready to carry its scientific methodology and legal theories to court in an attempt to obtain reserved intream flow rights in Colorado — and throughout the West. 37/

ALTERNATIVES TO LITIGATION

In light of the recent developments in the reserved rights doctrine in the Supreme Court, it is doubtful that the United States will be able to overcome the legal hurdles it faces in obtaining National Forest instream flow rights. First, the Court has made it clear that federal reserved water rights must reflect the intent of Congress, either expressed or implied. The U.S. will have a difficult time convincing the Court that a reservation of more than half the water of the National Forests would have been acquiesced to by the 1897 Congress, even if the legislators had been aware of the need for such instream flows in order to maintain the stream channels. Such a conclusion is directly contrary to the expressed intent of Congress to allow Western water users to capture and divert water within the forest lands.

The United States will also face the standard of "minimal need" set forth in **Cappaert**. In **United States v. New Mexico**, the Court restated and refined this standard regarding when, and how much, water can be deemed reserved:

"While many of the contours of what has come to be called the 'implied-reservation-of-water doctrine' remain unspecified, the Court has repeatedly emphasized that Congress reserved 'only that amount of water necessary to fulfill the purpose of the reservation, no more.' [Cites omitted.] Each time this Court has applied the 'implied-reservation-of-water doctrine,' it has carefully examined both the asserted water right and the specific purposes for which the land was reserved, and concluded that without the water the purposes of the reservation would be entirely defeated." 38/

Can the U.S. actually show that without the requested instream flows, the National Forest purposes will be defeated? Probably not. Without the reserved instream flow rights, water users will simply be able to continue storing and diverting runoff from within the forest boundaries — a result that is actually consistent with the reservation's purposes rather than

36/ Supra, at n. 27.
37/ The United States has recently filed similar claims in general stream adjudications in Utah, and has begun negotiating with officials in Montana regarding reserved instream flows in the areas's National Forest.
38/ 438 U.S. at 700.

contrary to them. It will indeed take a compelling argument by U.S. attorneys to convince the Court to rule otherwise.

The fact that the Forest Service is unlikely to prevail under the reserved rights doctrine does not negate the important issues raised by its claims. In many parts of the West, the problems with stream channel degradation are increasingly evident as spring runoff floods out of clogged beds. Such flooding results in property damage as well as in waste of precious water as it spreads out of its banks and is consumed or evaporated nonbeneficially. Such damage and waste is of growing concern to water planners in Western states, and will require serious attention in the coming years.

The legal framework already exists in which both the states and the Forest Service can work to mitigate this problem. In areas where the flooding, water quality, and waste problems are identified in the National Forest, the United States could work cooperatively with the states to obtain the necessary instream flows to prevent aggravation of the problem. Many Western states already have instream flow programs in place which can accommodate such needs to protect the natural stream environment. In addition, cooperative efforts could be initiated with the water users and property owners who are being adversely impacted by the channel clogging problem.

The Forest Service does not, however, need to rely on others' good faith alone in order to pursue its goals under existing law. If Forest Service personnel identify streams in which additional diversions will cause channel degradation problems, they have the authority to make the developer accommodate instream flows through administrative permitting processes. The courts have long recognized the validity of special use permits issued by the Forest Service (through the Secretary of Agriculture) for construction projects within forest boundaries:

"Broad authority is conferred by 16 U.S.C.A. §§ 497 and 551 for the Secretary to issue use permits under such regulations as he may make and upon such terms and conditions as he may deem proper. This grant of authority seems clearly valid in view of Congress' power over public lands and the conditions that may be on their use." 39/

In 1976, Congress directly addressed the issuance of permits in the National Forests associated with rights-of-way for water developments. Under 16 U.S.C. § 1761(a)(1), the Secretary is authorized to "grant, issue or renew rights-of-way over, under, or through such lands for reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other facilities and systems for the impoundment, storage, transportation, or distribution of water." It is unlawful for a water developer to proceed without such a permit and the Secretary may deny it if the requested right-of-way would defeat the primary purpose of the forest reservation. Also, 16 U.S.C. § 1765(a)(ii) places an affirmative duty on the Secretary to incorporate into the right-of-way "terms and conditions which will minimize damage to . . . fish and wildlife habitat and otherwise protect the environment." Subsection (b) follows by granting to the Secretary the ability to design additional terms and conditions for the protection of the federal lands and the public interest therein.

Application of these existing powers could facilitate site-specific solutions in National Forest areas where additional diversions will aggravate channel degradation problems. The Forest Service could write into the right-of-way permit specific requirements for minimum bypasses of

39/ **Sabin v. Butz**, 515 F.2d 1066 (10th Cir. 1975).

streamflow that are needed to protect the stream environment. Ideally, these could be developed in cooperation with states and local water users. But if litigation were to follow that attacks the channel maintenance theory upon which the in-stream flow levels are predicated, the Forest Service would carry administrative presumptions of validity into trial, instead of the heavy burden of overcoming the hurdles it faces in the current reserved rights litigation.

CONCLUSION

It may be naive to believe that the United States would forego its ongoing claims for reserved instream flow rights in order to cooperatively address a problem facing the Western states. The federal litigants are motivated by an honest belief that they have a valid claim worth pursuing in court. One can hope, however, that the states, water users, and the federal government will soon come together to assess this problem of channel degradation and the waste and damage it can cause. Government lawyers and expert witnesses may shortly expend hundreds of thousands of tax dollars, both federal and state, in order to pursue adversary legal positions on what is actually a mutual problem.

Such money could be used instead to begin solving this problem that the Forest Service has brought to light through its claims. Onsite projects could be funded in order to alleviate past damage to natural stream channels. Likewise, administrative actions can be initiated through the existing legal framework (i.e., rights-of-way permits and state instream flow programs) to mitigate future channel degradation problems where necessary.

It is probable that the momentum of litigation in Colorado will prevent such a refocusing of resources there. But as Round Two of the battle for instream flows in the National Forests spills over into other states, those responsible for water resources — on both state and federal levels — should consider the alternatives available for its protection, management, and use.

ATTORNEY POSITIONS AVAILABLE

The Colorado State Attorney General's Office has openings for up to a dozen qualified attorneys with a minimum of two years litigation experience for federal district court hazardous waste litigation. Please send a resume and writing sample to: Janet L. Miller Office of the Attorney General, 1525 Sherman Street, Denver, CO 80203.

Franc. SB150

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

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September 27, 1985

The Honorable Arliss Sturgulewski
Alaska State Senate
2957 Sheldon Jackson Street
Anchorage, AK 99508

Dear Senator Sturgulewski:

Enclosed is an updated 1985-1989 copy of the Alaska Water Resources Evaluation (AWARE) 5-Year Plan, compiled by the U.S. Geological Survey and the Alaska Division of Geological and Geophysical Surveys. This cooperative effort is updated annually in order to accurately summarize the water resources related programs being conducted, and those that are needed, throughout the State of Alaska.

Demand for water resources data are increasing yearly. There never are enough data. Persons using the hydrologic information generated by the AWARE program, or those needing data not addressed, are encouraged to suggest changes to us. Current budgetary cutbacks threaten completion of some projects and tasks outlined in this plan in spite of increased efficiency of the DNR water resources hydrologists.

Sincerely,

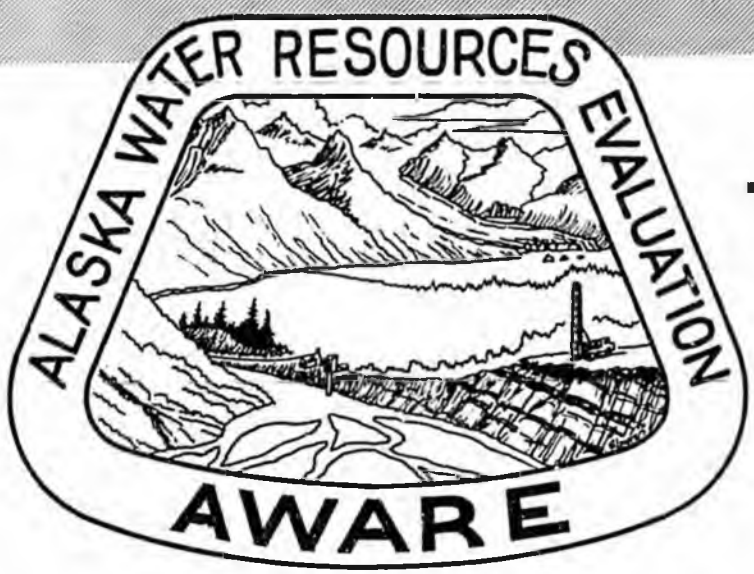
William E. Long

William E. Long
Chief, Water Resources Section

/jlw

Enclosure

5-YEAR PLAN



1985-1989

ALASKA DEPARTMENT OF NATURAL RESOURCES
Division of Geological and Geophysical Surveys

U.S. GEOLOGICAL SURVEY
Water Resources Division

ALASKA WATER RESOURCES EVALUATION

5-YEAR PLAN

1985-1989

Prepared jointly by

Division of Geological and Geophysical Surveys,
Department of Natural Resources, State of Alaska

and

Water Resources Division, U.S. Geological Survey,
Department of the Interior

June 1985

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INTRODUCTION

"One could write the story of man's growth in terms of his epic concerns with water. Through the ages people have elected or been compelled to live in regions where water was either deficient in amount, inferior in quality, or erratic in behavior.....(Yet) people have always preferred to meet their water troubles head on rather than quit their places of abode and industry, and.....applied their creative imagination and utilized their skills.....to find, develop, and maintain suitable water supplies.....We must pool our efforts if we expect to apply appropriate and durable prescriptions for our water ills."

(excerpts from "The Story of Water as the Story of Man," by Bernard Frank, in U.S. Dept. of Agriculture Yearbook, 1955)

The Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys (DNR-DGGS), and the U.S. Geological Survey, Water Resources Division (USGS-WRD) have developed a statewide program for water-data collection and hydrologic studies called AWARE (Alaska Water Resources Evaluation). This document is a summary of the current and proposed future (through 1989) plan for hydrologic basic data collection and study activities in Alaska by these two agencies and will help define the Statewide Natural Resources Plan. Reference to related activities and programs of other agencies and institutions (Federal, State and Municipal) is also included.

It is emphasized that this is a plan, and that accomplishment of its goals and objectives (p. 6-7) will depend on the continued support and participation -- in terms of funding and available personnel -- of all agencies involved. These factors are, of course, subject to changing economic conditions, priorities, and policy decisions at all levels of government.

Water Resources Data

Although at first glance Alaska's rivers, lakes, snowfields, glaciers, and even muskeg and wet tundra areas seem to offer "water, water everywhere", a useable supply may not be available at a given time and place -- winter on the North Slope, for example. Too much water at the "wrong" time and place means flooding. Water may not be of suitable quality for its intended use or may be subject to contamination. Avoiding, or at least lessening the effect of such problems, even in the presence of abundant water, requires an understanding of the water resource -- its occurrence, movement, and availability -- as well as planning and management of its use. The basis for that understanding is an adequate bank or store of water resources data.

Water resources data are needed to effectively plan for and manage uses of water such as private, municipal, commercial, and industrial supply; recreational activities; hydroelectric power generation; irrigation; placer mining; and numerous other activities. Water data are analyzed to develop criteria for the protection of aquatic environments that support Alaska's all-important commercial and recrea-

tional fisheries and to predict the probable occurrence and severity of hydrologic hazards such as floods, erosion, and drought. Measurements and observations of hydrologic features and phenomena -- glaciers, icings, permafrost, ice-jam and glacier-outburst flooding -- unique to Arctic regions, and thus common in Alaska, are critical to the effective utilization of the State's water resources.

The U.S. Geological Survey first started systematic collection of hydrologic data in Alaska Territory in the late 1940's and the Water Resources Division of the USGS dominates Alaskan water data collection today. After statehood, the Division of Geological and Geophysical Surveys (DGGS) of the Alaska Department of Natural Resources became the Alaskan equivalent of the USGS and is the designated State agency responsible for water-resources data collection.

Agencies at all levels of government, universities and their associated institutes, many private enterprises, and individuals must have adequate information about water resources to conduct their activities. A primary user of water data is the Division of of Land and Water Management of DNR, the agency responsible for adjudication of water rights and management of water use in Alaska. Coordination of water-data collection and management has become a major concern. This plan is a response to that concern.

AWARE 5-Year Plan

The AWARE 5-year plan complements and defines the DNR Statewide Natural Resources Plan which sets our Water Resources Inventory and Water Management goals and objectives. A Memorandum of Agreement between USGS-WRD and DNR-DGGS states the need for a comprehensive program to provide for the coordination of water-data collection and water resources study activities in Alaska. The Memorandum specifies that a 5-year plan for such a program be prepared, reviewed and updated annually.

This plan has been prepared by DNR and WRD hydrologists and water managers using input from other State and Federal agencies, particularly Alaska Division of Land and Water Management. The progress, status, and future needs for data collection and hydrologic studies in Alaska were primary considerations. State and Federal agencies directly involved in water-related activities or in need of or using water data have been contacted. Responses from those agencies, along with the results of the joint USGS-DGGS review of the AWARE program, have been incorporated in this revised 5-year plan. 1/

Unique aspects of Alaskan water resources have been included in the plan. Mid-winter river overflow icing, ice-jam flooding during spring breakup, snow surveys over 20 degrees of latitude, the effect of glaciers and outburst flooding on streamflow characteristics, analysis of permafrost terrain and its related hydrology, and the interactions between glaciers and volcanoes are examples of hydrological subjects which are rarely found elsewhere in the United States. In

1/ Due to the schedule set for issuing this document, contributions and/or updates were not received for all agencies. The Responsible Agency shown in the Related Programs sections should be contacted for further details on programs listed or for information on other ongoing or proposed projects.

the State of Washington considerable attention is paid to snow and glacier ice as important parts of the hydrological cycle. In Alaska we must focus even more on these aspects. (In April 1985, a "Workshop on Alaska Hydrology: Problems Related to Glacierized Basins," organized by the University of Alaska's Geophysical Institute, brought together scientists from Alaska and other states, Canada, and several European countries.) Future revisions of this plan will undoubtedly give increasing emphasis to unique Alaskan processes.

Plan Revision

A fundamental part of the AWARE program is the development and implementation of a plan to fulfill the data and information needs of all Alaska water users. In order to be successful, the program must include input from all groups or individuals who need or use water or water data. Participation in the continuing revision of and comments on this plan are welcomed by the DGGS and USGS. Suggestions for additions or other changes should be brought to the attention of:

Chief, Water Resources Section
DNR/DGGS
P.O. Box 77-2116
Eagle River, AK 99577

District Chief
USGS/WRD
4230 University Drive, Suite 201
Anchorage, AK 99508-4664

Acknowledgments

In addition to the ADNR-Division of Geological and Geophysical Surveys, Division of Land and Water Management, and the USGS-Water Resources Division, the following agencies are either involved in or provide funding for water resources study activities in Alaska. Their support of and participation in AWARE are critical to the success of the plan.

Federal

Bureau of Land Management (BLM)
U.S. Army, Corps of Engineers (USCE)
U.S. Environmental Protection Agency (USEPA)
U.S. Forest Service (USFS)
National Park Service (NPS)
National Weather Service (NWS)
Public Health Service (PHS)
Soil Conservation Service (SCS)
Cold Regions Research and Engineering Laboratory (CRREL)
U.S. Fish and Wildlife Service (USF&WS)
  Alaska Cooperative Research Fisheries Unit (ACRFU)

State of Alaska

Department of Natural Resources (DNR)
  Division of Agriculture (DA)
  Division of Mining (DM)
  Division of Forestry (DF)
  Division of Parks (DP)
Department of Environmental Conservation (DEC)
Department of Fish and Game (DF&G)
Department of Transportation and Public Facilities (DOT&PF)
Department of Commerce and Economic Development (DC&ED)
  Alaska Power Authority (APA)
  Agricultural Action Council (AAC)

Industry

U.S. Borax (USB)

Department of Community & Regional Affairs - Division of Municipal and Regional Assistance
Geophysical Institute, University of Alaska (GI)
Institute of Water Resources/ Engineering Experiment Station, University of Alaska (IWR/EES)
Arctic Environmental Information and Data Center, University of Alaska (AEIDC)

Local

Municipality of Anchorage (MOA)
Elfin Cove
Fairbanks North Star Borough (FNSB)
The City and Borough of Juneau (JCB)
Kena Peninsula Borough (KPB)
Matanuska-Susitna Borough (MSB)
North Slope Borough (NSB)
City of Petersburg
City of Sitka
City of Wasilla

ALASKA'S WATER RESOURCES

Glacier ice covers 17,000 square miles in Alaska, about 5 percent of the total area of the State. However, seasonal snow forms a veneer on most of Alaska for one-half to three-quarters of the year, and the freezing and thawing of water affect virtually all of the State to some extent.

Surface Water

Surface waters of Alaska include many large rivers. The Yukon River ranks fifth in size in the United States, and six Alaskan rivers (Yukon, Copper, Stikine, Susitna, Kuskokwim, and Tanana) are among the 30 largest U.S. rivers. Glacial sources for most Alaskan rivers cause important hydrologic consequences in addition to the heavy loads of glacier-derived silt carried by the glacial streams. For example, even a small amount of glacier-covered area in a drainage basin can have a major effect on the amount and timing of runoff.

Alaskan lakes are so numerous that they are essentially uncounted. Lake Iliamna, Alaska's largest, has a surface area of 1,000 square miles. Springs occur throughout the State -- as innumerable small seeps and as warm or mineral waters that support recreational centers. On the North Slope, flow from large springs produces widespread icings in winter.

Ground Water

Ground water is an untested resource in most of Alaska, but in many areas potential development of the resource far exceeds current use. Ground-water conditions are highly variable: major aquifers are present in the alluvium of large river valleys (Yukon, Tanana, Kuskokwim, Susitna), in glacial outwash deposits under coastal basins (Cook Inlet) and valleys (Seward and Juneau), and in carbonate bedrock of the Brooks Range. In many areas, however, the fine-grained material of glacial and glacial-lake deposits and poorly permeable consolidated rocks offer a much less promising ground-water potential. In addition, the recharge, discharge, movement, and thus the availability of ground water over much of the interior, western, and northern parts of the State and on the flanks of the Alaska Range are restricted by permafrost -- permanently frozen ground.

Water Quality

The quality of Alaskan waters is generally acceptable for most uses. However, available data do indicate naturally occurring problems such as suspended sediment in glacier-fed streams, and salt-water intrusions and undesirable concentrations of iron or arsenic in ground water at various locations. A few instances of local, man-caused water pollution have been identified.

ALASKA WATER RESOURCES EVALUATION

5-YEAR PLAN

1985 - 1989

LONG-RANGE GOAL

The AWARE goal is to provide water resource information and understanding needed by local, State, and Federal agencies, and by industry and the general public, for utilization and management of Alaska's water resources for the benefit of the people of Alaska through the conduct of water-resources investigations; and the collection and dissemination of these water resources data.

OBJECTIVES

This water resources evaluation program is comprised of three main elements. The first is to provide and improve the State-Federal Water Data and Information System, through collection, analysis, and dissemination of water data. The second element includes areal investigations, appraisals, and applied research related to defining and resolving specific water resource problems. The third element is to coordinate water data acquisition among State, Federal, and local agencies. The major objectives of each of these components follow:

A. State-Federal Water Data and Information System

Objectives:

1. To collect, on a systematic basis, data needed for the continuing determination and evaluation of the quantity, quality, and use of Alaska's water resources.

2. To disseminate water data and results of investigations and research through reports, maps, computerized information services, and other forms of public release.

B. Water Resources Areal Investigations, Problem Appraisals, and Applied Research

Objectives:

1. To conduct analytical and interpretive water resource appraisals describing the occurrence, availability, and the physical, chemical, and biological characteristics of surface and ground water.

2. To provide scientific and technical assistance in hydrology to other State, Federal, and local agencies.

3. To conduct problem-oriented research in hydraulics, hydrology, and related fields of science, to improve the scientific basis for investigation and measurement techniques, and to understand hydrologic systems sufficiently well to predict their response to stress, either natural or man-made.

C. Coordinate Water Data Acquisition

Objecti e:

1. To coordinate the activities of State and Federal agencies in the acquisition of water data for streams, lakes, reservoirs, estuaries, and ground water. (The Division of Geological and Geophysical Surveys has statutory authority [AS 41.08] for coordination of water-data collection by State agencies. The U.S. Geological Survey has such responsibility regarding Federal agencies under the provisions of OMB Circular A-67.)

APPROACH

Individual data-collection activities and projects within the AWARE program, and their more specific purposes and objectives, reflect the translation of the overall goals and objectives listed above into a proposed implementation plan for the period 1985-1989. The projects are listed and described in the following pages.

For management purposes, Division of Land and Water Management divides Alaska into three regions (fig. 1): Northern, Southcentral, and Southeast. Data collection and study activities are described for each region and projects with more widespread application are described under the Statewide category.

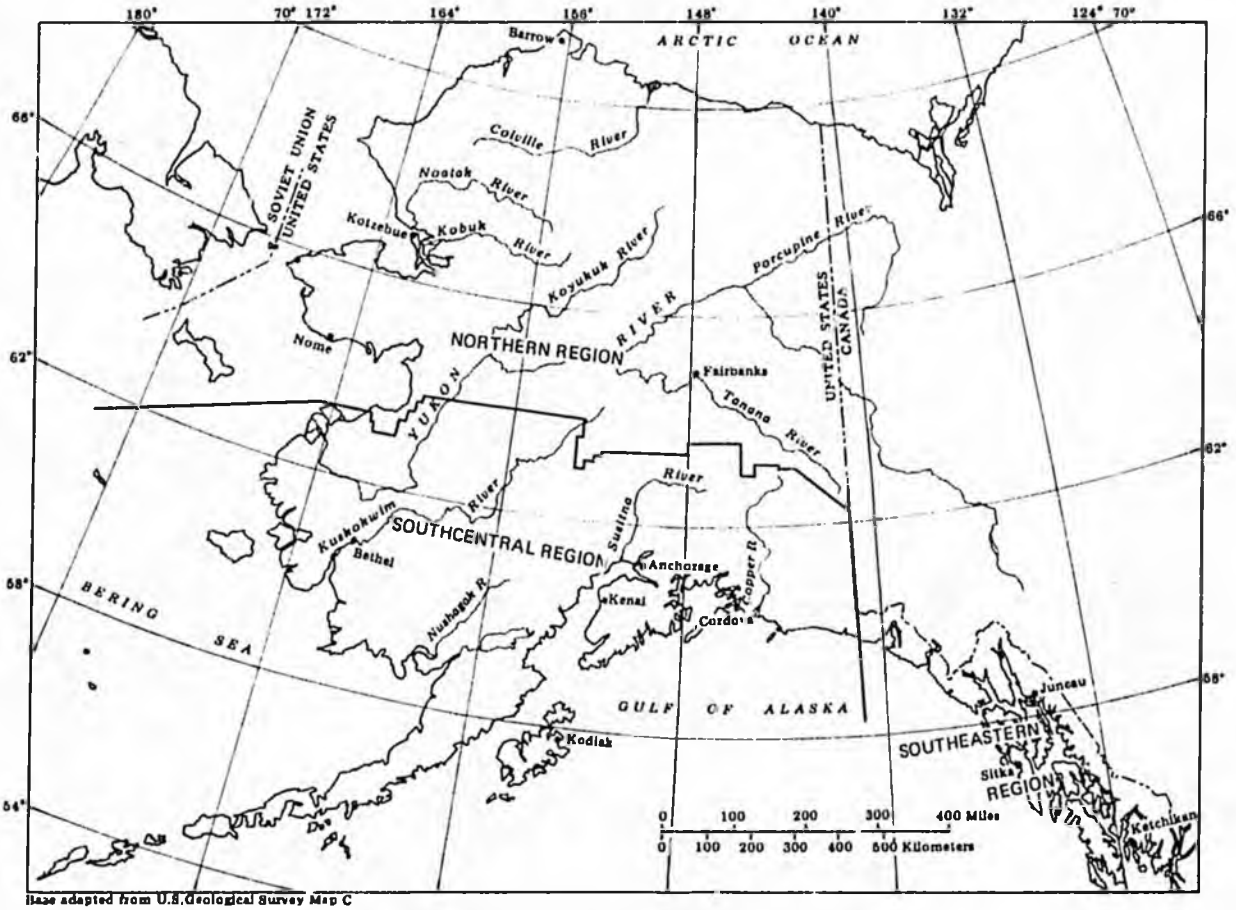


Figure 1. -- Index to land and water management regions.

STATEWIDE PROGRAMS

Statewide programs are primarily those activities aimed at achieving the objectives of the first major element of the AWARE program -- the collection, analysis, and dissemination of water data. The needs for such data may extend beyond the boundaries of a single region or may not be met within the scope, areal extent, and time constraints of one or more specific studies or resource appraisals. The selection of sites or areas to be included within a particular data-collection network is guided by the following criteria:

a. Need - of an individual, group or agency for a specific type of data at a particular time or place, or for a specific application.

b. Areal coverage - geologic and climatic differences in Alaska create a wide range and variety of hydrologic conditions and phenomena.

c. Representativeness - data-collection sites should be the hydrologically most representative within the area or environment sampled. Data should have a maximum transfer value to other, hydrologically similar sites or areas.

A. Statewide DNR/USGS Projects

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
1. Surface-Water Stations	F	F	F	F	F	USGS	Many agencies
2. Ground-Water Stations	F	F	F	F	F	USGS	DGGS
3. Water-Quality Stations	F	F	F	F	F	USGS	USFS/DF&G/ DGGS/DEC
4. Sediment Stations	F	F	F	F	F	USGS	APA/USCE/ DGGS/DEC
5. Alaska Water-Use Data System	F	F	F	F	F	DLWM	USGS
6. River Navigability Surveys	F	F	F	F	F	DLWM	DGGS
7. Water Rights Advisory	F	F	F	F	F	DLWM	DGGS
8. Water Resources Data System	F	F	F	F	F	DGGS/DLWM/ USGS	
9. Land Disposal Review	F	F	F	F	F	DLWM	DGGS

A. Statewide DNR/USGS Projects--Continued

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
10. Basinwide Adjudication Technical Support	P	P	P	P	P	DLWM	DGGS
11. Dam Safety	F	F	F	F	F	DLWM	DGGS
12. Instream Flow Analysis	F	F	F	F	F	DLWM	DGGS
13. Community Assistance	P	P	P	P	P	DGGS	DLWM

F - funded at present; funding anticipated
P - proposed, funds needed
C - completed

1. SURFACE-WATER STATIONS

A network of 104 continuous gaging stations (see table 1, p. 10 to 14) and 65 crest stage stations (figs. 2 and 3) equipped with water stage recorders, peak stage indicators, as well as periodically observed water-level indicators (staff plates) provides information on lake levels and on streamflow, including flood heights and discharges. Recorded or observed values of stream stage (water level) are used in conjunction with periodic field measurements of discharge to compute flow on a daily basis. Data collected as part of the AWARE plan augment the USGS Collection of Basic Records (CBR) program. These data are used in planning, designing and operating water-supply systems and hydroelectric facilities, designing stream crossings (pipelines, bridges, culverts), and assessing environmental impacts of such structures or facilities. On a real-time basis, these data are used to provide flood warnings, current river conditions (navigation safety), and forecasts for commercial and recreational activities.

2. GROUND-WATER STATIONS

A network of observation wells (fig. 4) provides data on ground-water level fluctuations. Water-level data indicate the status of ground water in storage, changes in storage due to development (pumping), effects of land-use changes (clearing and artificial drainage), and probable base flow of hydraulically connected streams nearby. Continued operation of the network will provide long-term records for regional studies that, in turn, serve as a basis for correlation of short-term hydrologic data collected for specific purposes.

3. WATER-QUALITY STATIONS

Analyses of data collected at these stations (which generally are also surface-water data stations) allow for characterization of the chemical, physical, and biological properties of surface waters of the State to (1) serve as a base from which many changes can be measured, and (2) permit evaluation of the suitability of

Table 1.--Selected hydrologic data for stations in the Alaska surface-water program.

Index no.	Station no.	Station name	Drainage area (mi^2)	Period of record	Mean annual flow (ft^3/s)
		SOUTHEAST ALASKA			
1	15022000	Harding River near Wrangell	67.4	1951-	732
2	15024750	Goat Creek near Wrangell	17.3	1976-	192
3	15024800	Stikine River near Wrangell	19,920	1976-	56,674
4	15028300	Farragut River near Petersburg	151	1977-	1,574
5	15049900	Gold Creek near Juneau	8.41	1984-	
6	15051008	Salmon Creek above Diversion near Juneau	9.77	1982-	---
7	15052009	Lemon Creek near Mouth near Juneau	22.9	1982-	---
8	15052500	Mendenhall River near Auke Bay	85.1	1965-	1,129
9	15052800	Montana Creek near Auke Bay	15.5	1965-1975, 1983	105
10	15056100	Skagway River at Skagway	145	1963-	568
11	15056560	Klehini River near Klukwan	245	1981-	---
12	15067900	Upper Mahoney Lake outlet near Ketchikan	2.03	1977-	40.3
13	15072000	Fish Creek near Ketchikan	32.1	1915-36, 1938-	421
14	15081580	Black Bear Lake outlet near Klawock	1.82	1980-	---
15	15081995	Reynolds Creek below Lake Mellen near Hydaburg	5.20	1982-	---
16	15083500	Perkins Creek near Metlakatla	3.38	1976-	34
17	15085100	Old Tom Creek near Kasaan	5.90	1949-	38.8
18	15087545	Municipal Watershed Creek near Petersburg	2.20	1978-	22.9
19	15087570	Hamilton Creek near Kake	65.0	1972-73a, 1975-76a, 1976-	326
20	15087590	Rocky Pass Creek near Point Baker	2.72	1976-	11
21	15087690	Indian River near Sitka	10.1	1980-	---
22	15101500	Greens Creek near Juneau	22.8	1978-	60.2
23	15106920	Kadashan River above Hook Creek near Tenakee	10.2	1968-78, 1980-	63.1
24	15106980	Tonalite Creek near Tenakee	14.5	1968-	96.4

See footnotes at end of table.

Table 1.--Continued

Index no.	Station no.	Station name	Drainage area (mi^2)	Period of record	Mean annual flow (ft^3/s)
		SOUTH-CENTRAL ALASKA			
25	15212000	Copper River near Chitina	20,600	1950b, 1952b, 1955-	37,670
26	15216000	Power Creek near Cordova	20.5	1913c, 1947-	250
27	15238648	Upper Nuka River near Homer	d	1984-	---
28	15238653	Nuka River near tidewater near Homer	d	1984-	---
29	15238820	Barbara Creek near Seldovia	20.7	1972-	105
30	15238990	Upper Bradley River near Homer	10d	1979-	---
31	15239000	Bradley River near Homer	54d	1955b, 1957-	434
32	15239050	Bradley River tributary near Homer	9.25	1979-	---
33	15239070	Bradley River near tidewater near Homer	82	1983-	---
34	15239900	Anchor River near Anchor Point	137	1964-73, 1974a, 1978-	201
35	15241600	Ninilchik River at Ninilchik	131	1963-	107
36	15258000	Kenai River at Cooper Landing	634	1947-	2,824e
37	15266300	Kenai River at Soldotna	2,010	1965-	5,907
38	15267900	Resurrection Creek near Hope	149	1967-	281
39	15271000	Sixmile Creek near Hope	234	1979-	---
40	15273050	Rabbit Creek at Anchorage	15	1979-80, 1984-	---
41	15273095	Little Rabbit Creek above Goldenview Drive at Anchorage	5.06	1980-	---
42	15273105	Rabbit Creek at New Seward Highway at Anchorage	f	1984-	---
43	15274300	North Fork Campbell Creek near Anchorage	13.4	1967-74a, 1974-	18.2
44	15274600	Campbell Creek near Spenard	69.7	1966-	65.5
45	15274798	South Branch South Fork Chester Creek near 20th Avenue at Anchorage	9.39	1980-	---
46	15275100	Chester Creek at Arctic Boulevard at Anchorage	27.2	1966-	18.1
47	15276000	Ship Creek near Anchorage	90.5	1946-	163g

See footnotes at end of table.

Table 1.--Continued

Index no.	Station no.	Station name	Drainage area (mi^2)	Period of record	Mean annual flow (ft^3/s)
		SOUTH-CENTRAL ALASKA--Continued			
48	15281000	Knik River near Palmer	1,180	1959h	6,955
49	15290000	Little Susitna River near Palmer	61.9	1948-	208
50	15291000	Susitna River near Denali	950	1957-66, 1967j, 1968-	2,759
51	15291200	Maclaren River near Paxson	280	1958-	979
52	15291500	Susitna River near Cantwell	4,140	1961-72, 1980-	6,404
53	15292000	Susitna River at Gold Creek	6,160	1949-	9,724
54	15292400	Chulitna River near Talkeetna	2,570	1958-72, 1973-77a, 1979a, 1980-	8,798
55	15292700	Talkeetna River near Talkeetna	2,006	1964-	4,055
56	15292780	Susitna River at Sunshine	11,100	1981-	---
57	15294005	Willow Creek near Willow	166	1978-	417
58	15294010	Deception Creek near Willow	48.0	1978-	69.1
59	15294100	Deshka River near Willow	592	1978-	941
60	15294345	Yentna River near Susitna Station	6,180	1980-	---
61	15294350	Susitna River at Susitna Station	19,400	1974-	49,940
62	15294410	Capps Creek below North Capps Creek near Tyonek	10.5	1979-	---
63	15294450	Chuitna River near Tyonek	131	1975-	369
64	15294900	Paint River near Kamishak	205	1983-	---
65	15295600	Terror River near Kodiak	15.0k	1962-68, 1978-	142k
66	15295700	Terror River at mouth near Kodiak	45.7k	1964-68, 1981-	294k
67	15297200	Myrtle Creek near Kodiak	4.74	1963-	46.2
68	15297485	Kizhuyak River near Port Lions	27.5k	1980-	---

See footnotes at end of table.

Table 1.--Continued

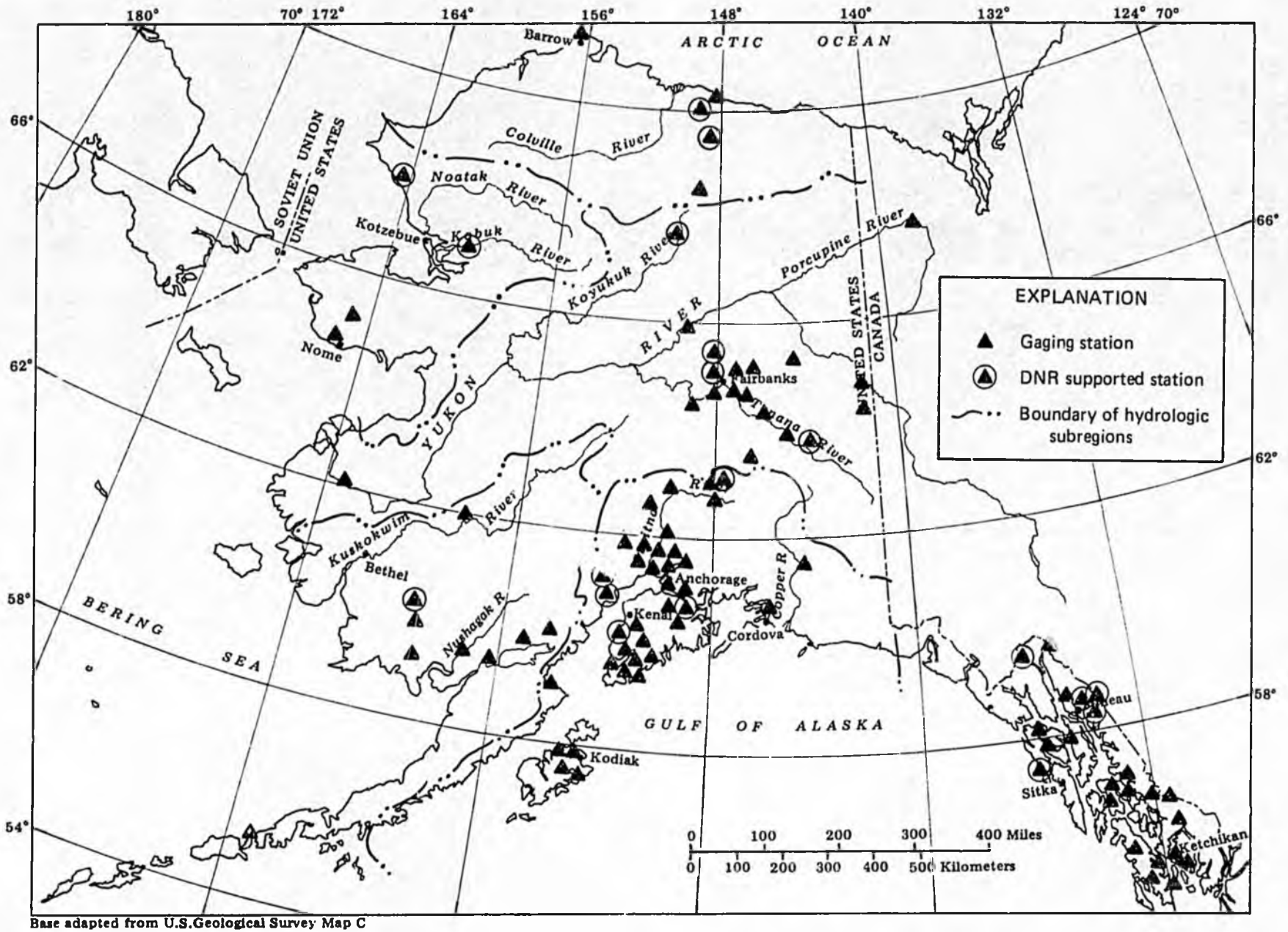
Index no.	Station no.	Station name	Drainage area (mi^2)	Period of record	Mean annual flow (ft^3/s)
		SOUTHWEST ALASKA			
69	15297610	Russell Creek near Cold Bay	25	1981-	---
70	15303010	Silver Salmon Creek near Aleknagik	4.46	1965-67a, 1969-83a, 1984-1973-76, 1977-	---
71	15299900	Tazimina River near Nondalton	327	1981-	---
72	15300000	Newhalen River near Iliamna	3,478	1951-67, 1968-77a, 1982-	9,226
73	15300500	Kvichak River at Igiugig	6,500	1967-	18,060
74	15302000	Nuyakuk River near Dillingham	1,490	1953-	6,156
75	15302500	Nushagak River at Ekwok	9,850	1977-	23,840
76	15304000	Kuskokwim River at Crooked Creek	31,100	1951-	41,220
77	15304200	Kisaralik River near Akiak	270	1979-	---
		YUKON ALASKA			
78	15344000	King Creek near Dome Creek	5.99	1975-82a, 1983-	---
79	15356000	Yukon River at Eagle	113,500	1911-13, 1950-	82,660
80	15388950	Porcupine River at Old Crow, Yukon Territory	21,400	1961-68, 1969-	m
81	15439800	Boulder Creek near Central	31.3	1964-65a, 1966-82, 1983a, 1984-	11.6
82	15453500	Yukon River near Stevens Village	196,300	1976-	119,200
83	15457800	Hess Creek near Livengood	662	1970-78, 1982-	227
84	15476000	Tanana River near Tanacross	8,550	1953-	7,943
85	15478040	Phelan Creek near Paxson	12.2	1966-78, 1983-	69.7
86	15484000	Salcha River near Salchaket	2,170	1909-10b, 1948-	1,640
87	15485500	Tanana River at Fairbanks	n	1973-	19,060
88	15493000	Chena River near Two Rivers	941	1967-	644
89	15493700	Chena River below Moose Creek Dam	1,430	1979-	---
90	15511000	Little Chena River near Fairbanks	372	1966-	203
91	15514000	Chena River at Fairbanks	1,980	1947-48b, 1948-	1,384
92	15515500	Tanana River at Nenana	25,600	1962-	23,550

See footnotes at end of table.

Table 1.--Continued

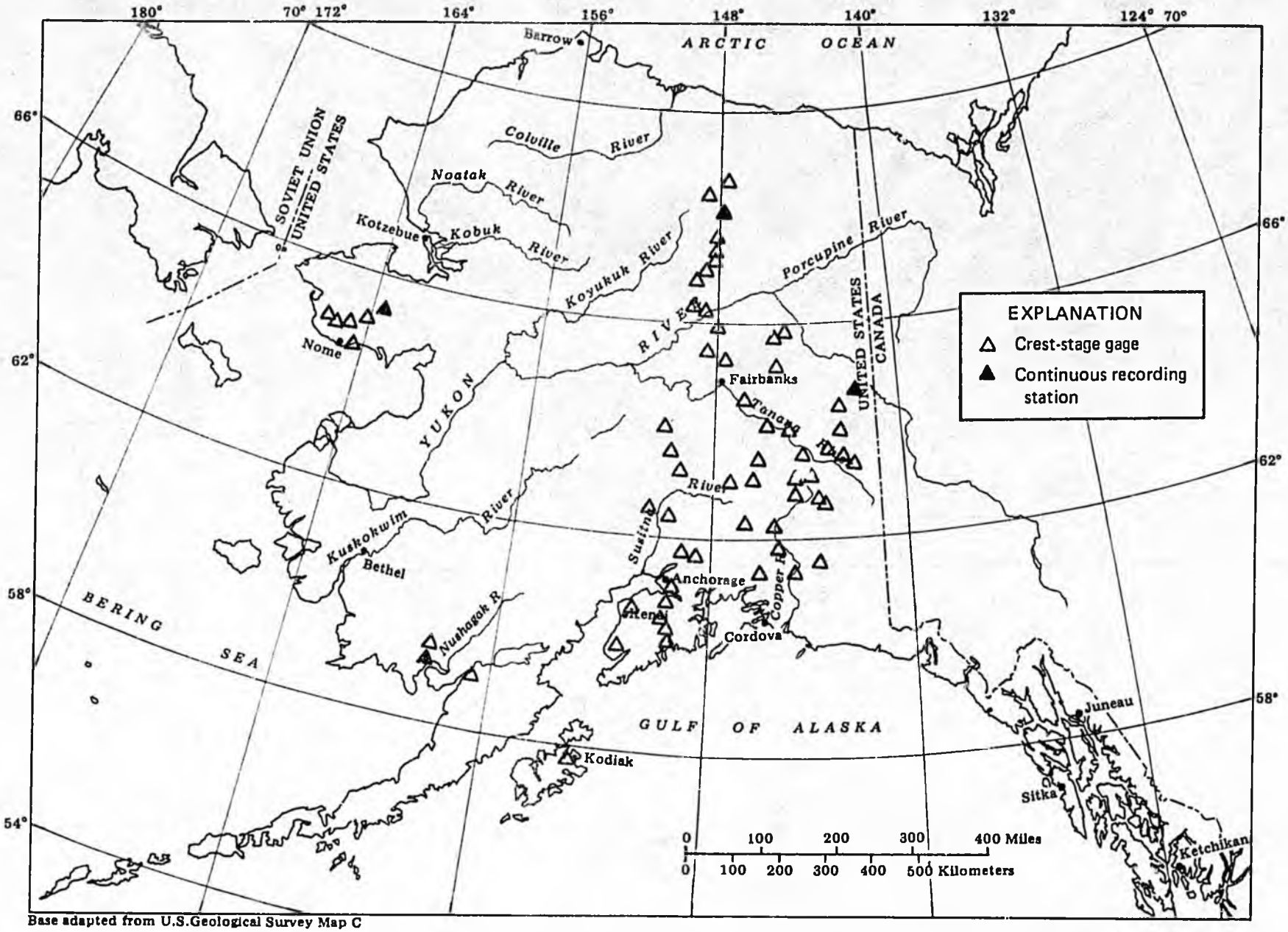
Index no.	Station no.	Station name	Drainage area (mi^2)	Period of record	Mean annual flow (ft^3/s)
		YUKON ALASKA-Continued			
93	15535000	Caribou Creek near Chatanika	9.19	1969-	5.09
94	15564875	Middle Fork Koyukuk River near Wiseman	1,200	1970-78, 1984-	709
95	15565447	Yukon River at Pilot Station	321,000	1975-	219,600
		NORTHWEST ALASKA			
96	15621000	Snake River near Nome	85.7	1965-81, 1982-	183
97	15668200	Crater Creek near Nome	21.9	1964-65a, 1967-75a, 1975-	54.6
98	15744500	Kobuk River near Kiana	9,520	1976-	15,270
99	15747000	Wulik River below Tutak Creek near Kivalina	705	1984-	---
		ARCTIC SLOPE ALASKA			
100	15798700	Nunavak Creek near Barrow	2.79	1971-	0.84
101	15896000	Kuparuk River near Deadhorse	3,130	1971-	1,367
102	15896700	Putuligayuk River near Deadhorse	176	1970-79, 1981-	42.2
103	15904900	Atigun River tributary near Pump Station 4	32.6	1976-	29.9
104	15908000	Sagavanirktok River near Pump Station 3	1,860	1982-	---

a Operated as a crest-stage gage.
b Seasonal summer record only.
c Fragmentary record.
d Drainage area not determinable to greater precision because it varies due to changes in route of meltwater stream from glacier at head of basin.
e Adjusted to exclude diversion from Cooper Lake.
f Not yet determined because drainage area depends on storm sewer network.
g Adjusted to include diversion for water supply.
h Flood peaks due to outbreak of glacier-dammed Lake George for 1948-62 and 1964-65 available.
j Only flood peak available.
k Affected by construction of Terror Lake Hydroelectric Power Project
m Average not determined, Canadian record.
n Drainage area undefined as part of river flows through Salchaket Slough and is ungaged.



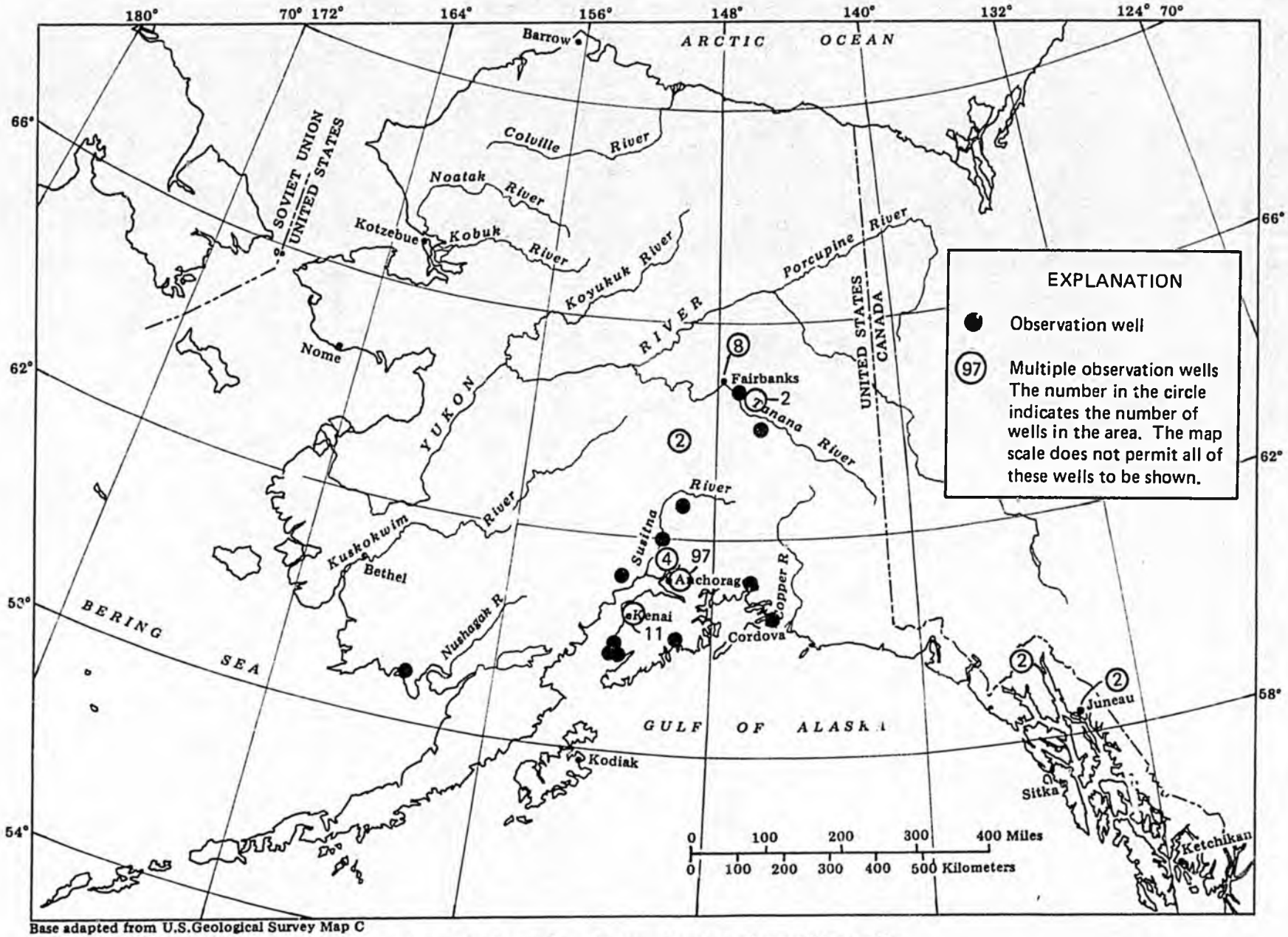
Base adapted from U.S.Geological Survey Map C

Figure 2.--Distribution of stream-gaging stations (diagrammatic - - 104 continous-record stations operating in 1985).



Base adapted from U.S.Geological Survey Map C

Figure 3.--Location of data-collection sites in small-streams (drainage area = 100 square miles or less) flood study network.



Base adapted from U.S.Geological Survey Map C

Figure 4.--Location of ground-water observation wells.

a water source for domestic, municipal, and industrial use. Water-quality stations operated as part of the AWARE plan augment the CBR program in development of the bank of data useful in broad State and Federal planning and action programs and in the management of international (Alaska-Canada) waters.

4. SEDIMENT STATIONS

Suspended-sediment concentration (actually a physical property of water) and sediment transport and discharge data collected at these stations are important for evaluating: effects of construction, bridges, culverts, pipeline crossings, and hydroelectric dams; effects of activities such as placer mining and sand-and-gravel removal; and effects of sediment on operation of hydroelectric facilities. Data from these stations also contribute to accomplishing the objectives of the USGS CBR program.

5. ALASKA WATER-USE DATA SYSTEM

The objectives of this program are to develop among agencies a coordinated and efficient system to collect, store, and disseminate data on water use in Alaska. The data are critical to planning the development and management of the State's water resources. Efforts within this program will contribute to the National Water-Use Data System (NWUDS) and support decisions in the appropriation of water rights in Alaska. DLWM collects the data and is a primary user of the data.

6. RIVER NAVIGABILITY SURVEYS

By Federal law, the State is entitled to the beds of all navigable water bodies, including the natural resources on and under the beds of those water bodies. DLWM needs criteria for determining "navigability" to argue Alaska's case in Federal courts in order to address anticipated disputes between various agencies, groups, and individuals. DGGS has the responsibility to describe the physical characteristics (such as width, depth, and velocity of flow) of selected water bodies throughout the State. Through 1983, surveys have been completed on the Matanuska, Alagnak, Gakona, Nenana, and Eagle Rivers; and Big Lake (Brooks Range), Hudson, Alexcy and Northway Lakes. Regional reports on water bodies in the Koyukuk, Bristol Bay, and Arctic areas are near completion. Surveys are planned for other areas of the State, though specific streams and lakes have not been selected.

7. WATER RIGHTS ADVISORY

Increasing conflicting uses of water statewide has led the DLWM to frequently require detailed technical analyses and interpretations of various hydrologic conditions. Services provided by the Water Resources Section of DGGS include data acquisition and the needed analyses and interpretations. Water managers of DLWM use this information in decisions on appropriations.

8. WATER RESOURCES DATA SYSTEMS (WATSTORE)

Data collected on the quantity and quality of ground, surface, and coastal waters through various State and Federal programs are entered into several computer systems. The USGS and DGGS have long enjoyed a unique and successful cooperative

agreement where Alaskan data entered into national systems such as NAWDEX and WATSTORE are readily available for project research and distribution to all users. Compatibility between the above-mentioned Federal data systems and DGGS' geoprocessor and Well Log Tracking System (WELTS) enables users to utilize the most recent and reliable data on water resources in Alaska.

9. LAND DISPOSAL REVIEW

Land disposals of many forms are a major activity for DLWM. Each land disposal action is reviewed by DGGS for hydrological implications and factors such as flooding, water supply, erosion, and water-quality effects.

10. BASINWIDE ADJUDICATION TECHNICAL SUPPORT

Due to unquantified Federal Reserve Water Rights and unknown streamflow values, several high-density, competitively used water bodies have been subject to overappropriation. In the event of water shortages or drought, Ship Creek in Anchorage, and possibly Indian River at Sitka would be primary examples of situations where the right to use water may exceed the water available for use. Basinwide Adjudications designed to quantify all uses, either private, State, or Federal, will assure orderly, effective management scenarios for high-use areas. In such cases, DLWM would request that DGGS designate drainage basin boundaries, collect and evaluate hydrologic data, and provide other technical assistance needed for basin-wide adjudication.

11. DAM SAFETY

The Water Management Section of DLWM is charged with permitting the construction or modification of dams 10 feet or more in height or storing 50 acre-feet or more of water. Detailed hydrologic data on affected drainage basins, spillway capacities, and flooding potentials downstream are occasionally directed to DGGS for review of adequacy.

12. INSTREAM FLOW ANALYSIS (RESERVATION)

All surface and subsurface waters of Alaska are reserved to the people for common use, and are subject to appropriations. One form of nonconsumptive use of water is the instream flow reservation. A person may apply to reserve sufficient water to maintain a critical level of water at a specified point on a stream or water body or in a specified stream reach for certain periods of time. The four types of instream flow uses are fish and wildlife, navigation and transportation, parks and recreation, and sanitary and water quality. DLWM, with technical assistance from DGGS, reviews, issues, and manages these appropriations.

13. COMMUNITY ASSISTANCE

Within the limits of funds available, DGGS will provide assistance, on an as-requested basis, to communities that have water-related problems.

DGGS hydrologists provide technological advice and even site-specific investigation for hydrologic problems arising in Alaskan communities. Water supply location,

erosion evaluation, gravel supplies, and pollution evaluation are typical kinds of problems hydrologists address for Alaskan communities.

B. Related Programs	Responsible Agency
1. River information, forecast, and flood warning program.	National Weather Service (NWS)

a. River Gage Network -- A network of 28 river gage sites, located along the major rivers and in flood-prone locations, is operated by the NWS (fig. 5). Either staff or wire-weight gages are used at most sites. All of the observations are transmitted to the NWS River Forecast Center in Anchorage on a daily basis. The data from the network are used in the NWS river information, forecast and flood warning programs and are supplemental to the USGS network.

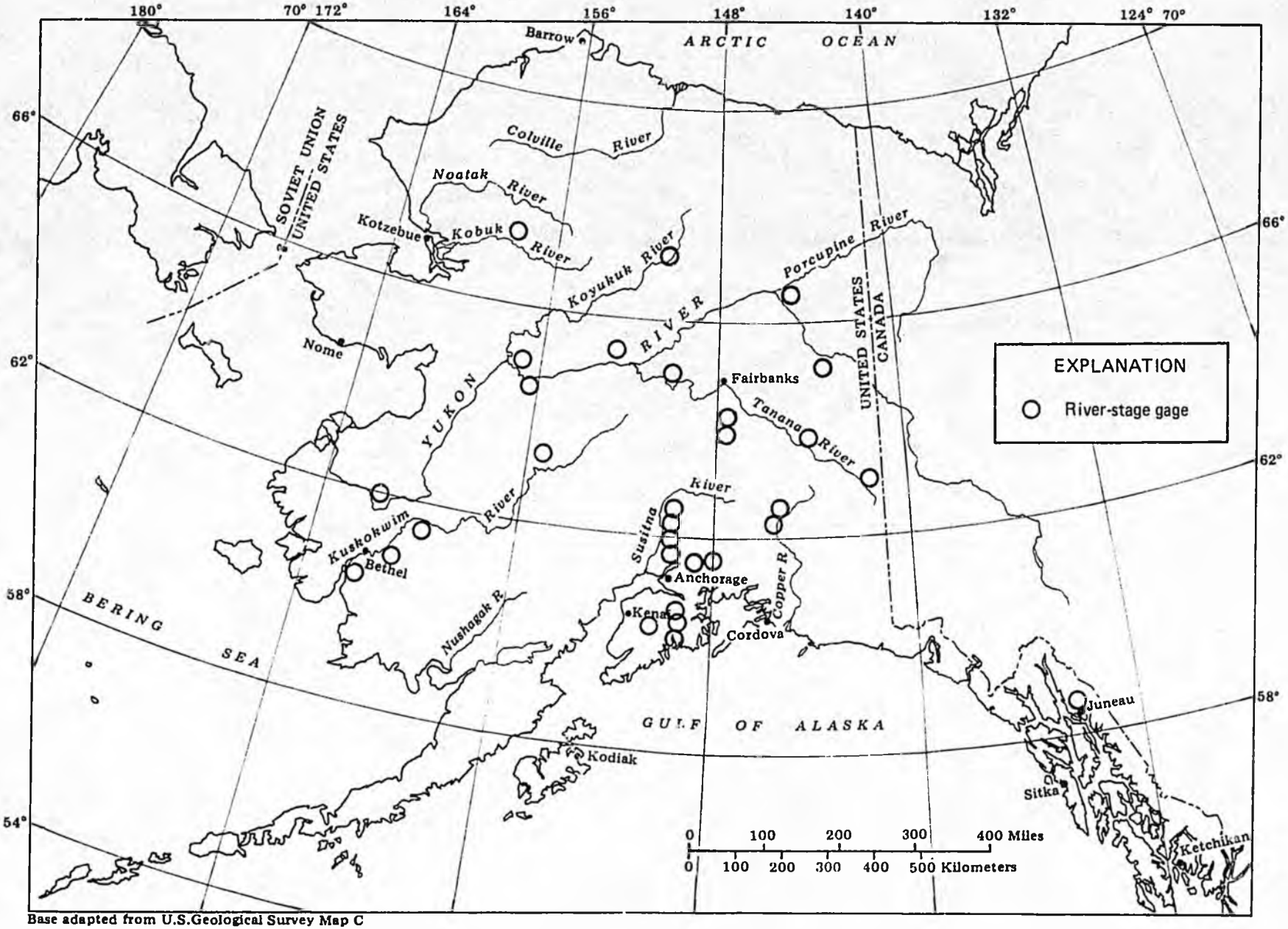
b. Ice Measurement -- The NWS operates 10 river and lake ice observation sites (fig. 6). Observations are made twice per month and consist of drilling a hole in the ice and measuring its thickness. The data are used for estimating spring breakup ice-jam flood potential.

c. Precipitation Data Monitoring and Archives -- A precipitation data monitoring and archiving program is in the process of being developed. The monitoring portion of the project is well developed and is a primary tool used in the NWS flood warning program. The archival portion is under development and will archive all of the precipitation data received by the River Forecast Center from telemetry systems operated by Federal and State agencies.

d. River Information -- River stage/discharge information for the recent past (last 60 days), present and future, is on file for many of the USGS and the Corps of Engineers sites as well as the NWS network. The data are available seven days per week through the NWS offices in Anchorage, Fairbanks, and Juneau.

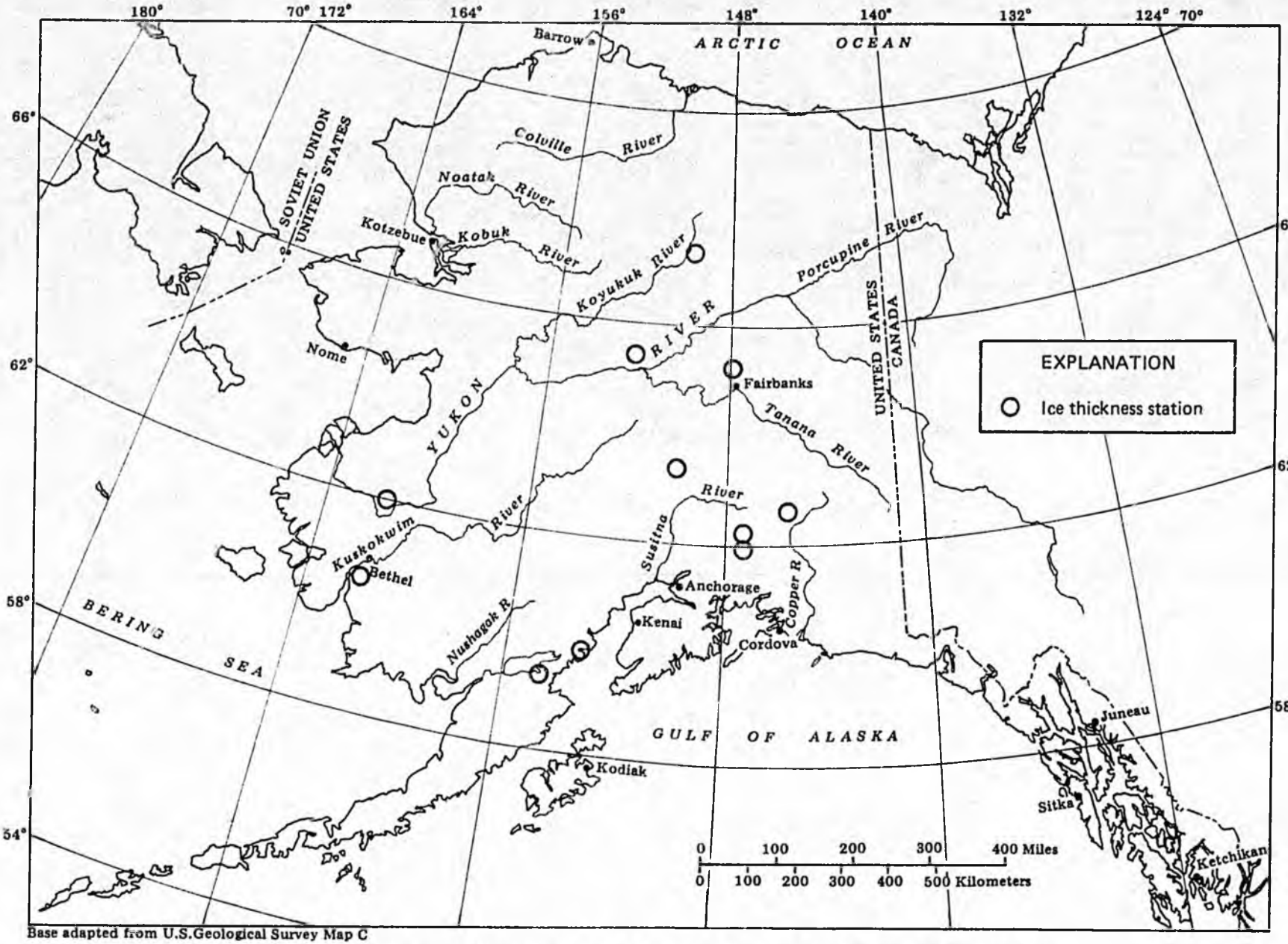
e. Streamflow Modeling -- Developed for various types of watersheds to illustrate some measures to mitigate or counteract flood damages.

2. Evaluation of capability of fish passage through roadway drainage structures (culverts). Complementary studies will address fish passage as it is affected by streamflow characteristics (seasonal variation, flow frequency and duration) and provide methods to determine those characteristics.	Institute of Water Resources, Engr. Experiment Station (IWR/EES) [Co-op with ADOT&PF]



Base adapted from U.S.Geological Survey Map C

Figure 5.--Location of the National Weather Service river gages.



Base adapted from U.S.Geological Survey Map C

Figure 6.--Location of the National Weather Service ice observation sites.

B. Related Programs--Continued	Responsible Agency
3. Evaluate potential for production of acid and/or dissolution of metals from coal and other mine spoils.	IWR/EES
4. Assist in development of stipulations for operation and abandonment of coal and other mines by studying impacts of mining on riparian ecosystems.	IWR/EES
5. Developmental research program for on-site wastewater and sewage disposal methods in Alaska.	IWR/EES
6. Potential impacts on water quality from activities such as seafood processing, agricultural practices, and development of timber, petroleum and mineral resources. Potential effects of placer mining are of particular concern in various areas of Alaska.	Alaska Department of Environmental Conservation (DEC)
7. Quality of public-drinking supplies.	DEC
8. Snow Surveys Program -- Snow survey data are useful or critical to water-resources and water-related research, assessment, planning, forecasting and management activities. At end of the 1984 winter, the network consisted of 196 snow measurement sites, 17 of which are precipitation gages equipped with Wyoming windshields. Manually measured data are published monthly from February through June. Recording and/or radio telemetry equipment is installed at about 40 of the measurement sites (table 2). Most of the climatological data collected at these sites have not been published, but can be obtained from the Snow Survey Unit of SCS.	U.S. Soil Conservation Service (SCS) [Co-op with many Federal & State agencies]
9. Hydropower studies -- various surveys, assessments, and investigations related to the feasibility, design and operation of hydroelectric power generating facilities.	Alaska Power Authority
10. Glacial hydrology, water supply -- to assess the role of glaciers in the regulation and quality of Alaska's water supply.	Geophysical Institute, Univ. of Alaska (GI)
11. Glacial hydrology, hazards -- to assess the hazards from glacier-dammed lakes, glacier-covered volcanoes and surging glaciers.	GI
12. Glacier-melt modeling -- development of subroutine for the NWS/RFC's operational river forecast model to make the model more applicable to basins that contain large areas of glaciers.	Arctic Environ. Info. and Data Center [Coop. with NWS]

Table 2.--Snow survey network sites with daily records
(Soil Conservation Service, February 1985)

Data site	Region/Drainage	Elevation	Latitude	Longitude	Begin daily record	Snow water-content	Precip.	Air temp.
Anchor River Divide	Cook Inlet	1,600	59°52'N	151°19'W	10/80	X	X	
Atigun Cirque	Yukon River	4,750	68°08'N	149°29'W	07/79	X		
Atigun Pass	Yukon River	4,800	68°08'N	149°28'W	09/93		X	
Barter Island	North Slope	30	70"07'N	143"39'W	08/84		X	
Bettles Field	Koyukuk River	640	66°55'N	151°32'W	10/80	X	X	
Botts Creek	Cook Inlet	1,500	61°10'N	151°38'W	11/81		X	
Caribou Snow Pillow	Tanana River	900	65°09'N	147°33'W	10/69	X		
Chuitna Plateau	Cook Inlet	1,540	61°13'N	151°38'W	12/82	X		X
Colorado Creek	Tanana River	700	64°54'N	146°37'W	10/65	X	(Discontinued 5/77)	
Congahbuna Lake	Cook Inlet	500	61°04'N	151°26'W	10/82	X	X	
Cooper Lake	Kenai River	1,200	60°23'N	149°41'W	10/81	X	X	
Cottonwood Camp	Seward Peninsula	100	65°07'N	164°43'W	08/82		X	
Fairbanks Test Site	Tanana River	450	64°51'N	147°48'W	10/82	X	X	X
Falls Creek	Kodiak Island	1,980	57°38'N	152°58'W	12/82		X	X
Grandview	Kenai Peninsula	1,100	60°36'N	149°04'W	10/84		X	
Indian Pass	Cook Inlet	2,350	61°04'N	149°29'W	10/79	X	X	X
Kenai Moose Pens	Kenai River	300	60°44'N	150°28'W	09/80	X	X	
Kizhuyak Valley	Kodiak Island	20	57°42'N	152°53'W	12/82		X	X
Little Chena Ridge	Tanana River	2,000	65°07'N	146°44'W	06/79	X	X	X
Monahan Flat	Susitna River	2,710	63°18'N	147°39'W	10/83		X	
Monument Creek	Tanana River	1,850	65°04'N	145°52'W	06/79	X	X	X
Mt. Alyeska	Cook Inlet	1,540	61°58'N	149°05'W	10/72	X	X	
Mt. Ryan	Tanana River	2,800	65°15'N	146°09'W	01/82	X	X	X
Munson Ridge	Tanana River	3,050	64°51'N	146°12'W	06/79	X	X	X
Nome 20-Mile	Seward Peninsula	250	64°44'N	165°14'W	08/84		X	
Point MacKenzie	Cook Inlet	200	61°23'N	150°04'W	01/81	X	X	
Ptarmigan Hills	Kenai Peninsula	1,200	59°43'N	150°42'W	10/79		X	
Ramsdyke Creek	Susitna River	2,220	62°37'N	150°48'W	10/79	X		
Rhoads Creek	Tanana River	1,225	63°56'N	145°22'W	12/80		X	
Sagwon	North Slope	1,000	69°26'N	148°41'W	07/83		X	
Ship Creek	Cook Inlet	1,750	61°08'N	149°27'W	10/72	X		
Terror Lake	Kodiak Island	1,450	57°36'N	153°02'W	12/82		X	X
Teuchet Creek	Tanana River	1,640	64°57'N	145°31'W	06/81	X	X	X
Toolik River	North Slope	3,050	69°38'N	149°18'W	07/83		X	
Totchaket	Tanana River	350	64°46'N	149°25'W	10/80	X	X	X
Turnagain Pass	Kenai Peninsula	1,880	60°46'N	149°13'W	12/82	X	X	X
Upper Chena Pillow	Tanana River	3,440	65°06'N	144°56'W	05/81	X	X	X
Upper Long Lake	Southeast	1,000	58°11'N	133°53'W	10/67		(Discontinued 6/75)	

Related Programs--Continued	Responsible Agency
13. Statewide assistance to local governments, lenders, and citizens regarding the National Flood Insurance Program (NFIP); technical assistance to improve community flood-plain management programs.	Dept. of Community & Regional Affairs/ Municipal & Regional Assistance Div.
14. Statewide coastal wind and wave data-collection sites located at Akutan, Atka, Chignik, Homer, Kake, King Cove, Kodiak, Nome, Saxman, Seward, and Whittier.	U.S. Army Corps of Engineers (USCE)
15. Statewide small hydropower projects - sites collecting data on temperature, precipitation, and streamflow at Bear Creek near Hope, Falls Creek near Gustavus, Indian Creek near Chignik, Kings River near Chickaloon, Pyramid Creek near Unalaska, Shaishnikof River near Unalaska, unnamed creek at Scammon Bay, and Windy River near Seldovia.	USCE

REGIONAL PROGRAMS

NORTHERN REGION

Arctic Area

The occurrence, movement, and availability of water in this region are strongly controlled by conditions created by its climate -- permafrost (permanently frozen ground), and rivers and lakes that are ice covered (or frozen solid) except during a short summer season. Prior to investigations conducted within the past 10 to 15 years along the Alaska Pipeline and other proposed transportation corridors, hydrologic data were collected at only a few, widely scattered sites. More recently, data collection activities have been expanded to fulfill requirements of the Alaska National Interests Land Conservation Act (ANILCA) of 1980. The potential future water needs of industry are great, but the paucity of water-resources data in the Arctic Region hinders a full understanding of hydrologic processes and the efficient development and use of the resource.

Seward Peninsula Area

The western part of the region includes extensive uplands and isolated groups of rugged, glaciated mountains of the Seward Peninsula, and alluvium-filled flats and lowlands of the Koyukuk, upper Kuskokwim, and lower Yukon basins. The Brooks Range (Baird Mountains) and Kuskokwim Mountains are dominant highland areas.

Surface-water data for the Seward Peninsula-Kotzebue Sound area have been collected for both long and short periods, or on an intermittent or one-time basis at several sites, and ground-water conditions are known locally at several communities. Yet the character of and the potential for development of water resources in this remote part of Alaska are probably the least studied of any area in the State.

Future requirements for hydrologic data and information probably will be related to development of known mineral reserves on the Seward Peninsula, extension and/or connection of now isolated, local road systems, and development and protection of the quality of community water supplies at the larger communities in the region (Nome, Unalakleet, Golovin, etc.). Hydrologic reconnaissance surveys, similar to those conducted in the Kobuk and Noatak basins, provide valuable, preliminary information for regional-scale resource assessment and planning. Establishment of one or more index stations on representative streams in large basins and a few crest gages in small basins provide a basis for interpreting additional reconnaissance-level observations and measurements at widely scattered sites in ungaged basins.

Interior Area

Interior Alaska is dominated by the valleys of the Yukon and Tanana Rivers, where alluvial deposits may be as thick as 2,000 feet. Permafrost is absent or thawed to a considerable depth beneath major streams, and rarely extends all the way to bedrock. Ground water is generally available in these thawed areas and in unfrozen zones within or beneath the permafrost. The melting of glacier ice (Alaska Range) and of perennial and seasonal snow affects the timing and amount of runoff to

streams draining the upland areas. Surface-water bodies are ice covered for at least half of each year, and most large streams carry heavy loads of glacier-derived sediment during summer months.

Ground water is the source of nearly all public and most private supplies in the region. Well yields as great as 1,000 gal/min have been developed from alluvial deposits of the Tanana Valley at Fairbanks, Eielson AFB and at Big Delta, but yields of wells drilled in bedrock north of Fairbanks are generally adequate only for individual household use. Two hydrologic "problems" have been identified in studies in the Fairbanks uplands: (1) anomalous concentrations of arsenic in the ground water and (2) a 10-year decline in water levels (although precipitation totals have been stable and baseflow of streams seems to be increasing during the same period).

Demands for water are most intense in the Fairbanks area, where the population increased during and after construction of the Alaska oil pipeline. Future needs for water in this region will probably continue to be concentrated at Fairbanks, but anticipated development of the Nenana and Big Delta agricultural areas, and potential impacts of placer and hardrock mining on water quality are also important concerns.

A. Northern Region USGS/DNR Projects

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
1. Streamflow Data	F	F	F	F	F	USGS/DGGS	DGGS/DLWM
2. Stream Basin Reconnaissance Surveys	F	F	F	F	F	DGGS	
3. Placer Mining Stream Basin Research	F	F	F	F	F	DGGS/USGS	DEC/DF&G/USFWS
4. Fairbanks Ground-Water Monitoring	F	F	F	F	F	DGGS/DLWM	USGS
5. Nenana Agricultural Area Hydrologic Resources	F	F	F	F	F	DGGS/SCS	DLWM
6. Delta Agricultural Area	F	F	F	F	F	DGGS/DF	DLWM/DA/ AAC
7. Hydrology of the North Star Borough	F	F	F	F	F	USGS	FNSB
8. Ground-Water Levels in Chena-Tanana Flood Plain	F	P	P	P		USGS	FNSB

F - funded at present; funding anticipated
P - proposed, funds needed
C - completed

1. STREAMFLOW DATA

A total of 22 continuous gaging stations provide streamflow data for the Northern Region. Operation of long-term, continuous recording gaging stations ("index stations") and selective discharge measurements provide data necessary for predicting streamflow and runoff characteristics in other basins. A stream-gaging site on the Sagavanirktok River (near Alaska Pipeline Pump Station 3) and a site on the Putuliga_ ık River (near Deadhorse) for which 10 years of streamflow data are available serve as index stations for large, northward flowing streams.

Additional index stations on the Colville and Canning Rivers are being considered, but costs are very high. Special emphasis should be directed to the Arctic National Wildlife Refuge. Continuation of stream discharge measurements at selected sites and times, and operation of partial-record and seasonal (summer) stations are planned. Partial record stations are planned for selected streams in the Seward Peninsula, and on placer mining streams, including the Chatanika River.

2. STREAM BASIN RECONNAISSANCE SURVEYS

Reconnaissance surveys of representative ungaged river basins are planned to provide data on channel and valley characteristics from which reasonable estimates of streamflow and flood levels can be made. Such surveys provide a sound basis for streamflow estimates in lieu of continuous gaging. Surveys have been completed for the Togiak, Kobuk, and Noatak basins (results published) and the Wulik and Unalakleet basins, and a survey of the Sheenjek River basin is being considered for 1985 and 1986.

3. PLACER MINING STREAM BASIN RESEARCH PROJECT

Placer mining activities significantly disrupt streams and stream valleys. Streamflow and stream water-quality data are needed by miners and agency managers. This multiagency cooperative project monitors flows, turbidities, water quality, and valley morphological changes in a variety of ways at 20 to 30 sites in the Birch Creek basin. Special emphasis is given to specific data needed for habitat studies as well as general hydrologic studies to determine volumes and times of flows for efficient mining and water-quality monitoring above and below placer operations.

4. FAIRBANKS GROUND-WATER MONITORING

Ground-water levels near school sites and other locations in the Fairbanks area are being monitored in order to evaluate impacts of the large producing well on local aquifers and general aquifer variation. Also, well data reports are being processed for entry into the USGS WATSTORE computer system (see Statewide Projects) by DNR/USGS. A report on Fairbanks ground water based on existing data is being prepared by USGS.

5. NENANA AGRICULTURAL AREA HYDROLOGIC RESOURCES

The objectives of this study are: to determine the availability of water from lakes, small streams, and ground water; to identify flood plains of large streams; to collect meteorological data for hydrologic cycle interpretation and wind analysis for erosion protection; and to assess potential for contamination of the

water resources by anticipated agricultural development. One monitoring well and two meteorological stations operated during 1984. Expanded surface-water studies are proposed for 1985.

6. DELTA AGRICULTURAL AREA

Hydrologic, meteorological, and ground cover baseline data for interagency plans for the Delta agricultural development areas have been reported. A data collection system monitors water level and wind of the Delta area. Five wind stations, several precipitation stations (rain and snow), as well as water-quality sampling sites provide data necessary for evaluating waters and winds of the area. Flood evaluation, erosion control design, wind break design, and ground-water recharge evaluation require data provided by the project.

7. HYDROLOGY OF NORTH STAR BOROUGH

This continuing study will provide basic hydrologic data useful for: (1) determining the availability of water from surface- and ground-water systems; (2) describing the "operation" of the hydrologic system in upland bedrock area and evaluating possible causes of the continuing water-level declines; (3) defining water quality with special attention to high nitrate and arsenic concentrations in ground water; and (4) assisting residents, officials, and consultants concerning hydrologic problems.

A research effort just being completed at the Fairbanks landfill was directed at explaining geochemical processes (production and movement of leachate) in subarctic areas. Potential effect of any leachate movement on Fairbanks municipal and domestic water-supply systems downgradient will be evaluated.

8. GROUND-WATER LEVELS IN CHENA-TANANA FLOOD PLAIN

Changes in stage of the Chena and Tanana Rivers are the principal controls on water-table fluctuations in the adjacent alluvial aquifers. Various ground-water modeling techniques will be used to simulate and attempt prediction of trends and ranges of water-table changes in response to changing river levels. Of particular concern are increases in ground-water levels that would result from any extended releases of water from flood-control dams above Fairbanks.

B. Related Programs	Responsible Agency
1. Determination of energy sources supporting arctic freshwater fauna (in anticipation of rapid increases in demand for generally scarce freshwater sources in arctic Alaska).	Institute of Water Resources/Engr. Exp. Sta. (IWR/EES)
2. Evaluation of impact of drilling-mud disposal on wetlands (Prudhoe Bay area).	Alaska Department of of Environmental Conservation (DEC)

B. Related Programs--Continued	Responsible Agency
3. Study of hydrologic system in Ester Dome area west of Fairbanks; results will be applicable to management of quantity and quality of ground water where potential conflicts exist over its use.	IWR/EES
4. Flood-hydrograph modeling, Chena Lakes Flood Control Project -- models developed from data collected at streamflow and meteorological stations. Near real-time data transmittal facilities provide flood prediction capabilities.	U.S. Army, Corps of Engineers (USCE)
5. Hydrologic and other natural resources of Tanana River Basin -- broad-based planning and management applications.	U.S. Soil Conservation Service (SCS)
6. Evaluation of Tanana River Basin flood hazards, particularly as they apply to flood-plain management in the Fairbanks area.	SCS
7. Water-quality impacts from chemical spills, abandoned landfills and "dump" sites, and military operations (Fairbanks area).	DEC
8. Effects of urban development on surface waters (Fairbanks).	DEC
9. Effects of use of fertilizers, other agricultural chemicals on water quality.	DEC
10. Impacts of placer mining on main-stem streams.	DEC
11. Water quality impacts of the Atqasuk Dredging Program -- will provide data on environmental impacts of dredging on the chemical and physical aspects of village water supplies, and ancillary information related to impact on anadromous and resident fish populations.	IWR/EES
12. Snowmelt infiltration into frozen ground -- will examine the role that moisture content within the seasonally frozen layers plays in controlling the infiltration and movement of snowmelt water.	IWR/EES
13. Geochemistry of saline lakes in northeastern Yukon Flats -- will determine the conditions leading to the formation of evaporite lakes in the Yukon Flats.	IWR/EES
14. Mineralogy of soils following forest fires (interior Alaska) and subsequent effect on ground-water quality.	IWR/EES
15. Consequences of removal of riparian vegetations on physical, chemical and biological characteristics of a headwaters, first-order taiga stream.	IWR/EES

B. Related Programs--Continued	Responsible Agency
16. Effects of placer mining on stream channel morphology, water quality, and aquatic organisms at sites in Denali National Park and Preserve. Continue water-quality studies and collection of baseline hydrologic data of DNP&P.	National Park Service (NPS)
17. Initiate baseline hydrologic-data collection and studies at Kobuk Valley National Park, Gates of the Arctic NP&P, Cape Krusenstern National Monument, and Noatak and Yukon-Charley Rivers National Preserves. Begin study of mining effects on water resources at Yukon-Charley Rivers National Preserve.	NPS

SOUTHCENTRAL REGION

Terrain, climate, and development are diverse within this large area. Physiographically, the Cook Inlet/Copper River basin is characterized by broad lowlands surrounded by rugged, glacier-clad mountains. The occurrence and potential for development of ground water are controlled by the wide range and complex distribution of underlying materials. Mixed glacier deposits, stream-sorted sand and gravel, wind-blown sand and silt, and lake-deposited silt and clay underlie the Matanuska and Susitna valleys, Anchorage Bowl area, Kenai Peninsula Lowlands, and the Copper River basin. Sedimentary and metasedimentary rocks form the Kenai and Chugach Ranges, and the Talkeetna and Wrangell Mountains are made up primarily of igneous rocks. Ground water has been developed from glacial outwash for public supplies at Kenai, Anchorage, and the Palmer-Wasilla area. Wells in either unconsolidated materials or bedrock also supply most individual, private water systems in the region. Frozen, fine-grained glacial-lake deposits in much of the Copper River basin restrict the occurrence and availability of ground water in that area.

The large, glacier-fed rivers of the region -- Copper-Chitina system, Susitna, Matanuska, Knik, and Kenai -- carry a high concentration of suspended sediment (glacier flour) during the summer melt periods, but many nonglacier-fed tributaries and other streams contain clear water. Ship Creek is an important source of supply at Anchorage, and the municipality proposes to pipe water, treated to remove the suspended sediment, from glacier-fed Eklutna Lake to the Anchorage Bowl area.

The water resources of the region as a whole are perhaps the most studied, documented, and developed in the State. Yet the rapid industrial and commercial development and accompanying population increases in Southcentral Alaska, where half the people of the State now live, are already stressing currently developed supplies in some areas (particularly Anchorage) and pose the potential for degradation of water quality (urban and residential runoff, untreated industrial and household wastewater). Anticipated future growth and development (coal resources in the Beluga area, agricultural activities at Pt. MacKenzie) will inevitably lead to additional demands for water supplies and concerns about protection of water quality. The timely and economical solution of these problems will require the continued expansion of the hydrologic information and data base.

The compound delta of the Yukon-Kuskokwim Rivers, the Bristol Bay-Nushagak Lowland, the intervening Ahklun/Kuskokwim Mountains, the Alaska Peninsula (Aleutian Range), and the volcanic Aleutian Island are separated and isolated by mountains, distance, and weather from developments in Cook Inlet and interior Alaska.

Ground-water conditions in the Bristol Bay-Nushagak Lowland are probably similar to those in other thick alluvial sequences, except that here the availability of water is influenced (reduced) by a layer of permafrost as thick as 175 feet. Potential for development of ground water in the Yukon-Kuskokwim Delta is limited by predominantly fine-grained sediment, permafrost, and shallow depth to the freshwater-saltwater interface near the coast. Ground-water conditions are probably highly variable in the volcanic rocks of the Alaska Peninsula and Aleutian Islands.

Man's use of and impact on the water resources of southwestern part of Alaska have so far been minor, and our knowledge of those resources is correspondingly limited.

Immediate needs for water data and information will most likely remain those at settled communities, military installations, and seasonal recreational and commercial fishery facilities. However, an understanding of the hydrologic environment is necessary to plan the orderly development of agricultural, hydropower, geothermal, and likely offshore mineral potentials in part of the region. Thus, significant increases in hydrologic data collection and in the current scope of study efforts are required.

A. Southcentral Region USGS/DNR Projects

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
1. Streamflow Data	F	F	F	F	F	DGGS/USGS	
2. Beluga Coalfields Projects							
a. Beluga Water Quality Monitoring	F	F	C			DGGS	DEC
b. Beluga Snow/Precipitation Survey	F	F	F	F	F	DGGS	SCS
3. Matanuska-Susitna Valley Projects							
a. Peak Flow, Low Flow & Lake Level Monitoring	F	F	F	F	F	USGS	DGGS/DF&G
b. Matanuska River Basin Survey	F	F	C			DGGS	DLWM
c. Knik Glacier Monitoring	F	F	F	F	F	USGS	DGGS
d. Pt. MacKenzie Ag Area Meteorological Data	C					DGGS	DA
e. Matanuska Aquifer Study	F	F	F	F	F	DGGS	DLWM
f. Mat-Su Large Lake Study	C					USGS/DGGS	
g. Mat-Su Small Lake Study	C					USGS/DGGS/DF&G	
h. Lake Eutrophication	F	F	F	F	C	USGS	DGGS
i. Hatcher Pass Snow Surveys	F	F	F	F	F	DGGS	SCS/DLWM
j. Susitna River Sediment Transport	F	F	C			USGS	APA
k. Knik River Gravel Survey	P	P	P			DGGS	DLWM
l. Matanuska Valley Moose Range Hydrology	F	F	F	F	F	DGGS	DLWM
4. Anchorage Area Projects							
a. Geohydrology of the Anchorage Area	F	F	F	F	F	USGS	MOA
b. Eagle River Ground Water Availability	F	C				DGGS	DLWM
c. Potter Marsh/Rabbit Creek Hydrological Evaluation	F	F	C			USGS	MOA/DLWM
d. South Anchorage Water Supply & Lake Levels	P	P	P	P	P	DGGS	DLWM
e. Hillside Area Ground Water Study	F	F	C			DGGS	

A. Southcentral Region USGS/DNR Projects--Continued

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
f. Eklutna Lake	F	F	F	C		USGS	MOA
5. Kenai Peninsula Projects							
a. North Kenai Ground Water Model		P	P	P		USGS	DGGS/DLWM
b. Lake Level & Ground Water Monitoring	F	F	F	F	F	USGS	DGGS
c. Water Resources of the Kenai Peninsula Borough	F	F	F	F	F	USGS	KPB
d. Kenai River Management Data		P	P	P	P	DGGS/DP	KPB
6. Kuskokwim Basin Reconnaissance Survey	F	F	C			DGGS	
7. Copper River Basin Projects							
a. Kenney Lake/Copper Center Water Supplies	P	P	P	P	P	DGGS	DLWM
b. Copper River Gaging Station		P				USGS	ADOT&PF
8. Alaska Peninsula/Aleutian Islands Projects							
a. Aleutian Island Stream-flow Data	F	F	F	F	F	DGGS	DLWM
b. Bristol Bay Water Supply Study	P	P	P	P	P	DGGS	DLWM

F - funded at present; funding anticipated
P - proposed, funds needed
C - completed

1. SOUTHCENTRAL STREAMFLOW CHARACTERISTICS

Streamflow data are basic to management of the water of Southcentral Alaska. Continuous recording gages are established, maintained, and data collected and published by USGS/DGGS cooperative, jointly funded contract.

Continuous streamflow recording gages are located on Anchor River, Kenai River, Capps Creek, Chuitna River, Willow Creek, Deception Creek, and Deshka River.

Peak flow and lake levels are maintained on 23 other streams and several lakes. Some stations are part of the GOES satellite real time system for which the receiving station is located in Anchorage.

2. BELUGA COALFIELD PROJECTS

a. Beluga Water Quality Monitoring - Water quality of the streams of the Beluga Coalfields will be threatened by coal mining. Baseline data are needed as well as water quality monitoring of the streams in order to adequately manage the water quality. This program provides data to DEC as well as DNR. This project involves a systematic sampling and analysis of water from designated sites in the Beluga Coal Mine area. The data are provided to management agencies.

b. Beluga Snow/Precipitation Survey - Precipitation and snow accumulation are an important part of monitoring and managing surface waters of the Beluga Coalfields area. This project is part of the statewide snow survey system coordinated by the U.S. Soil Conservation Service, which maintains five snow survey and precipitation sites in the Beluga Coalfields. Data are collected throughout the winter snow accumulation season.

3. MATANUSKA-SUSITNA VALLEY PROJECTS

a. Peak Flow, Low Flow, and Lake Level Monitoring - Peak-stage indicators (crest-stage gages) at several sites document flood events. Stream discharge measurements are made at other selected sites during low-flow conditions. Water levels are measured semiannually at 12 lakes. These streamflow and lake data (3 years of record now available) provide background information for other ongoing and planned areal and research studies.

b. Matanuska River Basin Survey - The Matanuska River system has good access and is one of the major river systems of the Matanuska-Susitna area. Very few data exist for the tributaries of the Matanuska River and no gaging stations presently monitor any part of the system. Data are needed to interpret water and sediment transport by the river. Gravel extraction, water quality, flooding, and erosion near Palmer are being monitored. This project will support preliminary streamflow measurement of the Matanuska River tributaries and sediment transport characteristics of the river system.

c. Knik Glacier Monitoring - The outburst of glacier-dammed Lake George once produced large floods on the Knik River. Although the lake has not formed since 1966, the potential exists for its re-formation and resumption of annual flooding. Such floods could affect existing and proposed future development along the Knik River. The activity of Knik Glacier is monitored in an attempt to predict the likelihood of the formation of a "new" Lake George.

d. Pt. MacKenzie Ag Area Meteorological Data - A meteorological station installed in 1981 records wind velocity and direction data needed for development of agricultural plans. The University of Alaska Agricultural Extension Service is planning to assume maintenance and monitoring of the station.

e. Matanuska Valley Aquifer Study - Demands for ground water in the Matanuska Valley are increasing rapidly as the population and associated development grow. Ground-water systems of the area need to be defined and evaluated in order to manage the area's water demands wisely. This project will analyze existing data and collect new information necessary to understand and describe ground-water systems of the Matanuska-Susitna area.

f. Matanuska-Susitna Large Lake Study - Big Lake in the Matanuska-Susitna Valley is an important area of development for recreation and fishing. The waters of the lake can produce necessary nutrients for the aquatic life there, but should not be polluted. Careful investigation of the nutrient condition of the lake will allow decisions for management of lake development and use to be based on fundamental biological principles and characteristics of the lake.

This project will define the physical and biological character of the waters of Big Lake and will document the distribution and variety of organic matter, the ability of the lake to support fish, and the potential for pollution of the waters. Principles learned through this study will be applicable to other lakes in subarctic areas of Alaska.

g. Matanuska-Susitna Small Lake Study - Smaller, heavily used lakes of the Matanuska-Susitna Valley support important fish population. Limnological investigations provide a scientific basis for management of the water of these recreational lakes.

h. Lake Eutrophication - An extension of earlier limnological studies in the Matanuska-Susitna Valley, this project will provide criteria for lake management by identifying those factors/conditions in shallow, subarctic lakes that make them most susceptible to cultural eutrophication.

i. Hatcher Pass Snow Surveys

Snow survey courses to monitor snow depth and water content will be established at selected locations to provide needed snow-cover data for managing these recreational areas for skiing and other winter sports. Data will also be useful for stream runoff and flood prediction.

j. Susitna River Sediment Transport Study - Alaska Power Authority has contracted USGS to conduct an in-depth investigation of the characteristics of sediment production, concentration, and yield of a glacier-fed stream. The data will be used for planning, design, and operation of proposed hydroelectric dams and power generation facilities. This study on the Susitna River (below the Devils Canyon dam site) will address the following aspects:

(a) Suspended-sediment transport rate as a function of discharge.
(b) Size distribution of suspended sediment as a function of transport rate.
(c) Bedload sediment-transport rate as a function of discharge.
(d) Size distribution of bedload sediment as a function of transport rate.
(e) Spatial distribution of total sediment transport.
(f) Stream vertical-velocity distributions as a function of discharge.
(g) Stream water-surface gradient as a function of discharge.
(h) Bed material particle-size distribution.

k. Knik River Gravel Survey - The project will evaluate the amount of gravel available for extraction from the bed of the Knik River, the effects of gravel mining and the potential gravel "recharge" of the river. In response to demand for aggregate resources, DNR land managers have requested this study.

1. Matanuska Valley Moose Range Hydrology - Streamflow, lake level, ground-water levels, water quality, wind and precipitation data needed to prepare a management plan for the newly created Matanuska Valley Moose Range will be provided to DLWM planners. Monitoring sites will provide data for ongoing management of the range.

4. ANCHORAGE AREA PROJECTS

a. Geohydrology of Anchorage Area - The objectives of this project are to: (1) operate a data-collection network for streamflow, lake levels, and ground-water levels; (2) maintain a "state-of-the-art" digital computer model of the confined aquifer system to simulate the hydrologic effects of ground-water development; (3) describe hydrologic characteristics of selected areas in Anchorage where information is required to guide land-use planning decisions; (4) determine current conditions and changes in streamflow characteristics and stream water quality due to urbanization of Campbell and Chester Creek basins; and (5) evaluate availability and quality of potential new public water supplies at Girdwood.

b. Eagle River Ground Water Availability - Eagle River community has had a history of ground-water supply problems. A study of the area's ground-water system, begun in 1982 at the request of DLWM, will result in the definition and understanding of Eagle River aquifers necessary for prudent management of the community's water resources.

c. Potter Marsh/Rabbit Creek Hydrological Evaluation - Potter Marsh is the focal point of a prime coastal waterfowl natural area which is potentially threatened by Anchorage subdivision development. Many agencies, organizations, and citizens have requested that steps be taken to preserve the natural qualities of the estuarine environment.

This project will provide data and analyses that will provide a basis for determining the potential of future development to alter the present hydrological balance of the marsh.

d. South Anchorage Water Supply and Lake Levels - Ground-water data (both quantity and quality) from bedrock aquifers and other aquifers are necessary for improved water management of water resources of South Anchorage. Saltwater intrusion poses a threat to wells near the inlet. Lake levels and quality have been jeopardized by continuing land development so that evaluation of the hydrological changes is needed by water managers and residents.

e. Hillside Area Ground-Water Study - Detailed data compilation and computer analysis will yield data for models which will provide a method for monitoring and interpreting hillside area ground-water systems. The model will be used to attempt to predict effects of potential withdrawals from the system. These data and interpretations are needed to manage water applications in this growing Anchorage suburb.

f. Eklutna Lake - Construction has begun on a pipeline that will eventually carry water from Eklutna Lake to communities along the Glenn Highway and to the Anchorage Bowl area. This study will investigate aspects of the water source, including (1) runoff characteristics of snow- and glacier-fed Eklutna Lake, and (2) sedimentation rates in and processes of transport of suspended sediment through the lake.

5. KENAI PENINSULA PROJECTS

a. North Kenai Ground Water Model - Continued monitoring of local ground water will allow development of a digital model of the lower confined aquifer, in order to simulate the extent of, and predict probable changes in, the intrusion of salt water from Cook Inlet into the aquifer due to anticipated increases in pumping of large-yield industrial wells, as well as effects on lakes and other hydrologic expressions of the area.

b. Lake Level and Ground Water Monitoring - This continuing program, begun as part of earlier USGS interpretive studies in the North Kenai area, further defines the relationships between ground-water use and fluctuations in lake levels.

c. Water Resources of the Kenai Peninsula Borough - The objectives are to monitor hydrologic conditions in parts of the Borough outside the specific study areas addressed in a and b above, and to evaluate needs for detailed studies.

d. Kenai River Management Data - Division of Parks needs all Kenai River hydrologic data available in order to prepare a management plan for the river. This project will summarize and evaluate existing data as well as define and initiate a data collection system adequate for managing the Kenai River in order to maintain the fisheries and recreational values of that system.

6. KUSKOKWIM BASIN RECONNAISSANCE SURVEY

Flow and flood data are developed from reconnaissance surveys of the Kuskokwim River tributaries. Surveys of valley and channel profiles as well as water surface slope and discharge allow reasonably accurate calculations for streamflow and flood characteristics for these major, hydrologically unknown interior Alaskan rivers which are tributary to the largest totally Alaskan river. The hydrologic data and interpretations are needed for knowledge, planning, and management of the Kuskokwim River system as well as the state lands through which the rivers flow.

7. COPPER RIVER BASIN PROJECTS

a. Kenney Lake/Copper Center Water Supply Evaluation - Residents and DNR water managers request data and evaluation of water supply sources for this Copper Basin population center particularly for domestic and agricultural water supplies.

b. Copper River Gaging Station - The streamgaging station on the Copper River near Chitina, operated by USGS, should be augmented or replaced by a station at the Million Dollar Bridge near Cordova. The new station would monitor runoff of the entire basin (which is not provided by the present gage) as well as obtain streamflow data needed for planning and design of proposed highway structures on the lower Copper River.

8. ALASKA PENINSULA/ALEUTIAN ISLAND PROJECTS

a. Aleutian Islands Streamflow Data - Small cooperator operated stations are located at Nikolski and Unalaska to provide streamflow data for small streams in the Aleutian Islands. Data are used to appraise the local water resource potential

for domestic and industrial water supply, hydroelectric potential, and fish habitat. Also the data can be used for improving ungaged streamflows in a hydrologically unsampled corner of Alaska.

b. Bristol Bay Water Supply Study - The study would evaluate available data and install new data collection stations in order to develop information needed to improve water supplies for Bristol Bay communities and seafood industrial plants at Naknek, King Salmon, Dillingham, or other villages as demand requires. Some work has already been done in Dillingham.

B. Related Programs	Responsible Agency
1. Chugach National Forest -- Establish and maintain a current water-resources data index for CNF; inventory and update current water rights permits on forest lands; transfer USGS gaging station from Resurrection Creek to Portage Creek and identify potential sites on Montague Island for streamflow data collection.	U.S Forest Service (USFS)
2. Fisheries ground-water studies -- assess potential for developing spawning and rearing areas in stream channel gravels fed by ground water (Turnagain Pass, Portage Valley and other areas).	USFS [Co-op with DF&G]
3. Potential for degradation of water quality: (a) Anchorage - urban runoff. (b) Kenai - disposal and storage of drilling muds in wetland areas.	Alaska Department of Environmental Conservation (DEC)
4. Collection of baseline hydrologic data in anticipation of coal mining (Beluga area).	DEC/DNR Co-op Study
5. Sterling Special Waste Site Evaluation.	DEC
6. Impacts of disposal of seafood processing wastes on receiving marine waters -- studies at Kodiak, Akutan, and at Cordova.	DEC
7. Geochemistry of Copper River Basin ground water - will provide a multivariate statistical analysis of the area's geochemistry.	Institute of Water Resources (IWR) [Co-op with DGGS]
8. Initiate water resources baseline studies at Lake Clark and Wrangell-St. Elias National Park and Preserve (NP&P); study of mining effects on water resources at Wrangell-St. Elias NP&P; study of salmon nutrient re-cycling at Katmai NP&P.	National Park Service (NPS)

B. Related Programs--Continued	Responsible Agency
9. Monitoring of aquatic habitat and fish populations of the Tuluksak River with respect to placer-gold dredging operations at Nyac.	Alaska Department of Fish & Game
10. Stream-temperature modeling -- Evaluate potential effects of proposed two-dam Susitna hydroelectric project on downstream water temperature. Model will simulate natural and "with-project" instream temperatures under a range of meteorologic and hydrologic conditions and various reservoir operating procedures. Associated with this project are investigations of thermal effects on fish and effects of an altered ice regime on physical and biologic system of the river.	Arctic Environ. Info. and Data Center [Coop. w/APA, USF&WS]
11. Identification of flood hazard areas along selected streams or reaches of those streams for use in flood-plain management studies. Tentative list of steams includes Kuskokwim, Copper, Matanuska, Kenai, Anchor, Kasilof, and Ninilchik Rivers, and Deep Creek.	Soil Conservation Service
12. Strandline Lake/Beluga River outburst flood analysis -- Strandline Lake is a glacially dammed lake which outbursts nearly every year causing flooding of the Beluga River. Power transmission lines, bridges, and fishermen are endangered by this flood. Detailed analysis of the processes responsible for the flooding will allow interpretation and possible prediction of the outburst flood. This project will support the final surveys and analyses and the preparation of the study report.	Geophysical Institute (GI) [Co-op with DGGS]
13. Mt. Redoubt/Drift River flood evaluation -- Drift River outburst floods occur when the North Glacier on Mt. Redoubt surges and dams the Drift River. Developments in the Drift River valley are threatened by such a flood. Recent investigation indicates the North Glacier is in the process of surging. Monitoring the surging glacier will allow forecast of flooding of the Drift River. This project will support continued surveillance and surveying of the North Glacier on Mt. Redoubt and collection of data necessary to make glacial terminus advance predictions	GI [Co-op with DGGS]

SOUTHEAST REGION

Water is abundant in the relatively mild (for Alaska) and very wet climate of Alaska's coastal "panhandle". The high precipitation (more than 200 inches per year measured at Little Port Walter; probably much greater at higher altitudes) on glaciers and on steeply sloping glacially scoured bedrock produces the highest mean annual and peak runoff rates in the State. Several large rivers originating in Canada flow through Southeast Alaska: the Taku (Drainage Area = 6,000 mi^2), the Alsek (D.A. = 11,000 mi^2) and the Stikine (D.A. = 20,000 mi^2). These glacier-fed rivers carry large amounts of suspended sediment. Most of the smaller streams in the region are free of glacial debris. Ground water can be obtained readily from alluvium of the larger stream valleys, although these deposits are not as extensive as in other parts of Alaska. Most of the water used in Southeast Alaska -- for hydroelectric power generation, seafood processing, and pulp mill operations -- is from surface sources, but ground water provides the principal public supply at Juneau, Sitka, Yakutat, Ketchikan, and at other large communities.

The following potential problems and needs exist in the Southeast Region: (1) Effects of past and ongoing logging practices as well as proposed mining operations (at Quartz Hill near Ketchikan and Greens Creek on Admiralty Island) pose potentially significant impacts on quality of surface water. Avalanches and landslides may occur naturally on steep, saturated slopes in areas being disturbed by man's activities; separation of "causes" may be difficult. (2) Potential hazards from glaciers (outburst floods) and heavy, wet snowfall on steep mountain slopes (avalanches) have been identified locally. A compilation of data and a coordinated action plan in case of emergency are needed. (3) Water-supply needs in the Juneau area (Mendenhall Valley and Douglas Island) and other communities require extension of information on ground-water systems -- complex hydrology (and local water-quality problems) of glacio-fluvial deposits and alluvial fans. Salt-water intrusion may occur naturally or be caused by pumping from coastal valleys. (4) Conduct of hydrologic-data collection and research activities on Native- or corporate-owned lands by government agencies (at least Federal) may be restricted by legal "considerations." (Federal government cannot accept funds for studies from such entities. This situation not unique to SE Alaska.)

A. Southeast Region USGS/DNR Projects

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
1. Streamflow Characteristics							
a. Gaging Stations (see Statewide Programs)	F	F	F	F	F	USGS	USFS/USB/ DGGS/DLWM*
b. River Basin Surveys		P	P	P	P	DGGS	DLWM
2. Mendenhall Valley Hydrological Study	F	C				USGS	JCB/DLWM

*Also cities of Sitka and Petersburg

A. Southeast Region USGS/DNR Projects--Continued

Program Element	'85	'86	'87	'88	'89	Responsible agency(s)	Co-op agency(s)
3. Auke Bay Water Supply Study	F	F	C			DGGS	DLWM
4. Indian River Basinwide Adjudication	P	P	P	P	P	DLWM/DGGS	
5. Quartz Hill Water Monitoring	P	P	P	P	P	USGS	USB/DGGS
6. Greens Creek Water Monitoring	F	F	F	F	F	USFS/USGS	
7. Land Disposal Water Availability Studies	P	P	P	P	P	DGGS/DL M	

F - funded at present; funding anticipated
P - proposed, funds needed
C - completed

1. STREAMFLOW CHARACTERISTICS

a. Gaging Stations (listed with Statewide Programs) - In southeast Alaska, long-term records from several active and discontinued gaging stations probably provide a more complete and representative picture of the regional variation and range of streamflow than for any other large area of the State. Although a relatively intensive region-wide basic data collection effort continues, new developments, activities or problem areas require additional and/or more detailed data at specific sites. Stations recently established to provide such information include: Indian River near Sitka (water rights adjudication), Mendenhall River near Auke Bay, and Klehini River near Klukwan (surface-water/ground-water relations).

A reconnaissance of runoff characteristics in the Alsek River basin is planned for 1985-86. This large river (drainage area 11,000 mi^2) is fed primarily by glacial meltwater.

b. River Basin Surveys - Reconnaissance surveys of ungaged stream systems to produce streamflow and flood predictions have been planned for the Alsek and Taku Rivers as well as other streams which DNR water managers identify for which data are needed. (Nonfunded projects.)

2. MENDENHALL VALLEY HYDROLOGICAL STUDY

The Borough and City of Juneau as well as residents and DNR water managers have requested an intensive investigation and evaluation of the water supplies of the Mendenhall Valley area. A USGS-WRD study nearing completion will provide necessary data and interpretation for determining quantities of available water and effects on the quantity and quality of the water from salt water intrusion and sewage resulting from increasing demands from the system.

3. AUKE BAY WATER SUPPLY STUDY

The study will provide more complete data and interpretation of ground water and other water supplies of the Auke Bay area in order to more accurately define salt water intrusion and provide a technical basis for more effective management policies for this developing area. The study was requested by Region water managers.

4. INDIAN RIVER BASINWIDE ADJUDICATION

Appropriations of water from Indian River in Sitka may be greater than the amount of water in the river during low flows. Users and water rights holders include Alaska Department of Fish and Game, City of Sitka, National Park Service, Sheldon Jackson College, and private parties. DLWM water managers are planning to adjudicate Indian River's waters on a basinwide basis and will require good, basic data as well as analyses and interpretation of those data for meaningful adjudication of this over-appropriated stream system.

5. QUARTZ HILL WATER MONITORING

This project will provide baseline data to characterize present hydrologic conditions in an area of known potential for molybdenum development near Ketchikan. Two gage sites provide quantity and seasonal distribution of stream discharge and seasonal and areal variations in surface-water quality

6. GREENS CREEK WATER MONITORING

Information similar to that collected at Quartz Hill will document surface-water conditions in this proposed mining development in the Hawk Inlet-Young Bay area in the northern part of Admiralty Island. The ongoing work is conducted by U.S. Forest Service hydrologists.

7. LAND DISPOSAL WATER AVAILABILITY STUDIES

Technical hydrological evaluations of water supply, flooding, erosion, recreation, and habitat will be provided as requested and needed by DNR planners and managers in order to conduct land disposals.

B. Related Programs	Responsible Agency
1. Impacts of forestry practices on water quality.	Alaska Department of Environmental Conservation (DEC)
2. Water quality and sediment analysis of Swan Lake, Sitka	DEC
3. Evaluate usefulness of the mussel Mytilus as a bio-accumulator and thus an index of metals added to streams by mining operations (Greens Creek and Hawk Inlet at Admiralty Island).	DEC

B. Related Programs--Continued	Responsible Agency
4. Impact of ore spillage on water quality (Skagway harbor)	DEC
5. Receiving water quality in the vicinity of Petersburg seafood processors.	DEC
6. Juneau area water-quality studies: a. Water quality investigations of North Twin Lake. b. Aurora Basin and Gastineau Channel -- circulation and water exchange. c. Effects of small boat moorage -- Auke Bay, Aurora Basin, Tee Harbor.	DEC
7. Forest Practices Advisory -- determine effects of forest practices on hydrologic system and monitor effectiveness of "Best Management Practices."	U.S. Forest Service (USFS)
8. Fishway Investigations -- to provide hydraulic and hydrologic data to fisheries management agencies.	USFS
9. Kadashan Barometer Watershed -- intensive effort to monitor effects of roads and timber harvesting practices on water quality and streamflow regime.	USFS [Co-op with USGS]
10. Water resource inventory of the Chatham Area (Tongass National Forest) -- relation of stream channel morphology to suitability and sensitivity of aquatic habitats for anadromous and resident fish.	USFS
11. Snow surveys and precipitation stations -- data significant in evaluation of runoff and water availability in areas of small or virtually nonexistent ground-water supplies.	U.S. Soil Conservation Service [Co-op with DGGS]
12. Instream flow study of Indian River, Sitka National Historical Park.	National Park Service (NPS)
13. Water-resources baseline study, Glacier Bay National Park and Preserve.	NPS
14. Streamflow data in support of potential hydroelectric power studies -- Favorite Creek near Angoon and small stream near Klukwan (north of Haines).	Alaska Power Authority (APA)
15. Monitoring effects of operation of Tyee hydroelectric project on fish-spawning channel developed in tailrace of the plant.	Arctic Environmental Info. & Data Center [Co-op. w/APA]

HYDROLOGICAL ACTIVITIES IN YUKON TERRITORY, 1985-1989

The great Yukon River system heads in the Yukon Territory and British Columbia, where our neighbors to the east must deal with water resources issues and problems similar to those we face in Alaska. We are thus pleased to include in this AWARE Plan the following statements provided by J.R. (Ric) Janowicz, Regional Hydrologist for Yukon Territory, with the Water Resources Division, Indian and Northern Affairs, Canada:

During the 1985/86 fiscal year a five-year plan will be implemented to expand the hydrometric network operated by Water Survey of Canada in Yukon Territory as part of the Water Survey of Canada/Department of Indian and Northern Development (WSC/DIAND) cooperative cost sharing agreement. The proposed plan, consisting primarily of baseline stations, will expand the existing network of 72 stations by 15 stations.

Water Survey of Canada intends to begin the installation of Data Collection Platforms at all remote hydrometric stations with five Yukon stations being instrumented during 1985. These five stations have ports available for the installation of additional sensors. Cooperation between WSC and Atmospheric Environmental Service, as well as other government agencies is anticipated with the inclusion of various meteorological instruments at WSC hydrometric sites.

The hydrometric network operated by DIAND during 1985/86 will consist of 24 stations of which 11 are baseline stations and 13 site specific stations. The future plan for the network is to transfer the 11 baseline stations to WSC (as outlined in the WSC/DIAND 5 year plan). The site specific stations, which represent primarily mining and transportation concerns, will be maintained only as long as a need exists. It is expected that other site specific stations will be added to the network. A historical summary of the data was published in 1984. It is expected that an update will be published every two years.

The snow course network operated by DIAND with the cooperation of the Atmospheric Environmental Service presently consists of 41 stations throughout the Territory. These will be sampled for snow depth and snow water equivalent on February 1, March 1, April 1, May 1 and May 15; a snow survey bulletin with runoff forecasts will be published after each sample. A historical snow survey summary is planned for 1985.

DIAND hopes to establish a snow pillow station in the Mackenzie Mountains to provide information on a real time basis for spring flood forecasting.

The Vancouver office of the National Water Research Institute is conducting a multiyear research project to develop a better understanding of freeze-up and break-up processes on the Yukon River in the Whitehorse area. Five river stage and ice front progression observation stations have been established in the reach. This particular river reach is traditionally a problem area with respect to freeze-up ice jam flooding on an almost annual frequency and the study will hopefully provide the basis for mitigative measures.

A joint study between DIAND and the Department of Civil Engineering, University of Alberta in Edmonton, is planned to study freeze-up and break-up processes on the

Yukon River in the reach between Fort Selkirk at the confluence of the Pelly River, and Eagle, Alaska. Emphasis will be placed on the Dawson area which is susceptible to ice jam flooding on a relatively frequent basis. The overall objective of the study is to obtain a solution to the flooding problem.

Negotiations between the Inland Water Directorate, Department of Environment, DIAND and Yukon Territory leading to the implementation of the Flood Damage Reduction Program (FDRP) in Yukon are planned to commence during 1985 with an agreement hopefully in place in the foreseeable future. The FDRP is a cooperative program to discourage future flood vulnerable developments in areas designated as flood prone. The Program is made up of a two stage process consisting of the floodplain mapping followed by designation. Nationally approximately 200 communities in the Northwest Territories, New Brunswick, Quebec, Ontario, Manitoba and Saskatchewan have been mapped and designated.

A general hydrology study of northern Canada (Northwest and Yukon Territories) is planned for 1986. The study to be funded by DIAND will consist of an inventory of hydrologic parameters, an estimation of these parameters for gauged areas followed by the transfer to ungauged areas. Recommendation for future hydrometeorologic data needs will be assessed on this basis. A similar study was carried out for NWT in 1982 with the 1986 publication representing a four-year update encompassing both Territories.

Primary work will continue to study the surface hydrology of Haeckel Creek near Whitehorse. The experimental watershed established in 1984 is a 17.4 square kilometer basin which is characteristic of Coast Mountain drainages. The basin will be used primarily for development and calibration of hydrologic models, the results of which will be transferred to ungauged areas.

A Canada-wide flood guide being prepared by the National Research Council, Associated Subcommittee on Hydrology will contain examples extracted from Yukon Territory. The guide is expected to be released during 1985.

The Mackenzie River Basin Study is at the implementation stage of several recommendations which include the establishment of an integrated monitoring network in the Liard and Peel River sub-basins of Yukon Territory and spring flood studies on the Liard. The proposed integrated monitoring network, which will consist of Hydrometric, Meteorologic, Snow Course, Water Quality and Sediment stations is anticipated to go ahead during 1986/87 through existing agreements where available.

The Canadian Climate Program is expected to be active in northern Canada through various subcommittees. The overall objective of the program is to better define the requirements for climate information for northern planning and development, and to provide insight into the ways which climate information can be acquired and used in responding to northern issues.

YUKON RIVER BASIN STUDY

The Yukon River Basin Study was a joint (2.2 million dollar Canadian) study by Canada, British Columbia and Yukon of the water and related resources of the Yukon River Basin in Canada. The study was carried out between 1980 and 1984. The final

report of the Yukon River Basin Committee is expected to be released in the spring of 1985.

During the course of the study, projects were completed in eight program areas: hydrology, water quality, wildlife, tourism, parks and recreation, fisheries, energy, placer mining and socio-economics. In addition, a program to exchange information between the governments and with the public was developed.

A computer model of the basin and a model of the basin's economy have been developed which will be of particular use to planners in the basin.

For further information on the study contact:

Dr. S. A. D'Aquino
Head, Planning Division
Water Planning and Management Branch
Inland Waters Directorate
Room 502 - 1001 West Pender St.
Vancouver, B.C. V6E 2M9 CANADA

STATE OF ALASKA
INSTREAM FLOW HANDBOOK

A GUIDE TO RESERVING WATER FOR INSTREAM USE

Division of
LAND AND WATER
MANAGEMENT

Alaska Department of
NATURAL
RESOURCES

STATE OF ALASKA
INSTREAM FLOW HANDBOOK

A Guide to Reserving Water for Instream Use

Department of Natural Resources
Division of Land and Water Management
Water Management Section

March 1985

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Photo Lisa R. Holzapfel © 1985

FOREWORD

Alaska water law provides for the appropriation of water for both out-of-stream and instream uses. The "Instream Flow Handbook" provides an understanding and basic knowledge of reservations of water for instream uses and serves as a guide to reserving water for instream uses.

The handbook is divided into two sections. The first section reviews the administrative process by which individuals, organizations, or government agencies may reserve water for instream use. The second section is designed to acquaint the reader with some of the various methods of determining instream flows or lake levels and to guide the reader to sources of more detailed information. Descriptions of methods in this handbook constitute neither endorsements of these methods nor guarantees of the applicability of a quantification method to a given situation.

This handbook is a companion to the "State of Alaska Water User's Handbook," published by the Alaska Department of Natural Resources (DNR), Division of Land and Water Management in 1981 and revised in 1984. The "Water User's Handbook" provides extensive background and detail on the Alaska water appropriation system and should be read before reading the "Instream Flow Handbook." Both handbooks can be obtained at the DNR offices listed in the appendix.

GENERAL INFORMATION ABOUT RESERVING WATER FOR INSTREAM USES

Under Alaska water law, Alaskans may obtain two kinds of water rights: out-of-stream (diversionary) water rights and instream water rights. Those people wishing to divert, withdraw, or impound water from a surface or underground water source must file for a diversionary water right under Alaska Statute 46.15. This process is presented in detail in the "Water User's Handbook." Those wishing to ensure that a sufficient flow of water in a stream, or level of water in a lake, will remain in the stream or lake and will not be appropriated or diverted for another use may seek an instream flow reservation.

An instream flow reservation is not a required permit, but rather an optional water right. Private individuals or organizations as well as public agencies may apply for one. Those holding an established instream flow reservation have a legal standing to assert their right against conflicting uses of water by people who do not have water rights or who are junior in priority.

Under Alaska Statute 46.15.145, instream flow reservations may be made for the following uses:

- Protection of fish and wildlife habitat, migration, and propagation
- Recreation and parks
- Navigation and transportation
- Sanitation and water quality

Water can be reserved for one or more of these permissible uses at a particular point or part of a stream or other water body for a period of time specified in the certificate of reservation.

An instream flow reservation does not, however, authorize the certificate holder to:

- Prevent access to, on, or through the water of the reservation
- Prohibit the use of the reserved water for other compatible purposes
- Abandon, convey, transfer, assign, or convert the certificate to another use without the approval of the Department of Natural Resources (DNR)

An Application for Reservation of Water (Form 10-1151) can be obtained at any DNR regional office. Completed applications must be submitted to the regional office located in the area of the proposed reservation of water.

Photo Gary J. Prokosch.

HISTORY OF INSTREAM FLOW LEGISLATION IN ALASKA

In 1959, when Alaska was admitted to the Union, water use was addressed in Article VIII, Sections 3, 13, and 16 of the state constitution. These sections outline the doctrine of "prior appropriation," allowing earlier appropriators of water a priority of right over subsequent appropriators on a "first-in-time, first-in-right" basis.

The Alaska Water Use Act, Alaska Statute 46.15.010-270, governing appropriation and use of water, was enacted in 1966 by the Alaska Legislature. This act gave a statutory definition to the doctrine of prior appropriation as authorized by the state constitution. The Alaska Water Use Act established procedures for maintaining existing rights and for obtaining new rights to all ground and surface waters of the state. It delegated to DNR the authority to administer the act and to adjudicate water rights.

In 1980 the instream flow amendments to the Water Use Act were enacted to address the following issues:

- The State's need for a clear administrative process to adjudicate instream water rights that might be asserted by the federal government
- The fishing industry and fishery management agencies' concern that there was no legal mechanism to establish water rights to maintain streamflows for fish habitat and production, other than by putting conditions on DNR water rights permits
- Concern that reduced streamflow might affect water quality conditions downstream from municipal treatment plants and mining operations

The instream flow amendments established a mechanism by which private parties and public agencies can apply to DNR for reservations of water for instream uses, including fisheries, navigation, recreation, and water quality purposes. They provide for quantification of instream water uses, the establishment of a priority date, and issuance of a Certificate of Reservation within the existing state water rights system.

The Alaska instream flow legislation is unique within the United States in its specific inclusion of private citizens among those who may formally apply for an instream or lake level reservation. With the Alaska citizen's opportunity to reserve water goes the responsibility to be aware of the rather complex field of water resources allocation, particularly within the framework of instream flow activities.

Photo Robert Belous, NPS.

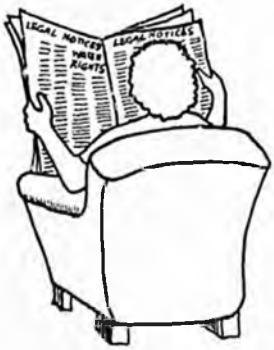
HOW TO RESERVE WATER FOR INSTREAM USES IN ALASKA

The Application To Certificate Process

1 Applicant contacts DNR for forms and assistance.

2 Applicant determines the quantity needed.

3 Applicant submits completed forms to DNR regional office.



4 DNR reviews the application and public is notified.

5 DNR issues Certificate of Reservation.

6 DNR reviews issued Certificate of Reservation.

Contact Department of Natural Resources

Those interested in filing an application to reserve water for instream use should first contact the DNR regional office in the area of the proposed reservation to find out:

- How to apply
- How to *quantify* the water to be reserved for a particular use; that is, how to determine how much water is needed, and how to choose the most appropriate quantification method for the stream or lake in question
- If there are any existing or pending water rights on the stream or lake in question
- If DNR has existing data on the stream which may be helpful in an instream flow study
- Which other local, state, or federal agencies may provide information or assistance or may have instream flow studies planned or underway on the stream or lake in question

The locations, addresses, and phone numbers of DNR regional and area offices are listed in the appendix.

Determine the Amount of Water to Apply for

When you have decided to reserve water in a stream or lake and know what use you want to reserve the water for, you are ready to plan how to quantify, or measure, how much water is needed. Once you have chosen a quantification method you will need to investigate how to apply it. The second part of this handbook introduces quantification techniques and some basic *hydrologic* (water-related) concepts. The references in the Annotated Bibliography have been selected to provide background information for further reading. You may also need to contact experts, such as hydrologists, biologists, instream flow specialists, and recreation planners, to assist you. Next, you need to collect all available information on the stream or water body and on the use for which you are proposing to reserve water. You or a selected contractor should conduct the study to determine how much water to request for reservation, then summarize the results in writing.

File an Application for Reservation of Water

Submit the completed Application for Reservation of Water (Form 10-1151) to the DNR regional or area office located in the area of the proposed reservation. The appendix contains a list of these offices. Include the filing fee as outlined in the DNR fee schedule. Fill out the application completely; answer all questions and include all attachments. An incomplete application will not be accepted but will be returned to you. The date and time that your complete application is accepted establishes the priority date for the application.

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

Northern Region
4420 Airport Way
Fairbanks, Alaska 99701
(907) 479-2243

Southcentral Region
Pouch 7-005
Anchorage, Alaska 99510
(907) 276-2653

Southeastern Region
Pouch MA
Juneau, Alaska 99811
(907) 465-3400

OFFICE USE ONLY

LAS

APPLICATION FOR RESERVATION OF WATER

INSTRUCTIONS: This is an application to reserve a specific instream flow or level of water under AS 46.15.145 and 11 AAC 93.141-147. This application must be filled out completely and all requested attachments submitted with it. Failure to complete all parts of the application may result in return of the application. Attach extra pages to fully answer questions. If a report is attached as part of this application, indicate appropriate page numbers following each question. Submit this application to the region in which the proposed reservation is located (identified above). Please type or print in ink.

1. Full legal name of applicant(s): _____

2. Mailing Address: _____

   City: _____ State: _____ Zip: _____

   Business Phone: _____ Home Phone: _____

3. Name of the stream or water body in which water is proposed to be reserved:

   _____

4. Location of the proposed reservation of water:

   (a) List ALL sections, townships, ranges and meridians from the beginning to the end of the stream segment and for all parts of the lake or waterbody in which water is requested to be reserved. (Attach extra pages if needed.)

   _____

   _____

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10-1151 (11/83)

(b) Describe the location of the point or points defining the boundary of the proposed reservation of water by river mile index, river mile, geographical or cultural landmark, etc., on the stream or water body. (Attach extra pages if needed.) _____

_____

_____

_____

_____

(c) ATTACH a U.S. Geological Survey map at 1:63,360 scale, or 1:250,000 scale if 1:63,360 scale is unavailable for the area, clearly identifying the following for the proposed reservation of water:

(1) Sections, townships, ranges and meridians

(2) The stream or water body in which the reservation of water is proposed

(3) Specific point or points defining the boundary of the proposed reservation of water

(4) Permanent, temporary or planned locations of water measurement devices (such as gaging stations, weirs, staff gages)

(5) Permanent, temporary or planned bench marks

5. (a) Identify the purpose(s) of the proposed reservation of water by checking the appropriate box(es).

[ ] protection of fish and wildlife habitat, migration, and propagation

[ ] recreation and park purposes

[ ] navigation and transportation purposes

[ ] sanitary and water quality purposes

(b) Describe in detail the purpose(s) of the proposed reservation, including, when appropriate; species and life stage, type of recreation, vehicle, or water quality parameter, or other relevant information. (Attach extra page if needed.) _____

_____

_____

_____

_____

_____

6. Is the water currently being used for the purpose(s) applied for?

[ ] Yes.

[ ] No. If no, when will use for this purpose begin? Specify approximate date. _____

7. (a) Water requested to be reserved (check one):

[ ] to maintain a specific instream flow rate, measured in cubic feet per second

[ ] to maintain a specific level of surface water, measured in cubic feet or acre feet

[ ] to maintain a specific surface water elevation, measured in relation to a permanent benchmark

(b) Quantify the specific amount of water requested to be reserved: Identify and quantify, as appropriate; flow rates, quantities, surface water elevations, depths, etc., as they relate to the daily durations and months of the year during which the reservation is proposed. Include any flow release schedules from projects upstream of the proposed reservation that would apply. (Attach extra pages if needed.)

_____

_____

_____

_____

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_____

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_____

_____

_____

_____

_____

8. Attach and submit with this application documentation or reports showing facts to support the following:

(a) The need for the proposed reservation of water, including reasons why the reservation is being requested.

(b) Identify and describe the methodology, data, and data analysis used to substantiate the need for and the quantity of water requested for the proposed reservation of water, including:

(1) Name and description of method used,

(2) Who conducted the study and analysis,

(3) Schedule of when data collection and analysis occurred,

(4) Type(s) of instrument(s) used to collect and analyze data,

(5) Description of data and how the data was collected, including when applicable, (A) selection of stream reach, study site and transect selection, (B) flow, survey, elevation, and depth measurements, (C) pertinent physical, biological, water chemistry and socio-economic data,

(6) Description of how data was analyzed, and

(7) Maps, photos, aerial photos, calculations, and any other documents supporting this application.

9. If there are provisions for monitoring this proposed reservation of water, include the following:

(a) Description of monitoring equipment (such as gaging stations, staff gages, weirs)
(b) Location of monitoring equipment
(c) Provisions for payment of monitoring
(d) Reporting system

Statements contained in this application are true and correct to the best of my knowledge.

Signed _____
Applicant(s) Full Legal Name(s)

Date _____

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10-1151 (11/83)

Provide Public Notice of the Application

After your application is complete and has been accepted, DNRwill review it to ascertain the need for the reservation of water and the impacts on other water rights holders and the public interest. DNR will make an assessment to determine if water is available for the reservation and if the hydrologic data and supporting information in the application is accurate and adequate. A site inspection of the proposed reservation of water may also be made at this time.

DNR will then provide you with a prepared public notice which you must place, at your expense, in a newspaper of general distribution in the vicinity of the proposed reservation of water. This legal advertisement will summarize the proposed reservation of water and allow the public to submit comments or objections to the DNR regional office.

During this public notice period DNR will serve individual notice to:

- Prior appropriators who may be affected by the new reservation of water
- The Alaska Department of Fish & Game
- The Alaska Department of Environmental Conservation
- The U.S. Department of Interior
- The U.S. Forest Service
- Any local government in whose jurisdiction the proposed reservation of water would occur

Objections resulting from the legal advertisement or individual notice must be submitted in writing to the DNR regional office within 15 days of publication of the advertisement or receipt of the notice. Objections should state all facts and all reasons for modifying or withholding the reservation of water. DNR will answer all objections in writing.

Photo Gary J. Prokosch.

Certificate of Reservation of Water

If the proposed reservation meets the requirements of Alaska Statute 46.15.145 a certificate of reservation will be granted. DNR will summarize the decision in writing and issue the certificate to the applicant. The certificate of reservation grants a water right, for the specified use of water within the stream or lake, to maintain an adequate instream flow or level of water for that use for a stated period of time during the year.

Conditions may be placed on the certificate of reservation, and the certificate holder is responsible for complying with them. Conditions might include a provision to install equipment, such as stream gages, weirs, or staff gages, to monitor the reserved flow or level of water and to periodically provide reports to DNR.

Review of Certificates of Reservation

Certificates of reservation must be reviewed by DNR every 10 years but can be reviewed any time within the 10-year period if necessary. The review will determine if:

- The purpose and need for the reservation still apply
- The reservation affects prior appropriators and the public interest
- A new beneficial use of water has been proposed
- New information is available about the reservation
- The quantity or level of water reserved is adequate for the purposes of the reservation
- The time periods for the reservation still apply
- Additional research, data collection, or analysis are needed to review the reservation

Public and individual notice of the review will be given in a manner similar to the notice of the application for reservation of water in order to gather information that may assist in the review. At the conclusion of the review, DNR will summarize the findings in writing and will continue, amend, or revoke the certificate of reservation.

Photo Lisa R. Holzapfel © 1985

Appeal Procedures

By statute, interested parties have 15 days to respond to a notice of a proposed reservation of water and to file any written objection regarding the application.

DNR is obligated by statute to grant or deny any application, in whole or in part, within 30 days of receipt of the last objection. If a hearing is held, the application must be granted or denied within 180 days of receipt of the last objection. If DNR fails to grant, deny, or condition the application in accordance with these time periods, the unsatisfied party may appeal directly to Superior Court.

If any party is dissatisfied by a delegated decision of the Commissioner, that party may, within 30 days after the date that the decision was mailed or personally served, appeal directly to the Commissioner for modification or reversal of the decision. Before making a decision, the Commissioner may require additional information or hold a hearing. The appellant may also request permission to present further information to the Commissioner. If a party is still not satisfied by the decision of the Commissioner, that party has 30 days to appeal to Superior Court in accordance with the Administrative Procedures Act.

INSTREAM FLOW QUANTIFICATION METHODS

Basic Information Requirements

The objective of an instream flow quantification study is to determine the amount of water necessary to maintain a given instream use or resource. There are numerous instream flow methods ranging from simple to complex, but regardless of the method selected, certain information will always be required: streamflow, stream channel (shape and dimensions), and *hydraulic* (depth, velocity, and substrate) information, and knowledge of the stream use.

STREAMFLOW INFORMATION

Knowledge of the natural or present streamflow in the stream under study is the starting point for determining how much water to request to be reserved. Streamflow is referred to as *discharge* and is measured in cubic feet per second (cfs). A discharge of 1 cfs defines a volume of 1 cubic foot of water passing a given point of a stream in one second. Discharges in Alaskan streams and rivers range from less than 1 cfs to over a half million cfs in the Yukon River.

Stream discharge is highly variable during the year; therefore it is not sufficient to characterize a stream simply by its average discharge, or *mean annual flow*. Knowledge of the maximum discharges (usually seen during breakup or following heavy rains) and minimum discharges (seen during winter or dry periods) will aid you in describing the natural pattern of streamflows.

Stream discharge is measured by the U.S. Geological Survey (USGS) at locations known as stream gaging stations. The continuous discharge record for each USGS gaging station within the state is compiled each year by the USGS in water resources publications which are available through USGS and major libraries. These publications are the most comprehensive source of information on the amount of discharge in a stream during the period when the gage was operating (see annotated bibliography).

In Alaska, where there is generally little diversion of water, the gage records often very nearly reflect the natural discharge patterns of the streams. Unfortunately, only a small number of Alaska's streams are currently gaged, and of those, the length of time the gage has operated—the *period of record*—is often quite short. Despite this problem, the USGS gage record should be checked as the first step in an instream flow study in Alaska. If the required discharge information is missing or insufficient, it will have to be supplemented through simulation techniques, usually under the direction of a hydrologist or engineer.

Photo Dick Nadeau, USFWS.

HYDRAULIC AND STREAM CHANNEL-RELATED INFORMATION

Hydraulics is a branch of science that deals with the practical applications of liquid in motion. Certain hydraulic parameters such as *stream depth, water velocity, wetted perimeter,* and *substrate* (the gravel, rocks, sticks, leaves, and other material covering the bottom of the stream) are important to fish habitat, recreation, and other instream uses. For example, the water depth in a stream must be sufficient to cover incubating eggs and to allow for fish passage. Water depth also provides protective cover for the fish. Flowing water transports food and continually flushes the stream of waste products and sediments. Water moving with excessive velocity, however, may dislodge fish and cause fatigue or may scatter substrates in which eggs are incubating. The wetted portion of a stream channel has been found to relate to the stream's food-producing abilities. *Wetted perimeter* (figure 1) is a measure of this production.

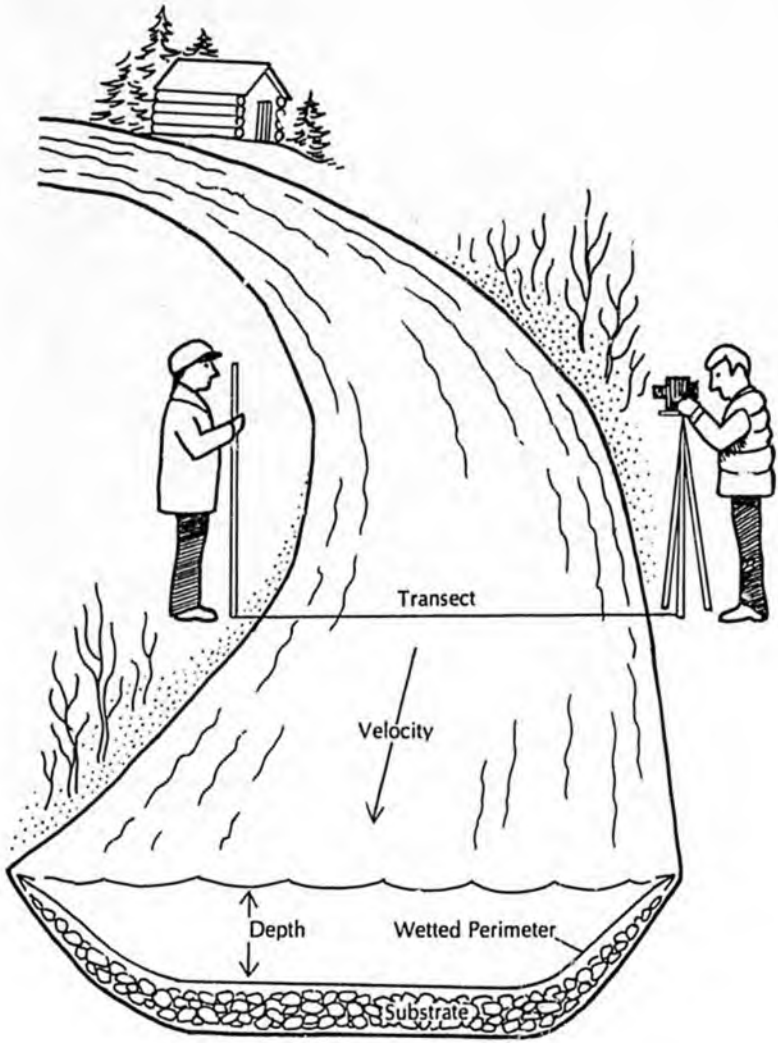

Figure 1. Stream characteristics typically measured in instream flow studies.

These hydraulic characteristics are usually measured along a stream *transect*, which is a line extending across the stream from bank to bank, perpendicular to the direction of water flow, located so that it will cross certain habitat types or stream features. Many instream flow methods are based on hydraulic characteristics measured along one or more transects. Measurement and use of hydraulic data from transects is a specialized technique requiring skills in the use of streamflow measurement equipment, surveying techniques, and stream habitat analysis.

KNOWLEDGE OF THE STREAM USE

To determine how much water is required for a particular instream use, you will need to understand the stream use in some detail. This may require knowledge of the recreational use (boating, fishing, swimming) or more specific information about the biology of fish species and the timing of their *life stages* (spawning, passage, rearing, and egg incubation). The simplest fishery methods may require little knowledge about fish in a particular stream. More complex fishery methods, however, will require detailed knowledge about a variety of fish species, their life histories, and their relative numbers within the study location. Some of this information may be available in reports and scientific publications.

Instream Flow Methods for Fisheries

Most quantification methods for fisheries are concerned with *fishery habitat*—the environment in which fish travel, feed, and reproduce. The fishery methods described in this handbook are divided into four major categories:

- Discharge-related methods
- Hydraulic rating methods
- Habitat rating methods
- Miscellaneous methods

Each category is described in the following sections, with specific examples that represent their general characteristics. However, presentation of example methods does not constitute endorsement of those methods.

DISCHARGE-RELATED METHODS

Discharge-related methods are based on existing discharge, or streamflow, records of the stream under study. In their simplest application, discharge-related methods require little knowledge of the biologic resources of the stream. Of the four categories of fisheries instream flow methods, this one is the most appropriate for use by private citizens.

The simplest methods are those based on percentages of the mean annual flow. Discharge-related methods rely on past research which has developed relationships between the quality of instream fish habitat and various percentages of the mean annual flow. The most widely used discharge-related method is the Tennant, or "Montana," method developed for use in streams in the northern United States. The Tennant method associates discharges of less than 10 percent of the mean annual flow with "severe degradation" of fishery habitat, discharges equal to 40 to 60 percent of mean annual flow with "excellent" fishery conditions, and those between 60 and 100 percent of mean annual flow with "optimum" conditions. The Tennant method percentages, while requiring a minimum of time and field study expense, provide a conservative way of determining instream flow needs.

Discharge-related methods are attractive because of their simplicity; however, they should be used with caution. Most discharge-related methods were developed after close observation of streamflows and fish habitat conditions in regions in the Lower 48, but Alaska conditions differ from those in other states or regions. In Alaska, streamflows are highest in summer and lowest in winter. Glaciers contribute sediment to Alaskan rivers, causing them to be milky in appearance, and river surfaces are frozen for extensive periods of time in most regions of the state. Therefore, discharge-related methods developed in the Lower 48 may have to be adapted for Alaskan conditions.

Finally, discharge-related methods may not be as simple and inexpensive as they first appear. Where stream gage records are not available, or where the period of record is quite short, these methods may not be appropriate. Most discharge-related methods need a minimum of one to five years of stream gage data, and 10 or more years of data are required for complex methods. If the period of record is short or data are missing because stream gages did not operate or were faulty, the services of a professional hydrologist may be required to fill in or expand the record by simulating stream discharges. This process may be expensive and time-consuming.

HYDRAULIC RATING METHODS

A number of instream flow methods relate changes in discharge to changes in *hydraulic characteristics* (stream depth, velocity, wetted perimeter, and substrate). These stream characteristics affect the quality of fishery habitat (figure 1).

To begin a hydraulic rating study, a hydrologist measures the natural or existing hydraulic characteristics of the stream and evaluates the substrate at locations along stream transects. More than one transect may be measured within a stream reach to more fully describe varied habitats or to aid in certain kinds of hydraulic simulation.

Once the stream characteristics have been measured and the data processed, the stream's depth, velocity, and wetted perimeter can be related to the stream's discharge on a graph known as a *rating curve* (figure 2). A recommended instream flow level is often selected by examining these rating curves. For example, the *inflection*, or "break point," in the curve of a *wetted perimeter vs. discharge* graph often indicates the discharge below which food production decreases or crowding and stress occurs. Therefore, this inflection point indicates a discharge below which habitat conditions may not be acceptable. In other cases, minimum flow requests may be based on the lowest discharge which provides water depth to cover the fish species present or water velocities sufficient to avoid stagnation.

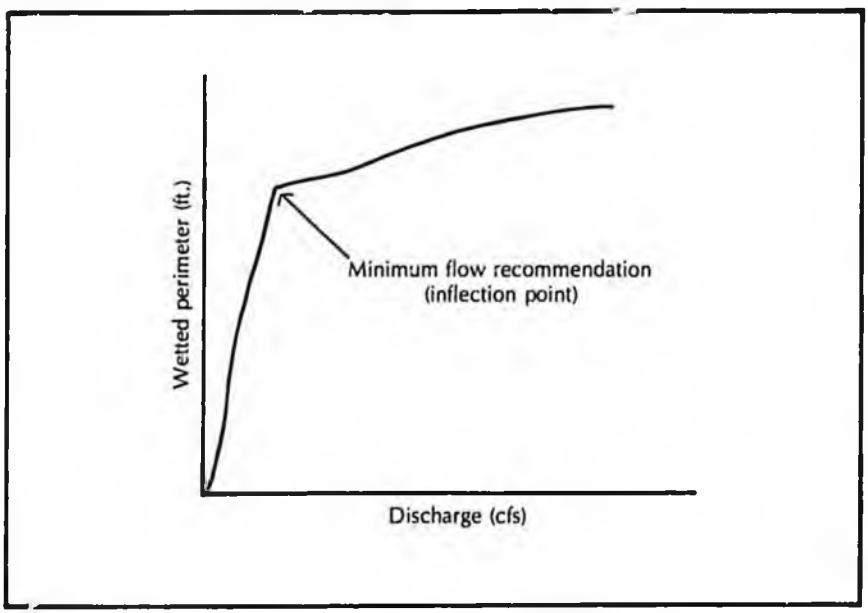

Figure 2. Hydraulic rating curve showing wetted perimeter vs. discharge.

Hydraulic rating methods provide a relatively simple means of quantifying an instream flow reservation for a specific site and perhaps for a specific species at that site. These methods provide more detailed information than discharge-related methods, especially in those locations where there are limited or no stream gage data. They do not incorporate extensive amounts of biologic information; however, the cross-sectional data may be usable in more sophisticated, computer-based approaches, such as habitat rating methods which do utilize biological data.

Hydraulic rating methods do, however, require field work which may be difficult and costly under Alaskan conditions. While the simplest approaches may require only a hand calculator, most hydraulic ratings will require the use of computer facilities and the services of trained professionals which, combined with the need for field measurements, may greatly increase the cost of these methods.

Photo Alaska Dept. of Fish and Game.

HABITAT RATING METHODS

Fish do not utilize all portions of a stream equally, but instead seek areas with preferred ranges of water depth, velocity, and substrate. Since these parameters vary with discharge, the amount of usable habitat within a stream is also a function of discharge. Habitat rating methods were developed to evaluate the relationship between discharge and habitat. One example of a habitat rating method is the Instream Flow Incremental Methodology (IFIM). The IFIM uses a package of computer programs to predict depth, velocity, and substrate for a range of unmeasured discharges. The system then incorporates habitat preferences of the fish species and life stages of interest to develop *habitat* rating curves, which are graphs showing *discharge* vs. *the amount of usable habitat*.

To develop a habitat rating curve using PHABSIM, the following steps are required:

1. Following a specified study site selection process, locate multiple transects where they will best describe the habitat and hydraulic features of the stream.

2. Measure stream depth, velocity, and substrate along each transect to serve as input to computer models which then predict these habitat characteristics at unmeasured flows.

3. For each fish species and life stage of interest, *preference curves* for depth, velocity, and substrate are stored in the computer. The biologic information used to generate the preference curves is based on prior research or field observations. The computer programs compare predicted depths, velocities, and substrates with the preference curves and calculate a value known as *Weighted Usable Area (WUA)*, which is an estimate of the amount of preferred habitat at the study site at a given discharge. The results for a range of discharges are presented as a *WUA* vs. *discharge* curve (figure 3). An instream flow recommendation based on *WUA* vs. *discharge* curves generated for the life stages of the species of interest will assure adequate habitat during the most critical yearly time periods.

Though some field work is necessary for habitat rating methods, computer simulation greatly reduces the amount of field work required. Habitat rating methods provide the highest resolution for specific fishery resources of the methods described in this handbook. When conflicts for water are severe, these methods offer a precise approach. However, the added resolution of habitat rating methods is not always necessary for planning-level studies or for many instream flow reservation situations. The time, cost, and training requirements also limit the accessibility of these methods to those individuals or organizations that can afford them.

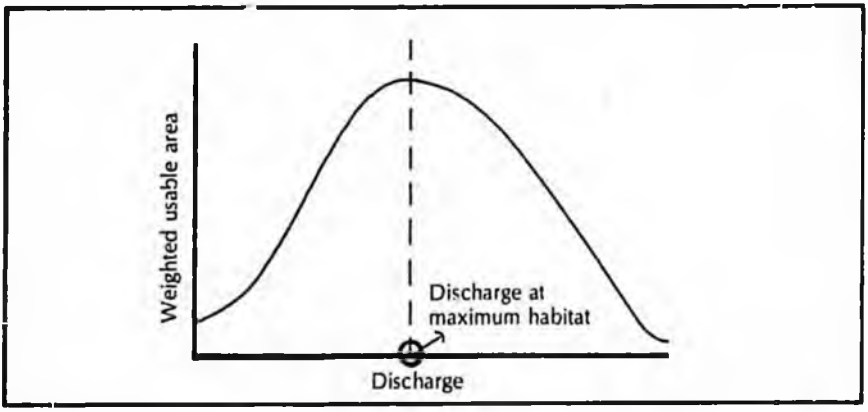

Figure 3. Weighted usable area vs. discharge curve.

OTHER FISHERY METHODS

In some situations, simpler approaches than those previously described can be used. It may be sufficient to determine the minimum instream flow required for fish migration through all or part of a critical reach of a stream. Most species of fish require a certain water depth to swim up- or downstream; this information has been published and you can obtain it from a library or with help from a fishery biologist. The applicant could then determine the streamflow required to maintain the minimum depths over the shallowest part of the stream. That discharge would be the flow required for fish passage.

Some fishery instream flow methods do not fit conveniently into the categories already discussed. Also, new methods not included in this handbook are constantly being developed. Those wishing more detailed information should inquire at the DNR regional offices or consult the publications listed in the Annotated Bibliography.

INSTREAM FLOW METHODS FOR WILDLIFE

Instream flow needs for wildlife and streamside habitats are often quite different from those for fisheries. For example, minimum streamflows may be required to maintain streamside vegetation or wetlands, or sufficient water depth may be needed to prevent animals from preying on birds nesting on sand bars. Instream flow needs for wildlife are specific to the locality and to the interactions between the plants and animals and the stream.

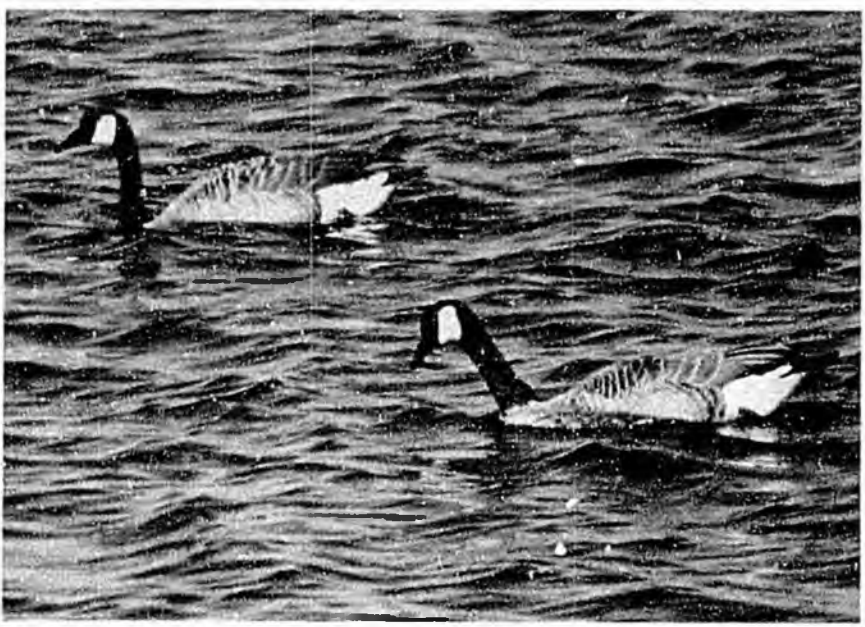

Photo Gary J. Prokosch.

Photo Gary J. Prokosch.

There are currently no formal wildlife methods of the types described for fisheries. References on some proposed methods for wildlife are presented in the annotated bibliography.

INSTREAM FLOW METHODS FOR RECREATION

Water-related recreational activities which involve streamflow include boating, fishing, and swimming. The actual quality of recreational experience for any of these activities at a given streamflow is the product of human and natural factors.

Although few formal methods for assessment of instream flows for recreation exist, some aspects of fisheries assessment methods are applicable to recreation. There are also a variety of social science techniques which can be applied to assess recreational streamflows.

Everyone who has recreated on or near a stream has an opinion of the quality of that experience. It is possible, using social survey techniques, to sample those opinions to determine the value of a particular recreation activity at several different streamflows. With enough information of this type, a rating curve relating the quality of a recreational experience to discharge can be developed.

For example, to construct a *whitewater rafting experience* vs. *discharge* rating curve, the following steps might be taken:

1. Develop a questionnaire to sample opinions of a rafting experience based on criteria such as enjoyment and passage difficulties encountered.

2. Analyze responses to questionnaires from a given day and assign a value to the discharge known to be in the river on that day.

3. Repeat the process for different discharges until a graph of *recreation value* vs. *discharge* can be constructed.

Another method would involve determining the minimum water depths required to float a raft or to operate various kinds of boats. The applicant can identify shallow reaches of a recreational stream and measure the streamflow at which the minimum depth to float a boat will occur. It may be necessary to measure water depth across several transects in a segment of a river in order to adequately describe alternate routes of boat or raft travel.

In general, recreation methods should be directed by an experienced recreation planner in association with an instream flow specialist. The publications listed in the Annotated Bibliography will provide valuable background.

Photo Lisa R. Holzapfel © 1985

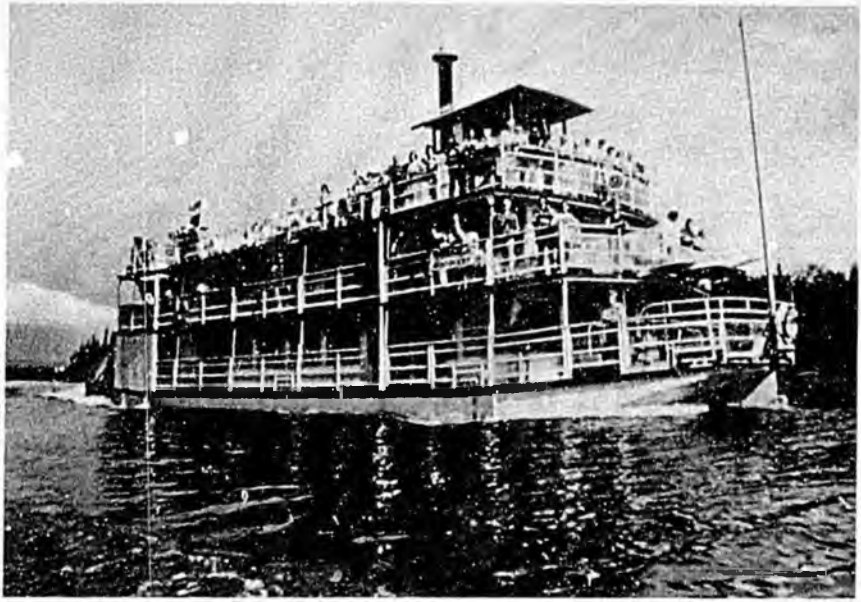

Photo Robert Belous, NPS.

INSTREAM FLOW METHODS FOR NAVIGATION AND TRANSPORTATION

In Alaska, people may reserve instream flows to navigate streams and lakes. Some uses in this category may be closely tied to recreational uses because water-based recreation depends heavily on the ability to navigate Alaska's waterways. Quantification of flows for navigation or transportation may be accomplished through survey or opinion techniques similar to those described for recreation. Individuals or groups may compile evaluations of navigation conditions on certain days and then determine the stream discharge on those days. The resulting relationship between flow and navigation may be useful in determining minimum navigation flows.

An applicant may determine the minimum depth required for passage of a particular type of boat through a shallow reach of a river. The discharge needed to maintain minimum water depths over those reaches can then be measured and considered the instream flow required for transportation on that river. Contact DNR for specific guidance.

INSTREAM FLOW METHODS FOR WATER QUALITY

Instream flows may be reserved to meet stream or lake water quality standards. For example, as discharge of a stream is reduced, the concentration of pollutants from a source such as a sewage outfall increases. Maintaining an instream flow level which assures sufficient flow to dilute the pollutants would be an acceptable instream use of water in Alaska.

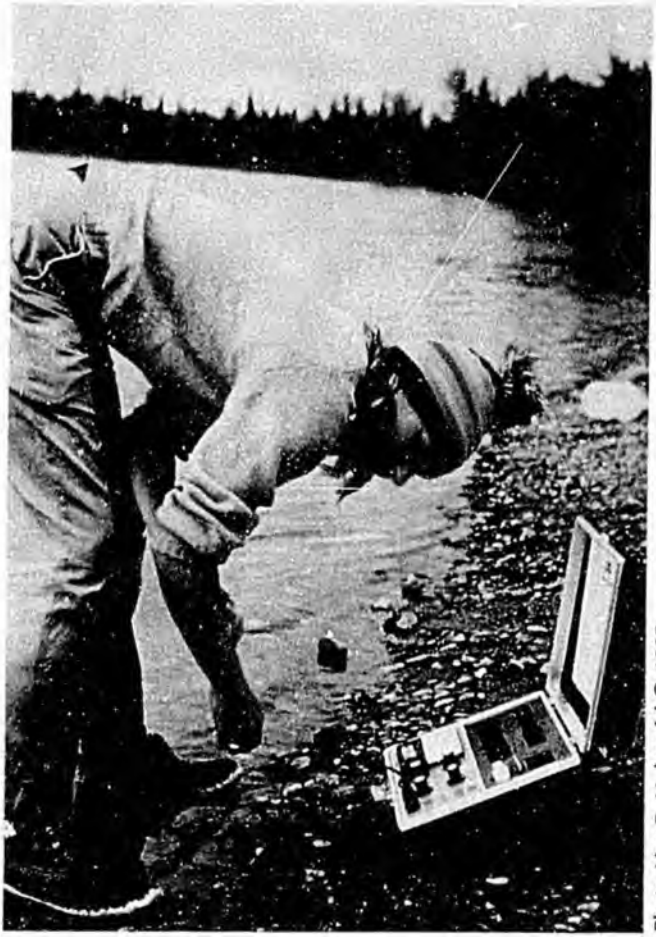

Photo Lisa R. Holzapfel © 1985

Two important concerns govern the activities of private citizens in reserving water for maintenance or enhancement of water quality conditions:

- Quantification of flow for water quality is usually a very complex problem requiring the services of professional engineers, chemists, and biologists.
- Established water quality standards will be utilized during the DNR application review; these standards are set by the Alaska Department of Environmental Conservation to meet federally defined clean water criteria.

There are no formal methods for the quantification of instream flow needs for water quality. At a minimum, however, applicants should collect water quality data which is sufficient to describe the existing state of the stream or lake in question. DNR can provide guidance.

ANNOTATED BIBLIOGRAPHY

Andrews, W.H. and G.E. Madsen. 1976. "Assessment of Recreation and Aesthetic Stream Flow Methodologies." Pp. 364-378 In J.F. Orsborn and C.H. Allman (eds.), **Instream Flow Needs**, Vol. I. American Fisheries Society, Bethesda, Maryland. 551 pp.

This paper is a good starting point for those wishing to file for a recreational instream flow reservation. While it presents no specific methods, it provides a background on stream recreation categories and ways to evaluate the recreational experience. The large list of references will be helpful to those wishing to pursue the stream and lake recreation topic in more detail. It is written at a low to medium technical level and is suitable for nontechnical readers.

Bovee, Ken D. 1982. **A Guide to Stream Habitat Analysis Using the Instream Flow Incremental Methodology.** Instream flow information paper no. 12. Cooperative Instream Flow Service Group. Ft. Collins, Colorado. 248 pp.

This is a comprehensive guide for Instream Flow Incremental Methodology (IFIM) users. It provides stepwise suggestions for conducting an IFIM study, with specific references to studies which might be encountered in reserving instream flow in Alaska. Especially relevant are sections on specific biologic, hydrologic, and hydraulic problems and how they might be solved using IFIM. It is written at a medium technical level, with some sections at higher levels, and is suitable for those with technical background or some IFIM training.

Bovee, Ken D. and Robert Milhous. 1978. **Hydraulic Simulation in Instream Flow Studies: Theory and Techniques.** Instream flow information paper no. 5. Cooperative Instream Flow Service Group, Fort Collins, Colorado. 130 pp.

This publication discusses stream hydraulics pertaining to hydraulic rating and habitat rating instream flow methods. Major sections include an introduction to concepts and terminology, selection of study sites, data requirements, data collection techniques and lists of required equipment. It is written at a medium to high technical level, probably most appropriate for those with a technical background or who are engaged in IFIM training.

Photo Fred Eubanks, NPS.

Chow, Ven Te (ed.) 1964. **Handbook of Applied Hydrology**. McGraw Hill Book Co. Subtitled "A Compendium of Water-Resources Technology." 1451 pp.

This has been the hydrologist's "Bible" for two decades. It contains sections on virtually every phase of hydrology. However, some areas of current interest, most notably computer techniques, are not well addressed due to the age of this text. The technical level is medium to high.

Dunne, Thomas and Luna Leopold. 1978. **Water in Environmental Planning**. W. H. Freeman. 818 pp.

The most recent of major hydrology textbooks, this is an excellent source of information on the most recent hydrologic methods. It is written for the layman as much as for the professional.

Grenney, W.J., D.B. Porcella, and M.L. Cleave. 1976. "Water Quality Relationships to Flow, Streams, and Estuaries." Pp. 35-87 In C.B. Stalnaker and J.L. Arnette (eds.) **Methodologies for the Determination of Stream Resource Flow Requirements: An Assessment**. Utah State University, Logan, Utah. 199 pp.

This publication describes the potential streamflow and water quality relationships likely to be encountered by those making an instream flow reservation. Included is information on temperature, dissolved oxygen, nitrogen, phosphorous, and suspended sediment. Discharge/water quality relationships in estuaries are also discussed. The technical level is extremely high, suitable primarily for engineers and chemists.

Hyra, Ronald. 1978. **Methods of Assessing Instream Flows for Recreation.** Instream flow information paper no. 6. Cooperative Instream Flow Service Group, Fort Collins, Colorado. 52 pp.

This paper presents an alternative approach to determining recreation values at various streamflows. The described method uses hydraulic simulation techniques and preference curves specific to stream recreational activities to produce *Weighted Usable Area* vs. *discharge* relationships. Technical level is medium to high, suitable for those with technical backgrounds or some IFIM training.

Kadlec, J.A. 1976. "Methodologies for Assessing Instream Flows for Wildlife." Pp. 139-146 In C.B. Stalnaker and J.L. Arnette (eds.) **Methodologies for the Determination of Stream Resource Flow Requirements: An Assessment.** Utah State University, Logan, Utah. 199 pp.

This is a general paper which provides background on instream flows for wildlife, describes current methods for wildlife assessments, and presents suggestions for future research. While no specific methods are presented, the discussions are informative and the literature cited is valuable to those wishing more background or detail. The technical level is low to medium.

Photo Lisa R. Holzapfel © 1985

Linsley, R., M. Kohler, and J. Paulhus. 1975. **Hydrology for Engineers.** McGraw Hill Book Co. Series in Water Resources and Environmental Engineering. 340 pp.

A hydrology text from a rigorous engineering viewpoint. It is of a moderate to high technical level.

Loar, J.M. and M.J. Sale. 1981. **Analysis of Environmental Issues Related to Small-scale Hydroelectric Development. V. Instream Flow Needs for Fishery Resources.** Oak Ridge National Laboratory, Oak Ridge, Tennessee. Environmental Sciences Division, publication no. 1829. 105 pp.

This is a compilation of fisheries instream flow methods. It includes descriptions of the major discharge-related, hydraulic rating, and habitat rating methods; a history of instream flow activities; an evaluation of existing methods; and an extensive bibliography. The writing is at a medium technical level.

Orsborn, J.F. and C.H. Allman (eds.) 1976. **Instream Flow Needs.** Vols. I and II. American Fisheries Society, Bethesda, Maryland. 551 and 656 pp.

These volumes are collections of instream flow papers from a variety of disciplines including legal-institutional, engineering, technical, resource agency perspectives, and accounts of instream flow experiences. Te[illegible]l papers cover topics ranging from river mechanics and water-sl[illegible]namics through evaluations of instream flow methods for fis[illegible] wildlife, recreation, aesthetics, and water quality. The tec[illegible]al level varies from low to high.

Stalnaker, C.B. and J.L. Arnette. 1976. **Methodologies for the Determination of Stream Resource Flow Requirements: An Assessment.** Prepared for U.S. Fish & Wildlife Service, Office of Biological Services. Utah State University, Logan, Utah. 199 pp.

This publication gives a comprehensive presentation and assessment of many aspects of instream flow: water resources allocation; comprehensive planning; instream flow needs for fisheries, wildlife, recreation, aesthetics and water quality; hydrologic principles; hydraulic relationships; and computer modeling. It contains a good description of single-transect hydraulic rating methods and is a comprehensive source for the instream flow assessment field. However, because of its age, it is no longer descriptive of the scope of available methods.

Tennant, D.L. 1976. "Instream Flow Regimens for Fish, Wildlife, Recreation, and Related Environmental Resources." Pp. 359-373 In J.F. Orsborn and C.H. Allman (eds.), **Instream Flow Needs**. Vol. II. American Fisheries Society, Bethesda, Maryland. 651 pp.

This paper describes development and application of the most often utilized discharge-related instream flow method. It is useful in providing a step-by-step process for making a flow recommendation, given sufficient information to use this method, and it is written at a low to medium technical level.

U.S. Geological Survey. Various Years. **Water Resources Data - Alaska**, Water Years 1971- . (Individual volumes for each water year).

These annuals contain all water resources data collected and compiled by the USGS in Alaska. The data include continuous discharge data, water quality data, and groundwater levels from permanent record sites as well as miscellaneous discharge, water quality, and lake storage records from many Alaskan streams and lakes. These volumes are the primary source for hydrologic information on lakes and streams in Alaska.

Wesche, T.A. and P.A. Rechard. 19 **Summary of Instream Flow Methods for Fisheries and Related R ch Needs**. Water Resources Research Institute, University of W g, Laramie, Wyoming. 122 pp.

This publication contains descriptions of many fisheries instream flow methods, a detailed procedures section, and an extensive bibliography. It also contains criteria for determining which method to use for an instream flow study. The technical level is medium.

Photo Keith Trexler, NPS.

APPENDICES

DNR Regional Location Map

DNR Regional Location Map

Department of Natural Resources Regional and Area Office Locations for Obtaining Forms and Assistance

DIVISION OF LAND AND WATER MANAGEMENT

NORTHERN REGIONAL OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHEAST REGIONAL OFFICE
400 Willoughby Avenue
Pouch MA
Juneau, Alaska 99611
465-3400

SOUTHCENTRAL REGIONAL OFFICE
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
276-2653

MAT-SU AREA OFFICE
Century Plaza, Suite 202
P.O. Box 874008
Wasilla, Alaska 99687
376-4595

Alaska Statutes

Title 46. Water, Air, Energy, and Environmental Conservation.

Chapter 15. Water Use Act.

Article
1. Administration (§§ 46.15.010—46.15.020)
2. Appropriation and Use of Water (§§ 46.15.030—46.15.185)
3. Water Resources Board (§§ 46.15.190—46.15.240)
4. General Provisions (§§ 46.15.250—46.15.270)

Article 1. Administration.

Section
10. Determination of water rights
20. Authority and duties of the commissioner

Sec.46.15.010. Determination of water rights. The Department of Natural Resources shall determine and adjudicate rights in the waters of the state, and in its appropriation and distribution. (§ 1 ch 50 SLA 1966)

Sec. 46.15.020. Authority and duties of the commissioner. (a) The commissioner shall exercise all those powers and do all those acts necessary to carry out the provisions and objectives of this chapter. The commissioner may

(1) enter into contractual agreements necessary to carry out the provisions of this chapter including agreements with federal, state and local agencies;

(2) apply for, accept, administer and expand grants, gifts, and loans from the federal government and any other public or private sources for the purpose of this chapter, and adopt procedures and do acts not otherwise restricted by law which are necessary to qualify the state to receive grants, gifts and loans;

(3) establish a division of water in the Department of Natural Resources and assign to that division the responsibility for carrying out the provisions of this chapter.

(b) The Commissioner shall

(1) adopt procedural and substantive regulations to carry out the provisions of this chapter, taking into consideration the responsibilities of the Department of Environmental Conservation under AS 46.03 and the Department of Fish and Game under AS 16;

Department of Natural Resources Regional and Area Office Locations for Obtaining Forms and Assistance

DIVISION OF LAND AND WATER MANAGEMENT

NORTHERN REGIONAL OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHEAST REGIONAL OFFICE
400 Willoughby Avenue
Pouch MA
Juneau, Alaska 99811
465-3400

SOUTHCENTRAL REGIONAL OFFICE
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
276-2653

MAT-SU AREA OFFICE
Century Plaza, Suite 202
P.O. Box 874008
Wasilla, Alaska 99687
376-4595

(2) Keep a public record of all applications for permits and certificates and other documents filed in his office; and shall record all permits and certificates and amendments and orders affecting them and shall index them in accordance with the source of the water and the name of the applicant or appropriator;

(3) cooperate with, assist, advise and coordinate plans with the federal, state and local agencies in matters relating to the appropriation, use, conservation, quality, disposal or control of waters and activities related thereto;

(4) prescribe fees or service charges for any public service rendered. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 50 ch 71 SLA 1972)

Legislative committee report.—For report on ch. 71, SLA 1972 (HCSSB 383 am H), see 1972 House Journal, p. 898.

Article 2. Appropriation and Use of Water.

Section	Section
30. Waters reserved to the people	130. Priority
40. Right to appropriate	133. Notices; objections
50. Priority	135. [Renumbered]
60. Existing rights	140. Abandonment, forfeiture, and reversion of appropriations.
65. Determination of existing rights	145. Reservation of water
70. [Renumbered]	147. Termination of permits
80. Criteria for issuance of permit	150. Preferred use
90. Preference in granting permits	160. Transfer and change of appropriations
100. Terms of permit	170. Effect of recording
110. Time for construction and completion	180. Crimes
120. Certificates	185. Appeals

Sec. 46.15.030. Waters reserved to the people. Wherever occurring in a natural state, the waters are reserved to the people for common use and are subject to appropriation and beneficial use and to reservation of in-stream flows and levels of water, as provided in this chapter. (§ 1 ch 50 SLA 1966; am § 4 ch 84 SLA 1980)

Effect of amendment. — The 1980 amendment, effective June 19, 1980, inserted "and to reservation of instream flows and levels of water" near the end of the section.

Pursuant to the Alaska Statehood Act, the Submerged Lands Act of 1953 applies to Alaska. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Ownership and control of land under navigable waters. — The court takes judicial notice of the fact that Alaska lies westward of the 98th meridian. Thus, under federal law, ownership and control of the land under navigable waters is confirmed in the state. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Ownership of ground and surface waters is to be determined according to state law. Under the Alaska Constitution and state law, the right to use such waterways is placed in the people of the state. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Purpose of easement along courses of major waterways is to provide a place for docks, campsites and such facilities to service those who are properly using the public waters. This purpose is apparently accommodated by the reservation of site easements under the order of the Secretary of the Interior. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Sec. 46.15.040 Right to appropriate. (a) A right to appropriate water can be acquired only as provided in this chapter. No right to the use of water either appropriated or unappropriated shall be acquired by adverse use or possession.

(b) A right to appropriate water shall be obtained by first making application to the commissioner for a permit to appropriate. The commissioner shall by regulation prescribe the form and contents of the application and the procedure for filing the application. If a permit is granted and the means of appropriation is constructed a certificate of appropriation may be obtained.

(c) All applications to the commissioner for a permit to appropriate water, filed subsequent to July 1, 1966, shall be considered as having been simultaneously filed with the Department of Fish and Game under AS 16 and the Department of Environmental Conservation under AS 46.03. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 51 ch 71 SLA 1972)

Legislative committee report. — For report on ch. 71, SLA 1972 (HCSSB 383 am H), see 1972 House Journal, p. 898.

Sec. 46.15.050. Priority. Priority of appropriation gives prior right. Priority of appropriation does not include the right to prevent changes in the condition of water occurrence, such as the increase or decrease of stream flow, or the lowering of a water table, artesian pressure, or water level, by later appropriators, if the prior appropriator can reasonably acquire his water under the changed conditions. (§ 1 ch 50 SLA 1966)

Sec. 46.15.060. Existing rights. A water right acquired by law before July 1, 1966 or a beneficial use of water on July 1, 1966, or made within five years before July 1, 1966, or made in conjunction with works under construction on July 1, 1966, under a lawful common law or customary appropriation or use, is a lawful appropriation under this chapter. The appropriation is subject to applicable provisions of this chapter and rules and regulations adopted under this chapter. (§ 1 ch 50 SLA 1966)

Sec. 46.15.065. Determination of existing rights. (a) A claimant of an existing right under AS 46.15.060 shall file a declaration of appropriation with the commissioner as set out in this section. The declaration shall be considered correct until a certificate of appropriation is issued or denied. Priority of such right dates from the day work was begun on the appropriation if due diligence was used in completing the work; otherwise, from the day water was applied for the beneficial use.

(b) The commissioner shall, as soon as practicable, determine the rights of persons owning existing appropriations. To accomplish this, the commissioner shall

(1) by order set a definite period for filing a declaration of appropriation within a specified area or from a specified source;

(2) publish notice of the order once a week for three weeks before the beginning of the period in a newspaper of general circulation in the affected area;

(3) give notice of the order by certified mail to any appropriator within the specified area or from the specified source who has requested mailed notice or of whom the commissioner can readily obtain knowledge including each owner of a recorded mining claim.

(c) The commissioner shall make such investigations as he considers necessary of rights asserted by declarations filed under this section and shall determine each existing appropriation and mail a summary of such determination to each person who has filed a declaration with respect to the specified area or source. Any person adversely affected by a determination may file with the commissioner a request for a hearing within 20 days of the date the notice is mailed. If a hearing is requested the commissioner shall send a notice of the time and place of the hearing to each person who has filed a declaration.

(d) If a hearing is not requested with respect to a determination, or if, after the hearing, the commissioner finds the determination to have been correctly made, he shall immediately issue a certificate of appropriation. If the commissioner finds the determination to be incorrect, he shall correct it and either issue a certificate of appropriation or refuse the certificate according to his findings.

(e) A person aggrieved by the action of the commissioner may appeal to the superior court within 30 days of the date on which that action is final. (§ 1 ch 50 SLA 1966)

Revisor's note. - This section formerly appeared as AS 46.15.135. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.070. Notices, objections [Renumbered].

Revisor's note. - This section now appears as AS 46.15.133. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.080. Criteria for issuance of permit. (a) The commissioner shall issue a permit if he finds that

(1) rights of a prior appropriator will not be unduly affected;

(2) the proposed means of diversion or construction are adequate;

(3) the proposed use of water is beneficial; and

(4) the proposed appropriation is in the public interest.

(b) In determining the public interest, the commissioner shall consider

(1) the benefit to the applicant resulting from the proposed appropriation;

(2) the effect of the economic activity resulting from the proposed appropriation;

(3) the effect on fish and game resources and on public recreational opportunities;

(4) the effect on public health;

(5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;

(6) harm to other persons resulting from the proposed appropriation;

(7) the intent and ability of the applicant to complete the appropriation; and

(8) the effect upon access to navigable or public waters. (§ 1 ch 50 SLA 1966)

Sec. 46.15.090. Preference in granting permits. When there are competing applications for water from the same source, and the source is insufficient to supply all applicants, the commissioner shall give preference first to public water supply and then to the use which alone or in combination with other foreseeable uses will constitute the most beneficial use. (§ 1 ch 50 SLA 1966)

Sec. 46.15.100. Terms of permit. The commissioner may issue a permit for less than the amount of water requested, but in no case may he issue a permit for more water than can be beneficially used for the purposes stated in the application. He may require modification of plans and specifications for the appropriation. He may issue a permit subject to terms, conditions, restrictions, and limitations he considers necessary to protect the rights of others, and the public interest. However, the permit shall be subject to termination only as provided in this chapter. (§ 1 ch 50 SLA 1966)

Sec. 46.15.110. Time for construction and completion. A permit may place a time limit for beginning construction and perfecting appropriation. Reasonable extensions of time shall be permitted for good cause shown. (§ 1 ch 50 SLA 1966)

Sec. 46.15.120. Certificates. Upon completion of construction of the works and commencement of use of water, the permit holder shall notify the commissioner that he has perfected his appropriation. If the commissioner determines that the appropriation has been perfected in substantial accordance with the permit, he shall issue the permit holder a certificate of appropriation. The certificate shall set out any condition which the commissioner may prescribe by regulation, including conditions that are necessary to protect the prior rights of other persons and the public interest. (§ 1 ch 50 SLA 1966; am § 9 ch 175 SLA 1980)

Sec. 46.15.130. Priority. (a) Priority of appropriation made under this chapter dates from the filing of an application with the commissioner.

(b) Priority of appropriation perfected before July 1, 1966, shall be determined as provided in § 135 of this chapter. (§ 1 ch 50 SLA 1966)

Sec. 46.15.133. Notices; objections. (a) Upon receipt of an application, the commissioner shall prepare a notice containing the location and extent of the proposed appropriation, the name and address of the applicant and other information he considers pertinent. The notice shall state that within 15 days of publication or service of notice, persons may file with the director written objections, stating the name and address of the objector, and any facts tending to show that rights of the objector or the public interest would be adversely affected by the proposed appropriation.

(b) The commissioner shall publish the notice at the applicant's expense in one issue of a newspaper of general distribution in the area of the state in which the water is to be appropriated. The commissioner shall also have notice served personally or by certified mail upon an appropriator of water or applicant for or holder of a permit who, according to the records of the division of lands, may be affected by the proposed appropriation and may serve notice upon any governmental agency, political subdivision or person; notice shall also be served upon the Department of Fish and Game and the Department of Environmental Conservation.

(c) Within 15 days of publication or service of notice, an interested person may file an objection. The commissioner may hold hearings upon giving due notice and shall grant, deny, or condition the application in whole or in part within 30 days of receipt of the last objection or, if the commissioner elects to hold hearings, within 180 days of receipt of the last objection. Notice of the order or decision shall be served personally or mailed to any person who has filed an objection.

(d) If no objection is filed, the commissioner may proceed to make his determination upon the application.

(e) A person aggrieved by the action of the commissioner or by the failure of the commissioner to grant, deny, or condition an application in accordance with (c) of this section may appeal to the superior court.

(f) The commissioner may, by regulation, designate types of appropriations which are exempt from this section and provide simplified procedures for ruling on the applications. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 52 ch 71 SLA 1972; am §§ 5, 6 ch 84 SLA 1980)

Revisor's note. — This section formerly appeared as AS 46.15.070. It was renumbered by the revisor of statutes for more logical arrangement.

Effect of amendment. — The 1980 amendment, effective June 19, 1980, substituted "if the commissioner elects to hold hearings, within 180 days of receipt of the last objection" for "at the conclusion of the hearing" at the end of the second sentence of subsection (c), and inserted "or by the failure of the commissioner to grant, deny, or condition an application in accordance with (c) of this section" near the middle of subsection (e).

Sec. 46.15.135. Determination of existing rights [Renumbered].

Revisor's note. — This section now appears as AS 46.15.065. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.140. Abandonment, forfeiture, and reversion of appropriations. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation if an appropriator, with intention to abandon, does not make beneficial use of all or a part of his appropriated water. An appropriation so forfeited and abandoned reverts to the state and the water becomes unappropriated water.

(b) The commissioner may declare an appropriation to be wholly or partially forfeited and shall revoke the certificate of appropriation if an appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of his appropriated water for a period of five successive years. (§ 1 ch 50 SLA 1966)

Sec. 46.15.145. Reservation of water. (a) The state, an agency or a political subdivision of the state, an agency of the United States or a person may apply to the commissioner to reserve sufficient water to maintain a specified instream flow or level of water at a specified point on a stream or body of water, or in a specified part of a stream, throughout a year or for specified times, for

(1) protection of fish and wildlife habitat, migration, and propagation;

(2) recreation and park purposes;

(3) navigation and transportation purposes; and

(4) sanitary and water quality purposes.

(b) Upon receiving an application for a reservation under this section, the commissioner shall proceed in accordance with AS 46.15.070.

(c) The commissioner shall issue a certificate reserving the water applied for under this section if he finds that

(1) the rights of prior appropriators will not be affected by the reservation;

(2) the applicant has demonstrated that a need exists for the reservation;

(3) there is unappropriated water in the stream or body of water sufficient for the reservation; and

(4) the proposed reservation is in the public interest.

(d) After the issuance of a certificate reserving water, the water specified in the certificate shall be withdrawn from appropriation and the commissioner shall reject an application for a permit to appropriate the reserved water.

(e) A reservation under this section does not affect rights in existence on the date the certificate reserving water is issued.

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose or part or all of the findings no longer apply to the reservation, he may revoke or modify the certificate reserving the water in accordance with AS 46.15.140(b). (§ 7 ch 84 SLA 1980)

Effective date. — Section 12, ch. 84, SLA 1980, makes this section effective June 19, 1980, in accordance with AS 01.10.070(c).

Editor's note. — As to declaration of legislative policy, see § 1, ch. 175, SLA 1980, in Temporary and Special Acts and Resolves.

Sec. 46.15.147. Termination of permits. (a) If the commissioner has reason to believe that a person who holds an appropriation permit under this chapter is wilfully violating or has wilfully violated a term, condition, restriction or limitation of his permit, he may commence proceedings to terminate the appropriation permit under the Administrative Procedure Act (AS 44.62.330 — 44.62.630).

(b) When an appropriation permit is terminated under this section, the appropriation of water made by the permit reverts to the state and becomes unappropriated water. (§ 8 ch 175 SLA 1980)

Editor's note. — As originally enacted, this section was designated AS 46.15.145. However, since a section with that designation had already been enacted by SLA 1980, ch. 84, this section was redesignated AS 46.15.147.

Sec. 46.15.150. Preferred use. (a) An applicant who asserts and proves a preferred use shall be granted a permit and shall be granted preference over other appropriators. A preferred use of water is for a public water supply.

(b) To be entitled to a preference an applicant must show that his use will be prevented or substantially interfered with by a prior appropriation; the use is a preferred use; the applicant agrees to compensate a permit or certificate holder for the prior appropriation for any damages sustained by the preferred use, and other information which the commissioner requires by regulation. (§ 1 ch 50 SLA 1966)

Sec. 46.15.160. Transfer and change of appropriations. (a) The right to use water under an appropriation or permit shall be appurtenant to the land or place where it has been or is to be beneficially used, provided, that water supplied by one person to another person's property shall not be appurtenant to the property unless the parties so intend. An appurtenant water right shall pass with a conveyance of the land, or transfer, or by operation of law unless specifically exempted from the conveyance.

(b) With the permission of the commissioner, all or any part of an appropriation may be severed from the land to which it is appurtenant, may be sold, leased or transferred for other purposes or to other lands and be made appurtenant to other lands. A permit or certificate or a deed, lease, contract, assignment of permit or other instrument transferring an appropriation must be filed for record in the office of the commissioner and a certified copy of the instrument must be recorded in the recorder's office of the recording district in which the appropriation is located. (§ 1 ch 50 SLA 1966)

Sec. 46.15.170. Effect of recording. (a) A deed, lease, contract, assignment of permit or other instrument transferring an appropriation is void as against a subsequent innocent purchaser who in good faith paid a valuable consideration for the appropriation or any portion of it and whose instrument is first filed and recorded under § 160(b) of this chapter.

(b) A deed, lease, contract, assignment of permit or other instrument transferring an appropriation which is recorded under § 160(b) of this chapter is constructive notice of its contents to subsequent purchasers of the appropriation or any portion of it. An unrecorded instrument is valid between the parties to it and as against one who has actual notice of it. (§ 1 ch 50 SLA 1966)

Sec. 46.15.180. Crimes. A person who constructs works for an appropriation, or diverts, impounds, withdraws or uses a significant amount of water from any source without a permit or certificate of appropriation; or a person who violates an order of the commissioner to cease and desist from preventing any water from moving to a person having a prior right to use the same; or who disobeys an order of the commissioner requiring him to take steps to cause the water to so move; or who fails or refuses to install meters, gauges or other measuring devices or control works; or who violates an order establishing corrective control works; or who violates an order establishing corrective controls for an area or for a source of water, or who knowingly makes a false or misleading statement in a declaration of existing rights, is guilty of a misdemeanor. Crimes under this section are in addition to any other crimes provided by law. (§ 1 ch 50 SLA 1966)

Quoted in G & A Contractors, Inc. v Alaska Greenhouses, Inc., Sup. Ct. Op. No 987 (File No. 1763), 517 P.2d 1379 (1974).

Sec. 46.15.185. Appeals. Appeals to the superior court under this chapter are subject to the provisions of the Administrative Procedure Act, AS 44.62.560 — 44.62.570. (§ 1 ch 50 SLA 1966)

Article 3. Water Resources Board.

Section	Section
190. The Water Resources Board	220. Board meetings
200. Term of office	230. Public meetings
210. Duties of the board	240. Compensation of board members

Sec. 46.15.190. The Water Resources Board. There is created the Water Resources Board composed of seven members having a general knowledge of the use and requirements for use of the waters of the state and the conservation and protection thereof, and the commissioner of environmental conservation or his designee shall serve as an additional, ex officio member serving without a vote. The commissioner of natural resources shall act as the executive secretary of the board, and shall provide clerical staff for the board. Members of the board are appointed by the governor, subject to confirmation by a majority of the members of the legislature in joint session. (§ 1 ch 50 SLA 1966; am § 1 ch 58 SLA 1972)

Sec. 46.15.200. Term of office. The term of office for members of the board is four years. The first members appointed serve as follows: two members serve for one year, three for two years and two for three years. If a vacancy occurs, the governor shall fill it by appointment for the unexpired term. The appointment shall be submitted to the legislature for confirmation at the next regular or special session. (§ 1 ch 50 SLA 1966)

Sec. 46.15.210. Duties of the board. The board shall inform and advise the governor on all matters relating to the use and appropriation of water in the state, including, but not limited to: the effect and adequacy of all state laws and regulations governing the establishment of water rights, the multi-purpose uses of water, the prevention of pollution and the protection of fish and game, studies of the state's water supplies and plans for future requirements, development of water resources, participation of local governmental units in the management of water resources, lands which are or may be needed for dams, reservoirs, flood dams, flood ways, canals or ditches for the impoundment, storage, flow and control of waters. (§ 1 ch 50 SLA 1966)

Sec. 46.15.220. Board meetings. The board shall hold one regular meeting annually at the state capital and one or more additional meetings at the time and place in the state the board selects for the transaction of business. (§ 1 ch 50 SLA 1966)

Sec. 46.15.230. Public meetings. The board may hold and conduct public meetings at any time or any place in the state in order to obtain public opinion on a water use problem or proposal and it may, by majority vote of all members, formally or informally delivered, authorize one or more of its members to hold and conduct a public meeting. (§ 1 ch 50 SLA 1966)

Sec. 46.15.240. Compensation of board members. Each member of the board is entitled to travel expenses and per diem as authorized for state boards by AS 39.20.180 while traveling to or from, or in attendance at, regular or special meetings or conferences authorized by the board. (§ 1 ch 50 SLA 1966)

Article 4. General Provisions.

Section
250. Enforcement authority
260. Definitions
270. Short title

Sec. 46.15.250. Enforcement authority. The following persons are peace officers of the state and they shall enforce this chapter:

(1) a state employee authorized by the commissioner;

(2) a police officer of the state. (§ 1 ch 50 SLA 1966)

Sec. 46.15.260 Definitions. In this chapter, unless the context otherwise requires,

(1) "appropriate" means to divert, impound, or withdraw a quantity of water from a source of water, for a beneficial use or reserve water in accordance with AS 46.15.145;

(2) "appropriation" means the diversion, impounding or withdrawal of a quantity of water from a source of water for a beneficial use or the reservation of water in accordance with AS 46.15.145;

(3) "beneficial use" means a use of water for the benefit of the appropriator, other persons or the public, that is reasonable and consistent with the public interest, including, but not limited to, domestic, agricultural, irrigation, industrial, manufacturing, fish and shellfish processing, navigation and transportation, mining, power, public, sanitary, fish and wildlife, recreational uses, and maintenance of water quality;

(4) "source of water" means a substantial quantity of water capable of being put to beneficial use;

(5) "water" means all water of the state, surface and subsurface, occurring in a natural state, except mineral and medicinal water;

(6) "commissioner" means the commissioner of the Department of Natural Resources;

(7) "director" means the director of the Division of Lands, Department of Natural Resources;

(8) "person" includes an individual, partnership, association, public or private corporation, state agency, political subdivision of the state, and the United States. (§ 1 ch 50 SLA 1966)

(9) "mineral and medicinal water" means

(A) water of a hot spring or spring with curative properties which has been reserved by the federal government under Public Land Order No. 399; and

(B) geothermal fluid, as the t[illegible] defined in AS 41.06.060. (am §§8 — 10 ch 84 SLA 1980; ar[illegible] 11 ch 175 SLA 1980)

Effect of amendment. — The first 1980 amendment, effective June 19, 1980, added "or to reserve water in accordance with AS 46.15.145" at the end of paragraph (1), added "or the reservation of water in accordance with AS 46.15.145" at the end of paragraph (2), inserted "fish and shellfish processing, navigation and transportation" near the middle of paragraph (3), and added "and maintenance of water quality" at the end of paragraph (3).

The second 1980 amendment substituted "subsurface" for "subsurfaces" near the middle of paragraph (5), and added paragraph (9).

As the rest of the section was not affected by the amendment, it is not set out.

Editor's note. — As to declaration of legislative policy, see § 1, ch. 175, SLA 1980, in Temporary and Special Acts and Resolves.

Sec. 46.15.270. Short title. This chapter may be cited as the Alaska Water Use Act. (§ 1 ch 50 SLA 1966)

STATE OF ALASKA

Bill Sheffield, *Governor*
Esther C. Wunnicke, *Commissioner, Dept. of Natural Resources*

STATE OF ALASKA
WATER USER'S HANDBOOK

Division of
LAND AND WATER
MANAGEMENT

Alaska Department of
NATURAL
RESOURCES

STATE OF ALASKA

WATER USER'S HANDBOOK

WATER MANAGEMENT SECTION
DIVISION OF LAND AND WATER MANAGEMENT
ALASKA DEPARTMENT OF NATURAL RESOURCES
555 CORDOVA STREET, POUCH 7-005
ANCHORAGE, ALASKA 99510

May 1981
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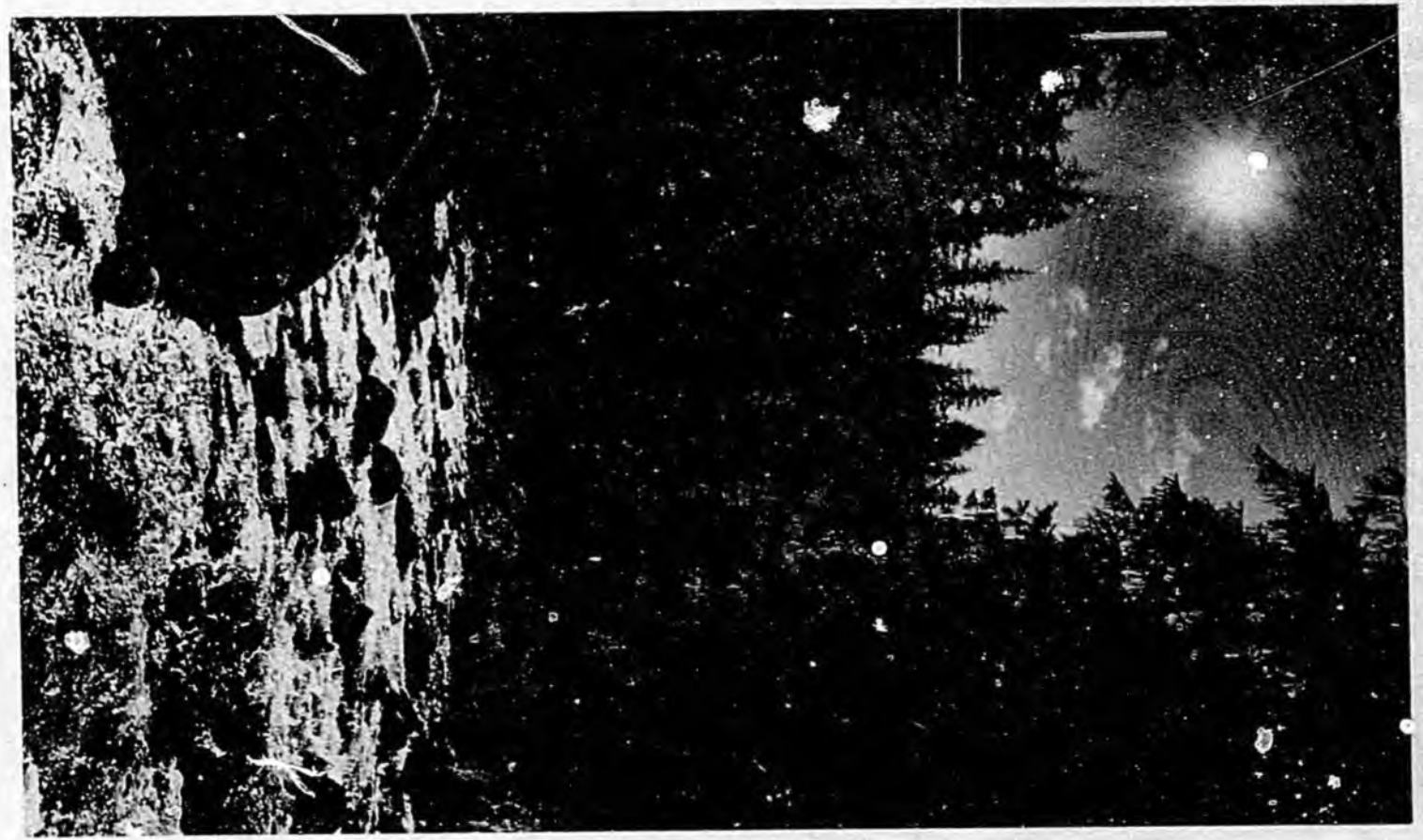
June 1984



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FOREWORD

The first issue of the Alaska Water Users Handbook was funded by the 1980 Alaska Legislature to assist Alaskans in improving their knowledge and understanding of water rights within the state. This booklet has been designed to give citizens a broad base of historical background on water rights, information about the procedures which are necessary to obtain a Certificate of Appropriation, pointers on special types of water uses and on-going management programs within the Department of Natural Resources.

The Department of Natural Resources, Division of Land and Water Management, Water Management Section, is responsible for planning and administering the appropriation of water in Alaska. Future conservation and development of water resources is dependent upon these important functions.

The division also publishes "fact sheets" to provide further information on items of importance to Alaskan citizens.

Cover Photo © Gary Prokosch

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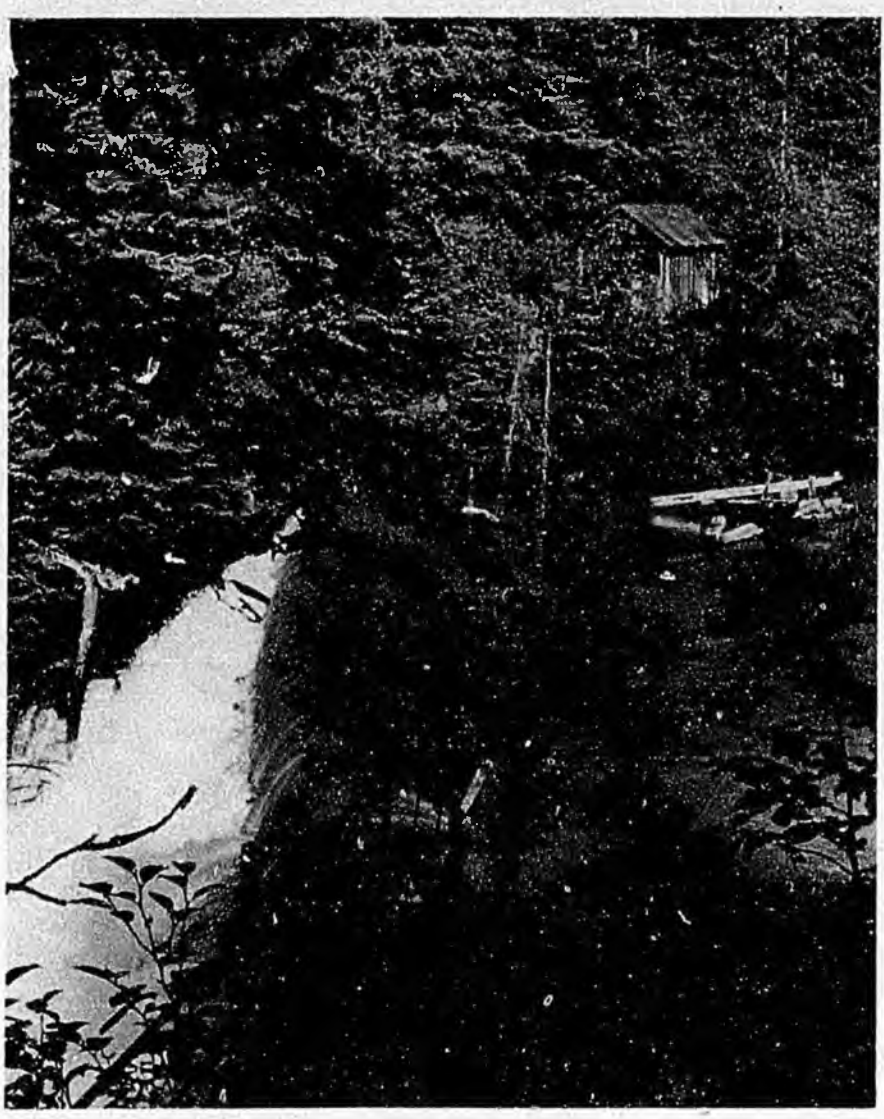
I. GENERAL INFORMATION ABOUT WATER RIGHTS



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The Alaska Water Use Act provides the public with a legal method to obtain water rights for the use of surface and subsurface waters. A water right is a property right and is issued only to individuals who apply for it. The user has the right to divert, impound and/or withdraw specified amounts of water from particular water sources for certain uses.

When the water right is granted, it becomes attached to (appurtenant to) the land where the water is being used, for as long as the water is utilized. If the land is sold, the water right goes with the land to the new owner, unless the water right has been separated from the land through prior approval of the Commissioner of the Department of Natural Resources.

To obtain a water right, individuals must complete the Application for Water Rights (Form 10-102) obtained from and submitted to the local district or area office of the Department of Natural Resources Division of Land and Water Management. A permit is then issued to develop the water source and the means to use it. Only after the water is being beneficially used is a Certificate of Appropriation issued. This is the legal document which conveys water rights once the water is in use.

In Alaska there are no rights to ground water based on ownership of the overlying land nor are there any rights to surface waters based on ownership of the adjoining or surrounding land.

With an established water right, individuals have a legal standing to assert that right against conflicting uses of water with people who do not have water rights or who are junior in priority. The use of water without a permit or certificate does not give the user defensible legal rights to the water, no matter how long the water has been in use or continues to be in use. Holders of water rights also have a priority to the use of water over persons who later file for water rights from the same water source.

Water rights records provide valuable resource information to the Department of Natural Resources about water use and consumption in Alaska. This information is essential in estimating the present uses of water, predicting future withdrawals, protecting the rights of prior appropriators and providing for proper management of this valuable resource.

If a significant amount of water is needed for a short-term project, such as a construction project, temporary authorization can be obtained. Applications should be made in the form of a letter request to the Department of Natural Resources stating the amount of water needed and the time period for which it will be used. An associated map showing the location of the point from which the water will be taken and if it differs from the source, the place at which the water will be used, should be attached to the letter of request. The temporary authorization does not establish a water right. It is only intended to help avoid problems between those who have a short-term water need and those who have existing water rights.

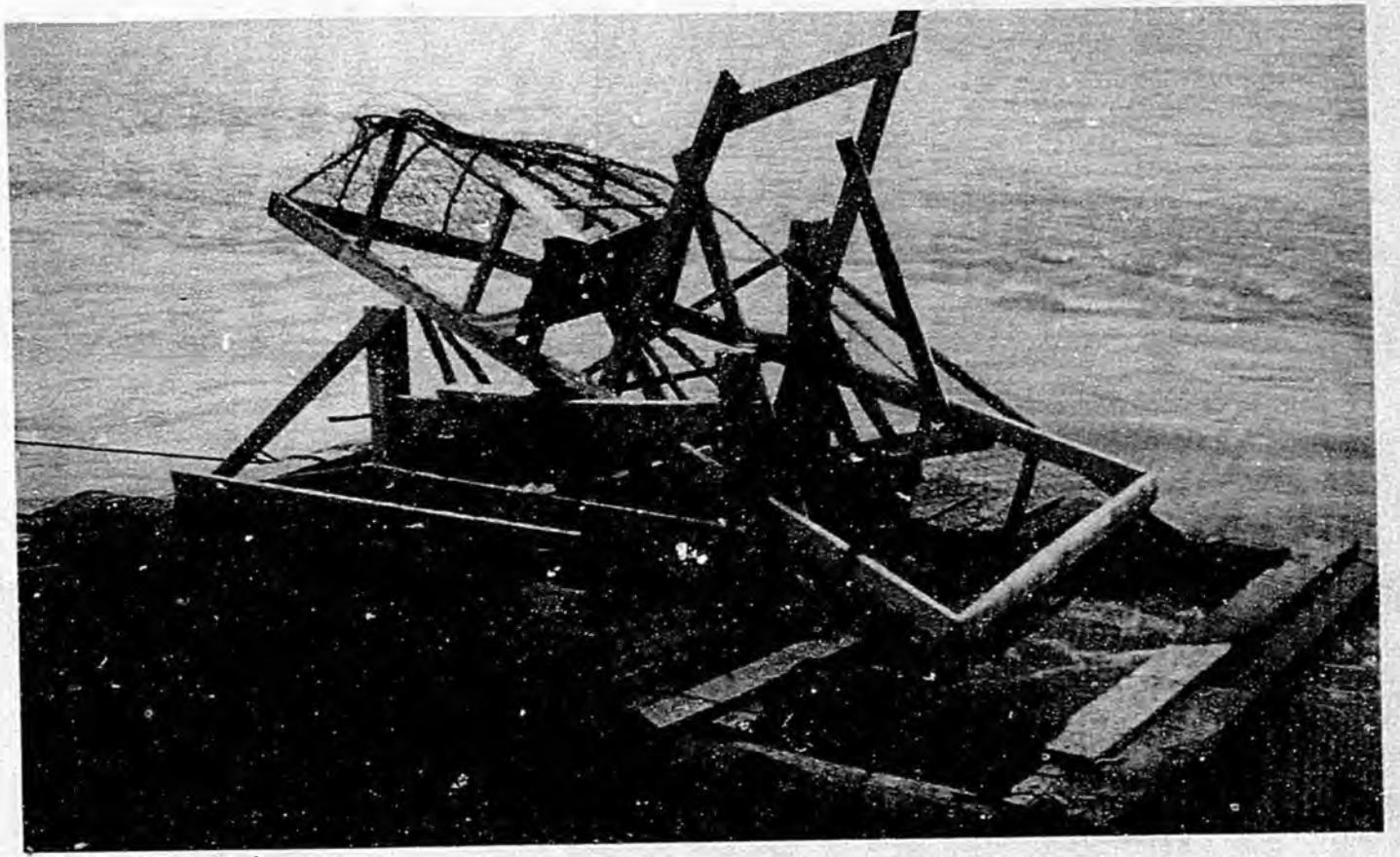


Photo © 1970 Ken Roberson

II. HISTORY OF WATER RIGHTS IN ALASKA

A. The Alaska Constitution

Water. The issue of water rights was a disputed issue in the State of Alaska for many years. Miners, homesteaders and recreational users argued among themselves for many years about who really had the right to use the water.

In 1959 when Alaska was admitted to the Union and the Constitution of the State of Alaska was ratified, water use was addressed in Sections 3, 13, and 16. These sections outlined the doctrine of "prior appropriation" allowing the first appropriator of water a priority of right over subsequent appropriators on a "first-in-time, first-in-right" basis.

The following sections are quoted from the Alaska Constitution:

SECTION 3, COMMON USE—Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use.

SECTION 13, WATER RIGHTS—All surface and subsurface waters reserved to the people for common use, except mineral and medicinal waters, are subject to appropriation. Priority of appropriation shall give prior right. Except for public water supply, an appropriation of water shall be limited to stated purposes and subject to preferences among beneficial uses, concurrent or otherwise, as prescribed by law, and to the general reservation of fish and wildlife.

SECTION 16, PROTECTION OF RIGHTS—No person shall be involuntarily divested of his right to the use of waters, his interest in land, or improvements affecting either, except for superior beneficial use or public purpose and then only with just compensation and by operation of law.

With the need for a clear definition of the boundaries of the doctrine of prior appropriation, the Alaska Water Use Act was introduced.

B. The Alaska Water Use Act

In 1961, Governor William A. Egan called for a comprehensive water code which would address all aspects of Alaska's future water uses. Frank J. Trelease, Dean and Professor of Law, University of Wyoming College of Law was hired by the Commissioners of the Alaska Departments of Natural Resources, Health and Welfare, Fish and Game, and Public Works as a consultant to draft a comprehensive water code tailored to the future needs of the state.

Trelease's final report, "A Water Code for Alaska, A Report to the State of Alaska," was submitted in January 1962. This code was rewritten as a bill and introduced to the legislature where it failed to pass. A revised version, "The Alaska Water Use Act, Alaska Statutes 46.15.010-270," was enacted in 1966 covering appropriation and use of water. This Act gave a statutory definition to the doctrine of prior appropriation as authorized by the state constitution.

The Alaska Water Use Act established a procedure for maintaining existing rights and obtaining new rights to all ground and surface waters of the state. The Alaska Department of Natural Resources (DNR) was delegated the authority to determine and adjudicate rights to the use of the waters of the state and to administer the Act. Regulations were adopted by the Commissioner of Natural Resources and became effective in February 1967.

These regulations defined existing rights, or "grandfather rights", as those rights which where established as of July 1, 1966. They included: the beneficial use of water on mining claims that included within the claim boundaries both banks of the stream from which the water was taken; the use of water after posting a notice of appropriation at the point of diversion, construction of a means of diversion and the recording of a notice of appropriation; the beneficial use of water during the periods of July 1, 1961 to July 1, 1966; and the construction of a means for diverting water to a beneficial use if the construction was in progress on July 1, 1966.

The procedure used in formalizing existing rights was to file a declaration of appropriation with the Commissioner of the Department of Natural Resources during specified filing periods, the last of which closed in April, 1968. A preliminary determination of validity was made and notice was sent to each person who filed within the area. After a 20-day comment period or hearing, the Commissioner then issued or denied the Certificate of Appropriation. Any declarations received since April, 1968 are treated as applications for water rights.

The statutory procedure for obtaining new water rights requires filing an Application for Water Rights with the Commissioner of the Department of Natural Resources. After a permit is issued and beneficial use of water has begun, a Certificate of Appropriation is issued. All persons planning to withdraw, impound or divert surface or ground water must file an Application for Water Rights. (Section III discusses the process of obtaining water rights).

The original regulations implementing the Water Use Act were extensively amended on December 29, 1979 and incorporated as 11 AAC 93, Water Management. Those of particular interest relate to the appropriation of water, water-well standards, dam safety and construction, and temporary water use. These regulations have significantly reduced the average time for issuance of a domestic water use permit (for 1,000 gallons of water per day or less) from up to six months to a matter of days.

Any questions regarding these regulations or requests for copies may be addressed to any of the local public offices of the Department of Natural Resources, Division or Land and Water Management as listed in the appendix.

The latest amendments to the Alaska Water Use Act include legislation relating to instream uses of water and geothermal development.

C. Instream Flow and Geothermal Legislation

The instream flow amendments to the Alaska Water Use Act were passed by the 1980 Alaska Legislature and signed into law by Governor Jay Hammond in June, 1980. The regulations for instream flow became effective in September 1983 and are incorporated in 11 AAC 93.

This legislation allows private parties and public agencies to apply to the Department of Natural Resources for reservations of water for instream uses including fisheries, navigation, recreation, and water quality purposes. It provides for quantification of instream water uses, the establishment of a priority date and issuance of a Certificate of Reservation within the existing state water rights system.

Legislation regarding development of geothermal resources was also passed by the 1980 Legislature. This legislation replaced the lengthy and outdated Geothermal Resources Act and also contained amendments to the Water Use Act.

The bill bases the definition of "geothermal resources" on a temperature threshold exceeding 120°C (248°F). When obtaining rights to the use of hot water resources below 120°C, only a water right is required from the Department of Natural Resources, Division of Land and Water Management. This provides an incentive for local and small-scale developers of thermal energy. Rights to develop geothermal resources above the 120°C threshold may be obtained from the Department of Natural Resources, Division of Oil & Gas. The use of geothermal resources may thus decrease dependency on the more expensive, non-renewable energy resources.

The amendments of the Geothermal Act to Alaska Water Use Act also clarify the ability of the state to place conditions on Certificates of Appropriation. The Act also clarifies the basis for terminating Permits to Appropriate Water. Thus the State has the ability to enforce safety and resource conservation aspects of drilling hot water resources below 120°C.

III. OBTAINING WATER RIGHTS IN ALASKA

A. Water Rights Application to Certificate Process

1. Claimant submits application to the District office of DNR.

2. The DNR adjudicator reviews the application and files a public notice in local newspaper.

3. Claimant is issued a permit to begin diversion of water.

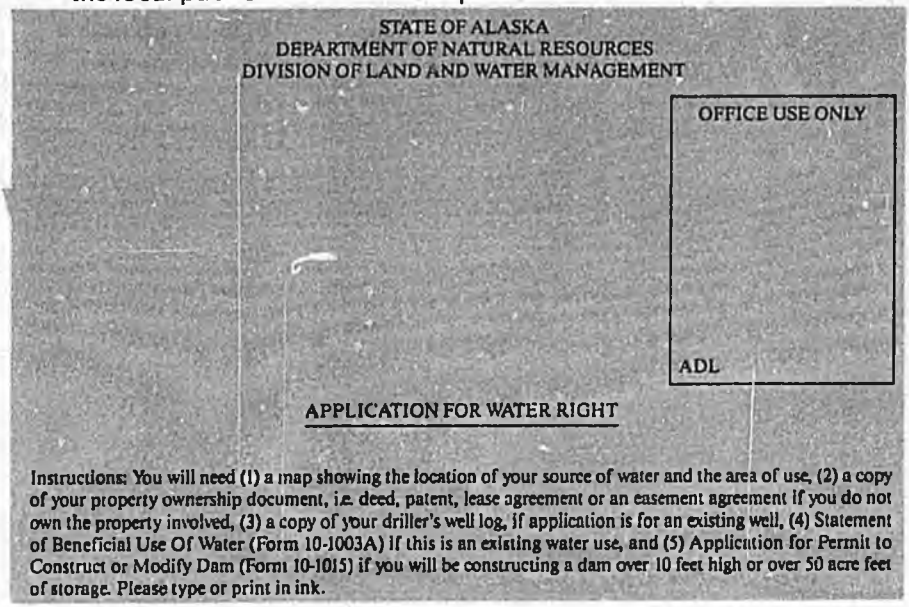
4. Water source is developed and beneficial use has begun

5. A site inspector verifies use, methods of diversion, and measures flow of the water source.

6. DNR issues water rights certificate and records document.

B. Filling out an Application for Water Rights

- This completed application should be submitted to the appropriate Department of Natural Resources district or area office in which the property is located. The application shall be accompanied by the appropriate filing fee as set forth in the fee schedule of the Department of Natural Resources. Please see the appendix for the listing of the local public offices of the Department of Natural Resources.



STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

OFFICE USE ONLY

ADL

APPLICATION FOR WATER RIGHT

Instructions: You will need (1) a map showing the location of your source of water and the area of use, (2) a copy of your property ownership document, i.e. deed, patent, lease agreement or an easement agreement if you do not own the property involved, (3) a copy of your driller's well log, if application is for an existing well, (4) Statement of Beneficial Use Of Water (Form 10-1003A) If this is an existing water use, and (5) Application for Permit to Construct or Modify Dam (Form 10-1015) if you will be constructing a dam over 10 feet high or over 50 acre feet of storage. Please type or print in ink.

- Do not write in the Office Use Only space. The date and time at which the application is submitted are placed here when the application is filed. This date/time stamp is known as the "priority date."

- An Alaska Division of Lands case file number is assigned by the local intake office when the application is properly completed and filed. This number is placed on the receipt, all correspondence, and the permit and certificate when they are issued. Remember, the date/time stamp establishes the priority date, not the case file number. Water rights are issued on the first come, first served principle.

1. Full legal name of Applicant(s) _____

_____

Item 1 - Full legal name:

- The full, legal name of the applicant should be entered here and should correspond with the signature at the end of the form.

- If a husband and a wife are filing the application, the names should be shown as John T. and Mary L. Sample, rather than Mr. and Mrs. John T. Sample.

2. Mailing Address _____

_____

Home Phone_____ Business Phone_____

Item 2 - Mailing Address and Telephones:

- Self-explanatory.

3. Source of Water Supply:

Item 3 - Source of Water Supply:

- Determine whether the water source is a well or surface water. If the water is taken from two separate sources, (such as a well and a stream) two separate applications should be filed.

(a) ☐ Well

☐ Drilled ☐ Hand Driven ☐ Dug ☐ Other _____

If existing well, attach copy of driller's well log.

If existing well, and no log, supply all known information

Total depth_____ Drawdown_____

Intake Depth _____ Screened Yes_____ No_____ Unknown_____

Static level _____

(a) Check the appropriate box for well type and supply a well log or all known information.

- The driller's well log is a record of the various rock layers drilled through, the thickness of those layers and the depth to the water in the well. The driller usually gives the land owner a copy of the well log.

- If the well is in existence and no log is available, please supply information on total depth. This is the distance from the land surface to the deepest point in the well as reached by the drill, the depth of the open hole. If the depth of the well is not known, please state "depth unknown".

- The intake depth is the distance from the ground surface to the device in the well which allows water to enter the well casing going up to the pump.

- The level at which water stands in a well when no water is being taken from the well is the static water level. This is the distance from the ground surface to the water level in the well.

- The drawdown in a well is how much the water level lowers when pumping is in progress or when water is discharging from a flowing well. Drawdown is the difference, measured in feet, between the static water level and the pumping level. The water table in the vicinity of the well is lowered when drawdown occurs.

- Most wells are either screened or have slotted casings. These are installed in wells to permit sand-free water to flow into the well and also to provide support for unstable formations to prevent caving.

(b) ☐ Surface Water

☐ Stream ☐ River ☐ Lake ☐ Spring

Give geographic name (if unnamed, state so) _____

Water will be taken from surface water source by:

☐ Pumping

☐ Gravity Flow System

☐ Diversion (Altering a watercourse) - Attach sketch and plans giving dimensions and specifications.

☐ Damming - Attach sketch and plans giving dimensions and specifications. If dam is over 10 feet high or over 50 acre feet storage, MUST file Application for Permit to Construct or Modify Dam (Form 10-1015).

☐ Other _____

(b) Indicate the type of surface water and its geographic name. If it is unnamed, state "unnamed stream", "unnamed lake", etc.

- Sketches must be attached for diversions, along with plans to divert or alter the water course.

- When a dam is to be built or altered in conjunction with an appropriation, an Application to Construct or Modify a Dam must be filed if the dam is over 10 feet high and/or has over 50 acre-feet of water storage. Sketches and plans giving dimensions and specifications must be attached both for existing dams and dams under construction.

4. Location of point of **WITHDRAWAL, DIVERSION** or **IMPOUNDMENT:**

MUST attach copy of map or subdivision plat and indicate location

(a) Fraction part_____ Section_____
Township_____, Range_____, _____ Meridian.

(b) If applicable, Lot, Block, Subdivision; U.S. Survey No. _____

_____

(c) Does applicant own or lease the property at point of water withdrawal and over which water is transported? Yes ☐ No ☐

If "Yes," MUST attach copy of ownership document (i.e. deed, patent)

If "No," MUST obtain an easement or right-of-way and supply copy. Give name, mailing address and phone number(s) of legal owner.

Name _____

Mailing Address _____

_____ Zip _____

Home Phone _____ Business Phone _____

Item 4 - Location of Point of Withdrawal, Diversion, or Impoundment:

- Write the legal description of the parcel of property containing the point of water withdrawal (well, spring, water collection point in stream), diversion or impoundment. Legal descriptions should be precise to at least the quarter-quarter section. If the parcel of property is irregularly shaped, a metes and bounds (boundary line) description is necessary.
- Copies of documents showing proof of interest in this property (deed, patent, lease) should be attached.
- If the property at the point of water withdrawal or over which water is transported is not owned by the applicant, copies of easement or right-of-way applications, permits or agreements, should be attached, if these have been applied for, obtained or executed. The land owner's name, address and telephone numbers must be stated.

5. Location of point of USE: If same as question 4, check and go to question 6. ☐

MUST attach copy of map or subdivision plat and indicate location.

(a) Fractional Part _____ Section _____
Township _____ Range _____ Meridian.

(b) If applicable, Lot, Block, Subdivision; U.S. Survey No. _____

_____

(c) Does applicant own or lease the property at point of water use? Yes ☐ No ☐

If "Yes," MUST attach copy of ownership document (i.e. deed, patent)

If "No," MUST obtain an easement or right-of-way and supply copy. Give name, mailing address and phone number(s) of legal owner.

Name _____

Mailing address _____

_____ Zip _____

Home Phone _____ Business Phone _____

Item 5 - Location of Point of Use:

- Write the legal description of the parcel of property on which the water is to be used. This may or may not be the same as the parcel of property from which the water is withdrawn, diverted or impounded. If the property is the same, check the box on question five and go to question six. A subdivision plat or other type of map showing the location of the point of use must be attached.
- Copies of the ownership document (deed, patent, lease) must be attached for the property at the point of use.

- If the applicant does not own or lease the property, copies of easement or right-of-way applications, permits or agreements must be attached. The legal land owner's name, address and telephone number must be stated. Documents showing proof of the applicant's interest in the property must be attached.

6. Type of water use and Quantity of water needed: Please fill in the attached Water Use Chart indicating the quantity of water and months of use for each type of water use. Standard quantities and definitions are provided for your convenience. If water use is for a Commercial/Industrial purpose or other Use not on the Water Use Chart, refer to question 7.

WATER USE CHART

Office Use SIC	Type(s) of Use	Standard Quantities	Quantity Requested	Months of Use From	To (Inclusive)
8800	(1) Single Family	Per Household	GPD		
	(a) Fully plumbed	500 GPD	GPD		
	(b) Partially plumbed	250 GPD	GPD		
	(c) Unplumbed	75 GPD	GPD		
6514	(2) Duplex	Per Duplex 1000 GPD	GPD		
	(3) Multi-Family	Per Unit 250 GPD	GPD		
7011	(4) Motel, Resort	Per Room 100 GPD	GPD		
	(5) Livestock	Per Head			
0241	Dairy Cows	30 GPD	GPD		
	Hosing dairy barn	35 GPD	GPD		
0212	Range Cattle	15 GPD	GPD		
0272	Horses	15 GPD	GPD		
0214	Sheep	2 GPD	GPD		
	Goats and Hogs	3 GPD	GPD		
	Poultry, Rabbits, etc.	1 GPD	GPD		
		Livestock Total	GPD		
	(6) Irrigation (Type of Crop: _____)	Per Acre 0.5 AFY	AFY		
	(7) Commercial Industrial				
	(8) Other _____				

DEFINITIONS:

GPD—gallons per day AFY—acre feet per year CFS—cubic feet per second

(1) SINGLE FAMILY—Water use necessary for a single household and the irrigation of up to 10,000 sq. ft. of yard and garden.

(a) Fully plumbed—Water piped into the residence for domestic uses. Hot water heater and water flush toilet included.

(b) Partially plumbed—Water piped into residence for limited domestic uses. Generally no hot water heater and no water flush toilet included.

(c) Unplumbed—No water piped into the residence. Water is hand carried for limited domestic use.

(2) DUPLEX—Water use necessary for two single households and the irrigation of up to 20,000 sq. ft. of yard and garden.

(3) MULTI-FAMILY—Water use necessary; for three or more households. Apartment units included.

Item 6 - Type of Water Use and Quantity:

- Specify type of water use, quantity, and periods of use on the attached Water Use Chart. Any exceptions to the standarized quantities must be fully explained in writing and attached.

7 Commercial/Industrial and Other Uses:

Explain in detail the basis for quantity of water requested. Use additional sheet of paper if needed. Indicate type of operation including structures and methods used. Include a sketch or engineering drawings. Enter quantity requested and months of use on attached Water Use Chart.

Item 7 - Commercial/Industrial and Other Uses:

- Quantity requested, periods of use and type of use must be stated on the attached Water Use Chart along with any calculations used to determine the quantity requested.

8. Date when water use began or is expected to begin _____. If water use is existing, fill out Statement of Beneficial Use of Water (Form 10-1003A).

Item 8 - Date of Use:

- If water use is in existence, show the date use began and also include a notarized Statement of Beneficial Use of Water.
- If the property is being developed, show the approximate month and year when construction is expected to be completed and water use will begin.

HAVE YOU ATTACHED?

- ☐ Deed, patent, lease, etc.
- ☐ USGS or Subdivision map
- ☐ Water Use Chart
- ☐ Driller's log (if existing well)
- ☐ Diversion sketch and plans
- ☐ Dam Sketch and plans
- ☐ Statement of Beneficial Use of Water (Form 10-1003A) (if existing water use)

Attachments:

- Check to be sure you have attached all the necessary information. Without these attachments, the application is incomplete and will be returned to you. This will delay the processing of your water right.

Statements appearing herein are to the best of my knowledge true and correct.

► SIGNED _____ DATE
(Applicant)

OFFICE USE ONLY	x,y	RMI	Location check	Other

10-102 Rev. 6/79

Signature:

- Check to make sure the application is SIGNED with your full legal name and correctly DATED. The application cannot be processed without the proper signature.

Incomplete Applications:

An incomplete application will be returned to the applicant with a date/time stamp but without an Alaska Division of Lands number, along with the check and attachments, and a letter requesting additional information.

Complete Applications:

When it is determined the application is complete, the ADL number is assigned. Your application form will then be processed.

C. Water Quantity Conversion Table

- 1 cubic foot per second (cfs) expresses a rate of flow of water equivalent to the following:

7.48	U.S. gallons per second
448.8	U.S. gallons per minute
646,272	U.S. gallons per day
1.98	acre-feet per day

- 1 acre-foot is equivalent to a volume of water which will cover one acre to a depth of one foot or:

43,560	cubic feet
325,851	U.S. gallons

D. Legal Advertisement and Public Notice

Once the completed application is received and processed, staff of the Commissioner of the Department of Natural Resources may investigate the site. This may include the proposed construction work, source of water or other uses or demands for water within the area. This inspection is to determine if other water rights or the public interest will be affected by the proposed appropriation.

The applicant will then be provided with a prepared request for publication which must appear in a newspaper of general distribution in the vicinity of the water appropriation. The applicant must submit this to the newspaper and pay for the legal ad. This legal advertisement will summarize the proposed appropriation and allow the public to submit comments or objections regarding the appropriation to the Department. If there is no newspaper in the vicinity, the notice must be posted for 15 days in a public place near the proposed appropriation site.

During this period, the Commissioner will also serve individual notice to prior appropriators who may be affected by the new appropriation, and to the Alaska Departments of Fish and Game and Environmental Conservation. Objections must be submitted in writing within 15 days containing all pertinent facts and reasons why the appropriation should be modified or withheld. All objections will be answered in writing by the Department of Natural Resources.

If there are no written objections within the 15 days following publication, posting or serving of notice, the Department will then proceed with adjudication of the application. Any objections received after the closing date for comments will be considered by the Commissioner at his discretion.

Applications to appropriate 1,000 gallons of water per day or less for single-family domestic use are exempt from this public notice except in areas where the total amount of available water appears to the Department to be limited with respect to the number of potential users of the same source. A municipality may also request notice.

Once the posting notice or legal advertisement and public notice period is over and the adjudication is completed, a permit may be issued.

E. Permit to Appropriate Water

The Permit to Appropriate Water is the authorization necessary from the Alaska Division of Land and Water Management to begin construction of a means to take water and begin beneficial use of that water.

The permit allows the permittee to look for water on the specified property, from a specified water source, for a specified use and in a maximum quantity. The permittee may then construct a means to use the water, begin beneficial use of the water and determine the specific quantity of water needed for the development.

The Commissioner will issue the Permit to Appropriate Water if it meets the requirements of Alaska Statute 46.15.080. The permit will be issued for a period of time adequate to complete construction and development of the project and begin using water. Conditions may be placed on the permit, such as the requirement for obtaining an easement or right-of-way or the requirement for metering and/or submission of water use reports.

Once the appropriation is completed, beneficial water use has begun, and the permittee has shown that all permit conditions have been met, the Statement of Beneficial Use of Water (Form 10-1003A) may be submitted requesting that a Certificate of Appropriation be issued.

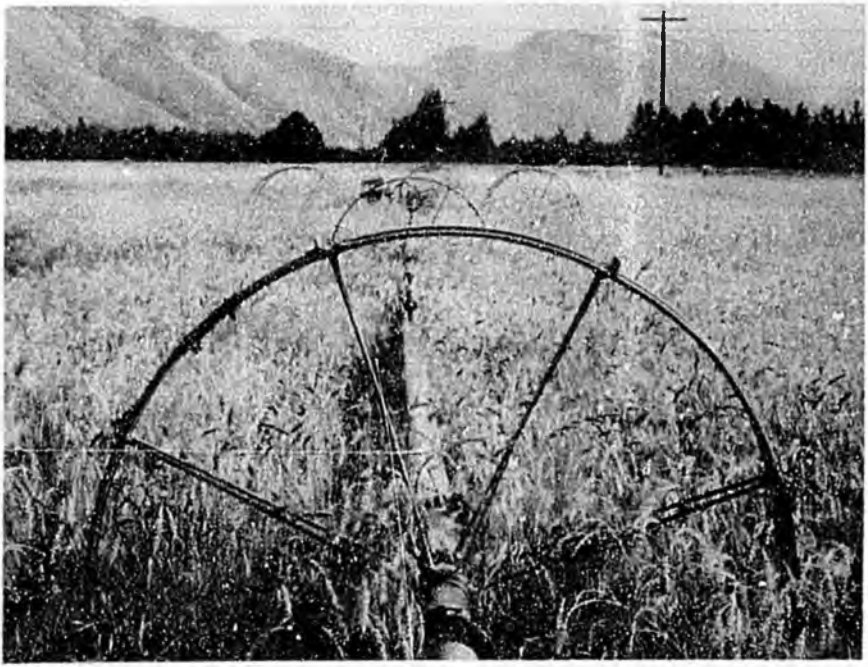


Photo © 1982 Gary Prokosch

F. Filling out a Statement of Beneficial Use/Request for Permit Extension/Notice of Relinquishment

Part A - STATEMENT OF BENEFICIAL USE OF WATER

- A notarized Statement of Beneficial Use of Water (Form 10-1003 A) must be submitted to the appropriate Department of Natural Resources district or area office by the permittee after a water appropriation has been perfected and beneficial use begun, or if a water use is already in existence.

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

Please complete A, B, or C, as required, and return to your District Office.

-A-

STATEMENT OF BENEFICIAL USE OF WATER

Permit No. _____ ADL _____

Construction of structures authorized under the above numbered Permit to Appropriate Water, of which I am the lawful holder, have been completed and beneficial use of water is being made. I hereby request that a Certificate of Appropriation be issued to me. I certify that I have complied with all conditions on the permit.

Amount of water being used for each type of water use: _____

_____

Item 1 - Amount and Type of Water Use:

- This should state the type and quantity of water use which has been perfected and is being beneficially used. The quantities may not exceed those on the permit.

Location of point of withdrawal, include sketch: _____

_____

Item 2 - Location of Point of Withdrawal:

- The location of the point of water withdrawal, impoundment or diversion must be stated. A sketch of this location may also be submitted.

Location of point of use, include sketch: _____

_____

Item 3 - Location of Point of Use:

- The location of the parcel of property on which water is used must be stated. A sketch of this location may also be submitted.

Briefly describe the structures for withdrawing and conveying water to the point of use (if a well, please attach copy of well log):_____

_____

Item 4 - Structures Used:

- Structures such as a well, catchment basin, pipe or dam, used to withdraw and transport water to the point of use must be stated. If a well is used to obtain water, a well log should be attached. If a well log cannot be obtained, all known data such as type, depth, and static water level should be submitted.

I certify under penalty of perjury that the foregoing is a true and accurate statement of the extent to which the above water use has been developed.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 19____

SIGNED _____ (Permit Holder)

DATE _____

_____ Notary Public or Postmaster

PLACE _____

State of _____
Commission expires _____

10-1003A

Item 5 - Signature:

a) The form MUST be signed by at least one of the permittees.

b) The form must be dated.

c) The form must be notarized or witnessed by a postmaster to certify the signature of the permittee.

Part B - REQUEST FOR PERMIT EXTENSION

- If the Permit to Appropriate Water has or will soon expire and the permittee has not completed the structures to appropriate water and/or begun beneficial use of that water, a Request for Permit Extension (Form 10-1003 B) may be filed.

-B-

REQUEST FOR PERMIT EXTENSION

Permit No. _____ ADL _____

Construction of the structures authorized under the above numbered Permit to Appropriate Water, of which I am the lawful holder, has not yet been completed.

The structures already completed. _____

_____

Item 1 - Completed Structures:

- List the structures such as a well, catchment basin, pipe or dam that have been constructed and completed to appropriate water.

The structures to be installed: _____

_____

Item 2 - Structures to be Installed:

- List the structures not yet constructed or completed that are necessary to withdraw, impound or divert water and begin beneficial use of water.

The reason work has not been completed: _____

_____

Item 3 - Work Not Completed:

- Explain the reasons why the appropriation has not been perfected during the permit period.

Estimated date of completion: _____

Item 4 - Completion Date:

- State the estimated time to complete the structures to take water and begin beneficial use of water.

I hereby apply for an extension of time in which to complete construction of the structures and begin beneficial use of water.

SIGNED _____ _____
(Permit Holder) DATE

Item 5 - Signature:

- This form must be signed and dated by at least one of the permittees. The extension request must be accompanied by the appropriate fee as set forth in the fee schedule of the Department of Natural Resources. The permit may be extended for good cause shown. Extensions are granted by amending the Permit to Appropriate Water.

Part C - NOTICE OF RELINQUISHMENT

- If the permittee intends to abandon the works to impound, withdraw or divert water and/or beneficially use all or part of the water, a Notice of Relinquishment (Form 10-1003 C) must be submitted to the local Department of Natural Resources district office.

-C-

NOTICE OF RELINQUISHMENT

Permit No._____ Certificate No._____ ADL_____

To Whom It May Concern:

The project/beneficial water use has been abandoned and I hereby relinquish to the State of Alaska all my right, title and interest in and to the above numbered Permit to Appropriate Water/Certificate of Appropriation. I understand that the appropriation reverts to the State and the water becomes unappropriated water.

SIGNED _____
(Permit or Certificate Holder)

SUBSCRIBED AND SWORN TO before me

this _____ day of _____, 19____ DATE _____

_____ PLACE _____
Notary Public or Postmaster

State of _____

Commission Expires _____

10-1003B

Item I - Signature:

a) The form must have the legal signature of at least one of the permittees.

b) The form must be dated.

c) The form must be notarized or witnessed by a postmaster to certify the permittee's signature.

G. Site Inspection of Perfected Water Rights

Personnel from the nearest district or area office of the Department of Natural Resources may conduct a field inspection of the completed appropriation. The purpose of this visit will be to determine if actual water use has begun, or to determine what stage of construction has been reached. The water officer may want to see your operation to check the size and type of equipment used, or the area or size of the house to verify the amount of water which you have requested. Water measurements may be taken at this time, if deemed necessary

The Alaska Water Use Act provides that a water right may only be issued for a quantity of water that is beneficially used. In some instances, applicants inadvertently ask for more water than can be beneficially used or the applicant does not ask for enough water to cover the needs. After the field inspection, the water officer can usually determine the appropriate quantity.

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H. Certificate of Appropriation

Once the water rights application is completed, the permit issued, beneficial use established and any necessary site inspection completed, a Certificate of Appropriation will be issued. When this certificate is issued, it is the applicant's responsibility to have it recorded in the recorder's office in the area in which the appropriation is located.

In the event of a change of address, change of applicant's name or change in ownership of the property, the Department of Natural Resources and recorder's office should be notified in order to keep their files current.

The Certificate of Appropriation conveys a property right and should be kept in a safe place with other documents relating to property ownership.

I. Appeal Procedures

By statute, there are 15 days to respond to a notice of proposed appropriation of water and to file any written objection regarding that application.

The Commissioner of the Department of Natural Resources is obligated by statute to grant or deny any application, in whole or in part, within 30 days of receipt of the last objection. If the Commissioner elects to hold a hearing, the application must be granted or denied within 180 days of receipt of the last objection. If the Commissioner fails to grant, deny or condition the application in accordance with these time periods, the unsatisfied party may appeal directly to Superior Court.

If any person is unsatisfied by a delegated decision or order of the Commissioner he may, within 30 days after the date that the decision or order was mailed or personally served, appeal to the Commissioner for modification or reversal of the decision or order. Before making a decision the Commissioner may require additional information or hold a hearing. The appellant may also request permission to present further information to the Commissioner. If a party is still unsatisfied by the decision of the Commissioner, there are 30 days to appeal to Superior Court in accordance with the Administrative Procedures Act.

IV. GUIDELINES FOR SPECIAL WATER USES

A. Drilling a Water Well

When drilling a water well it is important to determine what the water will be used for and how much water will be needed. For most single family residences in this state, 500 gallons of water per day is more than adequate for a fully plumbed dwelling unit. If the well will serve other needs such as livestock watering, agricultural irrigation, or commercial use, the water well driller must determine the water required in order to design the well. Sources of information for determining these needs are the Department of Natural Resource's Division of Land and Water Management, The Extension Service of the U.S. Department of Agriculture, the Department of Environmental Conservation, and the water-well drilling contractor.

When drilling a water well, the selection of a reliable drilling contractor is a significant factor. Locate the names of local water well drilling contractors from the classified telephone directory, or from local banks, pump dealers, or neighbors who have recently had a well completed. In selecting a contractor, check reliability, reputation, record of satisfied customers and how long they have been established. Do not be afraid to ask the contractor for references; nc · hesitate to check those references.

Feel free to ask a prospective contractor the following questions:

1) Will you make a written contract for our mutual protection?

2) Do you carry adequate insurance to protect both of us?

3) Will you explain how you will construct the well?

4) Are you licensed as a specialty contractor with the State of Alaska?

5) Do you furnish a certified log of the well?

Also ask the prospective drilling contractor to itemize the cost estimate as follows:

- cost of drilling per foot
- casing per foot
- cost of other materials, drive shoe, screen, pitless adapter, etc.
- cementing
- developing and test pumping
- water treatment equipment
- pump

Keep in mind that a contractor cannot always determine the depth at which an adequate supply of water may be found. Neighboring wells may give some indication of adequate water depth, but depths may vary significantly within a matter of a few hundred feet on the surface.

If applying for water rights for an existing drilled well, submit a copy of the well log for the well. If there is no copy of the well log, try to contact the original owners to see if they still have one, or if they can identify the water well contractor. If the contractor is located, he may still have a copy of the water well log which should be included with the Application for Water Rights or Statement of Beneficial Use of Water.

In some instances, a water well log may already be on file with the Department of Natural Resources. Since 1977 it has been a state law that water well logs be filed with the Department of Natural Resources. Some drillers have filed their logs while others have not. If a water well driller fails to file a well log, then later goes out of business, it may be impossible to locate a log of the water well.

Driven or hand-dug wells do not require a well log because it is generally impossible to obtain one from a driven well and dug wells are usually very shallow. In either case, however, provide information on the total depth of the well and total yield of the well if it is known.

B. Dam Construction and Safety

When developing water rights, individuals may also need to construct a dam and reservoir at the site. An Application to Construct or Modify a Dam is required by the Department of Natural Resources for dams which are 10 feet or more in height or storing 50 acre-feet or more of water.

In general, any dam 10 feet or more in height must have plans submitted as well as specifications, topographic maps of the dam site, profiles and cross sections of the dam. And in some cases, detailed hydrologic data, a seepage and permeability analysis of the structure, and a stability analysis must be submitted if the structure is in an earthquake zone.

For dams less than 10 feet in height, or less than 50-acre feet in storage, no special additional approval is needed other than the granting of a water rights permit to develop the water source. However, plans and specifications will generally still be required.

The purpose of the dam construction and safety regulations is twofold. The primary purpose is to maintain an accurate central file system of existing structures. The system may be utilized by civil defense and emergency personnel in the event of an earthquake which may cause cracking or failure of reservoir structures and necessitate evacuation of the area below the dam. The secondary purpose of the dam construction and safety regulations is to ensure a consistent review of dam construction and the application of sound engineering standards in the construction of dams.

C. Water Rights for Placer Mining

Water rights play an important part in mining operations. Mining operations which affect water flow, quantity or quality and anadromous fish habitats need several land and water permits. A single tri-agency application form, the Annual Placer Mining Application for Land Use and Water Use Permits and Mining License (Form 00-001, Revised 12/83), simplifies the permit process. This form may be obtained from and submitted to the nearest local intake office of the Department of Natural Resources, Division of Land and Water Management (see the appendix for these listings).

Completion of this single, joint-application form allows individuals to satisfy the application requirements for the following permits:

1) Permit to Appropriate Water - Issued by the Department of Natural Resources, Division of Land and Water Management.

2) Miscellaneous Land Use Permit - Issued by the Department of Natural Resources, Division of Mining.

V. DEPARTMENT OF NATURAL RESOURCES WATER MANAGEMENT PROGRAMS

A. Alaska Water-Use Data System

Water use in Alaska is increasing significantly. However, all major population and industrial centers indicate concern over the adequacy of present supplies, and possible future sources. In cooperation with the U.S. Geological Survey (USGS), the Department of Natural Resources (DNR) is continuing a program where significant water use in Alaska is recorded, computer stored for evaluation, and then dissemintated to those in need of such data. Information gathered by the State is shared with the USGS, where it is compiled with other co-operating states, then published every five years as a national "estimate." The national publication indicates trends in water use per state based on five categories. Statistical increases or decreases are shown for nation-wide water use per type of use, i.e., hydroelectric, public supply, rural, self-supplied industrial and irrigation.

The development of a computerized water-use program was completed in 1981. With an operational data base, efforts to compile existing water-use data have begun. A five-year Project Management Plan detailing collection schedules and strategies is being designed to enable present and future water users to examine specific areas, to assess their ability to obtain adequate water for either commercial, industrial or private needs, and plan accordingly. (Confidentiality between DNR and providers of commercial or industrial water-use data is maintained. Only a "summary" of total water used per type of use is ever published.)

In Alaska, the availability of water-use data for each different type of use will provide a powerful and essential tool in regional planning for land-use management, water rights adjudications, and for maintaining in-stream flows. Mining, recreation, fisheries, irrigation, as well as seafood processing, and hydroelectric power generation are among the categories established for data compilation. More information on the Alaska Water-Use Data System is available through the Department of Natural Resources, Division of Land and Water Management.

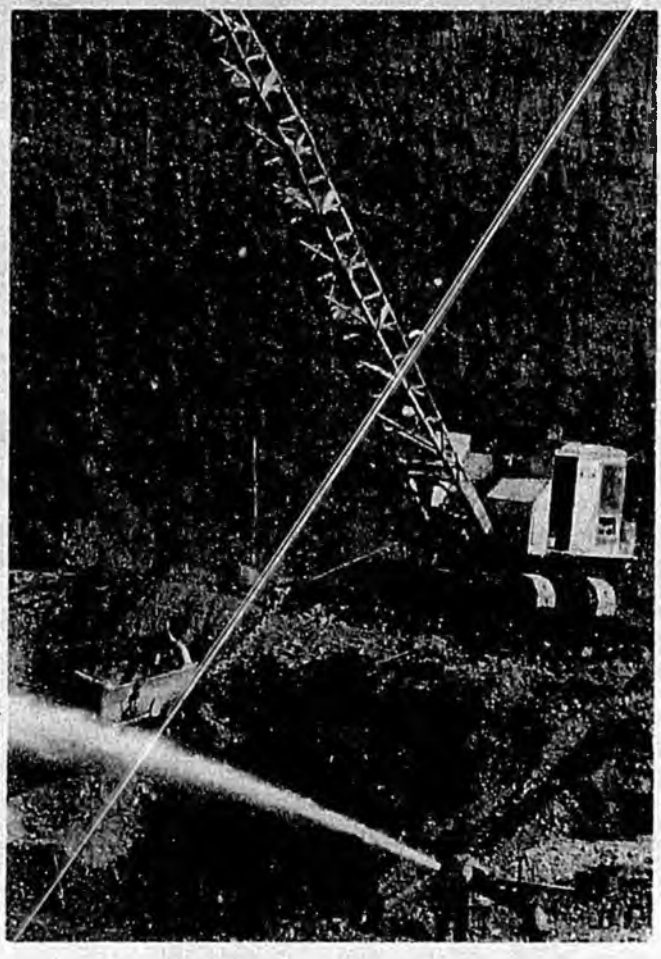

Photo © 1980 Gary Prokosch

3) Anadromous Fish Permit - Issued by the Department of Fish and Game.

4) Wastewater Discharge Permit - Issued by the Department of Environmental Conservation.

5) Alaska Mining License - Issued by the Department of Revenue.

All applications should be submitted by February 15 of each year to allow time for the issuance of permits before operations in the field begin. A copy of a U.S. Geological Survey 1:63,360 map showing the vicinity of your mining operation should accompany this application.

The 1980 revision of the booklet "Regulations and Statutes Pertaining to Mining Rights on Alaska Lands as Contained in the Alaska Statutes and the Alaska Administrative Code," contains pertinent information of interest to miners and may be obtained at the local offices of the Department of Natural Resources.

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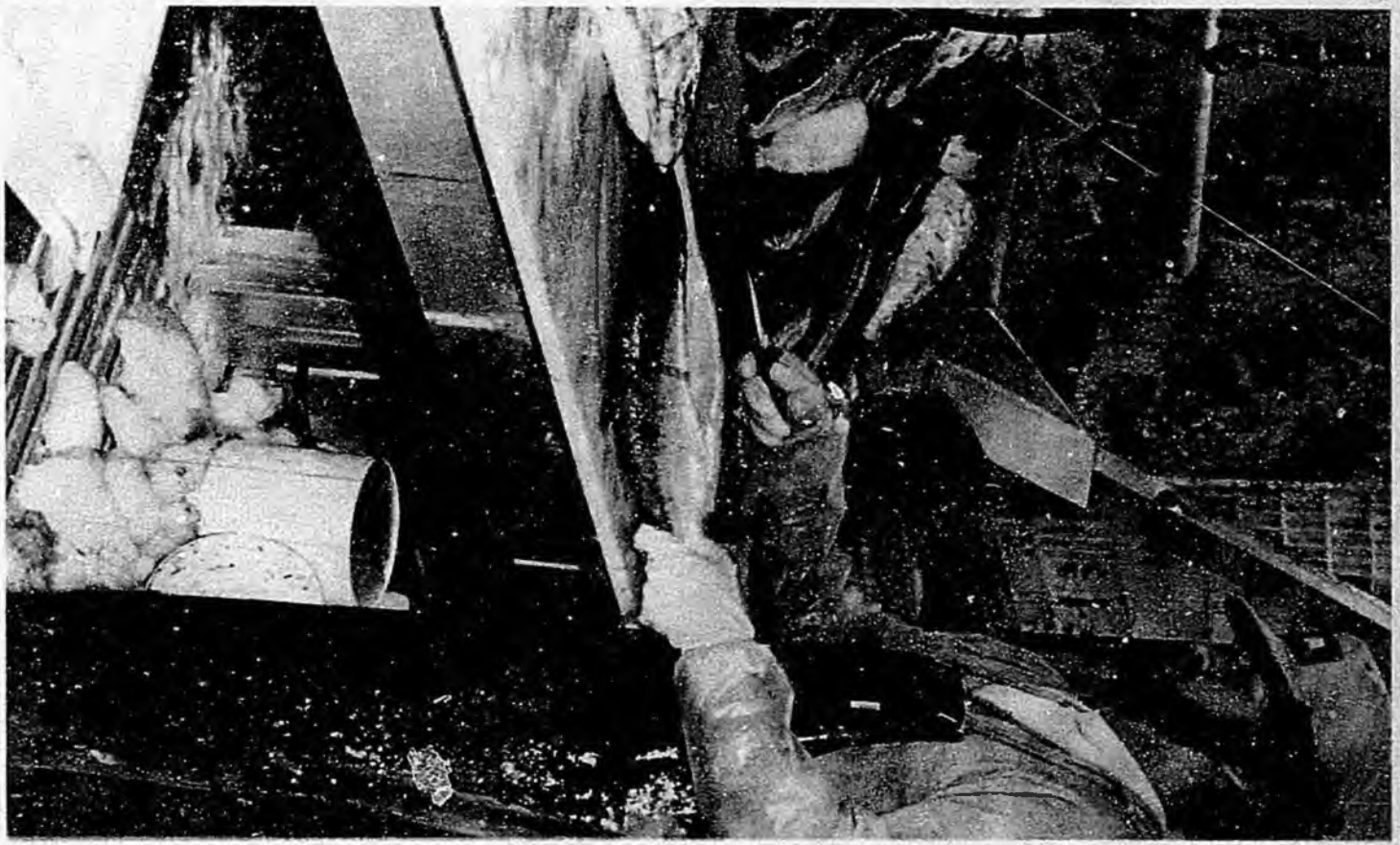

B. Water Resources Inventory Programs

Water resources data gathering programs are conducted by the Water Resources Section of the Department of Natural Resource's Division of Geological and Geophysical Surveys. The Division of Geological and Geophysical Surveys is responsible for all data collection (water as well as geological, soils, etc.) within the Department of Natural Resources. The Water Resources Section conducts data collection programs for surface water, ground water and water quality throughout Alaska. The section also coordinates hydrological investigation and data collection with the U.S. Geological Survey, Water Resources Division.

The U.S. Geological Survey, Water Resources Division is currently the principal water resources data collector in Alaska. Under its supervision and with cooperation from several other agencies,stream data are collected at 188 stations throughout Alaska. Of these stations, 102 are continuous record stations and 86 are partial record stations. The stations are primarily located near population or activity centers;thus much of Alaska is not adequately covered by the stream station network. Only three lake stage stations exist in spite of the large number of lakes in Alaska.

Wells provide the primary and most important ground water information. Observation wells have been established in order to document water level fluctuations. Of the 125 observation wells, 36 are continuously recording, 54 are measured monthly and 35 semiannually. These wells are located near centers of population,but future observation wells are planned for less populated Alaskan communities and locations.

Water quality data are collected from about 125 surface water stations throughout Alaska. Surface waters are variously analyzed for temperature, specific conductance, pH, sediment, inorganic constituents, organic constituents, pesticides, minor elements, radiochemical components and biological data.

Data storage and retrieval is an important part of the Department of Natural Resources data program. Alaskan data for surface water, ground water and water quality are stored in the U.S. Geological Survey WATSTORE computer program. These data can be called for by computer technicians to produce printouts for small or large areas. Also the data are published each year by the U.S. Geological Survey in cooperation with the State of Alaska in a publication called "Water Resources Data for Alaska—Water Year 19_____."

VI. ALASKA WATER RESOURCES BOARD

The Alaska Water Resources Board serves as an advisory group to the governor on all water related matters in the State of Alaska. This Board was created by Article 3 of Alaska Statutes 46.15, the Alaska Water Use Act.

The Board is required to hold at least two meetings each year with one of those meetings held in the state capital. The Board functioned as an active group from the Water Use Act's passage in 1966 until 1975. The Board did not meet in 1976 and 1977.

In late 1977, a concerted effort was made to reestablish the Board as a citizen's advisory group to provide input on an increasingly complex array of water resource issues facing the state. Governor Jay Hammond made appointments to fill existing vacancies and the Board began meeting regularly again in May 1978.

The Water Resources Board covers a wide range of topics at its meetings. Generally, a presentation of a topic is given by an agency representative followed by a discussion of the topic by the Board members. Action taken by the Board is usually in the form of a resolution to the governor or letters to state department commissioners requesting some form of action.

Recently, the Board has addressed itself to matters relating to administrative efficiency on the part of the agencies dealing with the public as well as policy matters that may cut across agency lines.

VII. APPENDICES

A. District Location Map

DISTRICT LOCATION MAP

B. Department of Natural Resources District and Area Office Locations for Obtaining Forms and Assistance

DIVISION OF LAND AND WATER MANAGEMENT

NORTHCENTRAL DISTRICT OFFICE
4420 Airport Way
Fairbanks, Alaska 99701
479-2243

SOUTHEASTERN DISTRICT OFFICE
400 Willoughby Avenue
Pouch MA
Juneau, Alaska 99811
465-3400

SOUTHCENTRAL DISTRICT OFFICE
3601 C Street, 10th Floor
Pouch 7-005
Anchorage, Alaska 99510
276-2653

MAT-SU AREA OFFICE
Century Plaza, Suite 202
P.O. Box 874008
Wasilla, Alaska 99687
376-4595

DIVISION OF FORESTRY

Haines/Skagway Area Office
Second Floor, Gateway Bldg.
Post Office Box 263
Haines, Alaska 99827
766-2120

Petersburg Area Office
Box 1580
Petersburg, Alaska 99833
772-3236

Ketchikan Area Office
318 NBA Building
Post Office Box 5220
Ketchikan, Alaska 99901
225-3070

Kenai Peninsula Area Office
Mile 92 Sterling Highway
Post Office Box 1130
Soldotna, Alaska 99669
262-7559

Copper River Area Office
Gulkana Airport
Post Office Box 185
Glennallen, Alaska 99588
822-5535

Tok Area Office
Post Office Box 304
Tok, Alaska 99780
883-5134

Delta Area Office
Mile 267.5 Richardson Highway
Post Office Box 1149
Delta Junction, Alaska 99737
895-4226

McGrath Area Office
P.O. Box 101
McGrath, Alaska 99267
524-3010

Alaska Statutes

Title 46. Water, Air, Energy, and Environmental Conservation.

Chapter 15. Water Use Act.

Article
1. Administration (§§ 46.15.010—46.15.020)
2. Appropriation and Use of Water (§§ 46.15.030—46.15.185)
3. Water Resources Board (§§ 46.15.190—46.15.240)
4. General Provisions (§§ 46.15.250—46.15.270)

Article 1. Administration.

Section
10. Determination of water rights
20. Authority and duties of the commissioner

Sec.46.15.010. Determination of water rights. The Department of Natural Resources shall determine and adjudicate rights in the waters of the state, and in its appropriation and distribution. (§ 1 ch 50 SLA 1966)

Sec. 46.15.020. Authority and duties of the commissioner. (a) The commissioner shall exercise all those powers and do all those acts necessary to carry out the provisions and objectives of this chapter. The commissioner may

(1) enter into contractual agreements necessary to carry out the provisions of this chapter including agreements with federal, state and local agencies;

(2) apply for, accept, administer and expand grants, gifts, and loans from the federal government and any other public or private sources for the purpose of this chapter, and adopt procedures and do acts not otherwise restricted by law which are necessary to qualify the state to receive grants, gifts and loans;

(3) establish a division of water in the Department of Natural Resources and assign to that division the responsibility for carrying out the provisions of this chapter.

(b) The Commissioner shall

(1) adopt procedural and substantive regulations to carry out the provisions of this chapter, taking into consideration the responsibilities of the Department of Environmental Conservation under AS 46.03 and the Department of Fish and Game under AS 16;

(2) Keep a public record of all applications for permits and certificates and other documents filed in his office; and shall record all permits and certificates and amendments and orders affecting them and shall index them in accordance with the source of the water and the name of the applicant or appropriator;

(3) cooperate with, assist, advise and coordinate plans with the federal, state and local agencies in matters relating to the appropriation, use, conservation, quality, disposal or control of waters and activities related thereto;

(4) prescribe fees or service charges for any public service rendered. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 50 ch 71 SLA 1972)

Legislative committee report.—For report on ch. 71, SLA 1972 (HCSSB 383 am H), see 1972 House Journal, p. 898.

Article 2. Appropriation and Use of Water.

Section	Section
30. Waters reserved to the people	130. Priority
40. Right to appropriate	133. Notices; objections
50. Priority	135. [Renumbered]
60. Existing rights	140. Abandonment, forfeiture, and reversion of appropriations.
65. Determination of existing rights	145. Reservation of water
70. [Renumbered]	147. Termination of permits
80. Criteria for issuance of permit	150. Preferred use
90. Preference in granting permits	160. Transfer and change of appropriations
100. Terms of permit	170. Effect of recording
110. Time for construction and completion	180. Crimes
120. Certificates	185. Appeals

Sec. 46.15.030. Waters reserved to the people. Wherever occurring in a natural state, the waters are reserved to the people for common use and are subject to appropriation and beneficial use and tc reservation of in-stream flows and levels of water, as provided in this chapter. (§ 1 ch 50 SLA 1966; am § 4 ch 84 SLA 1980)

Effect of amendment. — The 1980 amendment, effective June 19, 1980, inserted "and to reservation of instream flows and levels of water" near the end of the section.

Pursuant to the Alaska Statehood Act, the Submerged Lands Act of 1953 applies to Alaska. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Ownership and control of land under navigable waters. — The court takes judicial notice of the fact that Alaska lies westward of the 98th meridian. Thus, under federal law, ownership and control of the land under navigable waters is confirmed in the state. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Ownership of ground and surface waters is to be determined according to state law. Under the Alaska Constitution and state law, the right to use such waterways is placed in the people of the state. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Purpose of easement along courses of major waterways is to provide a place for docks, campsites and such facilities to service those who are properly using the public waters. This purpose is apparently accommodated by the reservation of site easements under the order of the Secretary of the Interior. Alaska Pub. Easement Defense Fund v. Andrus, 435 F. Supp. 664 (D. Alas. 1977).

Sec. 46.15.040 Right to appropriate. (a) A right to appropriate water can be acquired only as provided in this chapter. No right to the use of water either appropriated or unappropriated shall be acquired by adverse use or possession.

(b) A right to appropriate water shall be obtained by first making application to the commissioner for a permit to appropriate. The commissioner shall by regulation prescribe the form and contents of the application and the procedure for filing the application. If a permit is granted and the means of appropriation is constructed a certificate of appropriation may be obtained.

(c) All applications to the commissioner for a permit to appropriate water, filed subsequent to July 1, 1966, shall be considered as having been simultaneously filed with the Department of Fish and Game under AS 16 and the Department of Environmental Conservation under AS 46.03. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 51 ch 71 SLA 1972)

Sec 1.

Legislative committee report. — For report on ch. 71, SLA 1972 (HCSSB 383 am H), see 1972 House Journal, p. 898.

Sec. 46.15.050. Priority. Priority of appropriation gives prior right. Priority of appropriation does not include the right to prevent changes in the condition of water occurrence, such as the increase or decrease of stream flow, or the lowering of a water table, artesian pressure, or water level, by later appropriators, if the prior appropriator can reasonably acquire his water under the changed conditions. (§ 1 ch 50 SLA 1966)

Sec. 46.15.060. Existing rights. A water right acquired by law before July 1, 1966 or a beneficial use of water on July 1, 1966, or made within five years before July 1, 1966, or made in conjunction with works under construction on July 1, 1966, under a lawful common law or customary appropriation or use, is a lawful appropriation under this chapter. The appropriation is subject to applicable provisions of this chapter and rules and regulations adopted under this chapter. (§ 1 ch 50 SLA 1966)

Sec. 46.15.065. Determination of existing rights. (a) A claimant of an existing right under AS 46.15.060 shall file a declaration of appropriation with the commissioner as set out in this section. The declaration shall be considered correct until a certificate of appropriation is issued or denied. Priority of such right dates from the day work was begun on the appropriation if due diligence was used in completing the work; otherwise, from the day water was applied for the beneficial use.

(b) The commissioner shall, as soon as practicable, determine the rights of persons owning existing appropriations. To accomplish this, the commissioner shall

(1) by order set a definite period for filing a declaration of appropriation within a specified area or from a specified source;

(2) publish notice of the order once a week for three weeks before the beginning of the period in a newspaper of general circulation in the affected area;

(3) give notice of the order by certified mail to any appropriator within the specified area or from the specified source who has requested mailed notice or of whom the commissioner can readily obtain knowledge including each owner of a recorded mining claim.

(c) The commissioner shall make such investigations as he considers necessary of rights asserted by declarations filed under this section and shall determine each existing appropriation and mail a summary of such determination to each person who has filed a declaration with respect to the specified area or source. Any person adversely affected by a determination may file with the commissioner a request for a hearing within 20 days of the date the notice is mailed. If a hearing is requested the commissioner shall send a notice of the time and place of the hearing to each person who has filed a declaration.

(d) If a hearing is not requested with respect to a determination, or if, after the hearing, the commissioner finds the determination to have been correctly made, he shall immediately issue a certificate of appropriation. If the commissioner finds the determination to be incorrect, he shall correct it and either issue a certificate of appropriation or refuse the certificate according to his findings.

(e) A person aggrieved by the action of the commissioner may appeal to the superior court within 30 days of the date on which that action is final. (§ 1 ch 50 SLA 1966)

Revisor's note. - This section formerly appeared as AS 46.15.135. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.070. Notices; objections [Renumbered].

Revisor's note. - This section now appears as AS 46.15.133. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.080. Criteria for issuance of permit. (a) The commissioner shall issue a permit if he finds that

(1) rights of a prior appropriator will not be unduly affected;

(2) the proposed means of diversion or construction are adequate;

(3) the proposed use of water is beneficial; and

(4) the proposed appropriation is in the public interest.

(b) In determining the public interest, the commissioner shall consider

(1) the benefit to the applicant resulting from the proposed appropriation;

(2) the effect of the economic activity resulting from the proposed appropriation;

(3) the effect on fish and game resources and on public recreational opportunities;

(4) the effect on public health;

(5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;

(6) harm to other persons resulting from the proposed appropriation;

(7) the intent and ability of the applicant to complete the appropriation; and

(8) the effect upon access to navigable or public waters. (§ 1 ch 50 SLA 1966)

Sec. 46.15.090. Preference in granting permits. When there are competing applications for water from the same source, and the source is insufficient to supply all applicants, the commissioner shall give preference first to public water supply and then to the use which alone or in combination with other foreseeable uses will constitute the most beneficial use. (§ 1 ch 50 SLA 1966)

Sec. 46.15.100. Terms of permit. The commissioner may issue a permit for less than the amount of water requested, but in no case may he issue a permit for more water than can be beneficially used for the purposes stated in the application. He may require modification of plans and specifications for the appropriation. He may issue a permit subject to terms, conditions, restrictions, and limitations he considers necessary to protect the rights of others, and the public interest. However, the permit shall be subject to termination only as provided in this chapter. (§ 1 ch 50 SLA 1966)

Sec. 46.15.110. Time for construction and completion. A permit may place a time limit for beginning construction and perfecting appropriation. Reasonable extensions of time shall be permitted for good cause shown. (§ 1 ch 50 SLA 1966)

Sec. 46.15.120. Certificates. Upon completion of construction of the works and commencement of use of water, the permit holder shall notify the commissioner that he has perfected his appropriation. If the commissioner determines that the appropriation has been perfected in substantial accordance with the permit, he shall issue the permit holder a certificate of appropriation. The certificate shall set out any condition which the commissioner may prescribe by regulation, including conditions that are necessary to protect the prior rights of other persons and the public interest. (§ 1 ch 50 SLA 1966; am § 9 ch 175 SLA 1980)

Revisor's note. — This section formerly appeared as AS 46.15.070. It was renumbered by the revisor of statutes for more logical arrangement.

Effect of amendment. — The 1980 amendment, effective June 19, 1980, substituted "if the commissioner elects to hold hearings, within 180 days of receipt of the last objection" for "at the conclusion of the hearing" at the end of the second sentence of subsection (c), and inserted "or by the failure of the commissioner to grant, deny, or condition an application in accordance with (c) of this section" near the middle of subsection (e).

Sec. 46.15.135. Determination of existing rights [Renumbered].

Revisor's note. — This section now appears as AS 46.15.065. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.140. Abandonment, forfeiture, and reversion of appropriations. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation if an appropriator, with intention to abandon, does not make beneficial use of all or a part of his appropriated water. An appropriation so forfeited and abandoned reverts to the state and the water becomes unappropriated water.

(b) The commissioner may declare an appropriation to be wholly or partially forfeited and shall revoke the certificate of appropriation if an appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of his appropriated water for a period of five successive years. (§ 1 ch 50 SLA 1966)

Sec. 46.15.145. Reservation of water. (a) The state, an agency or a political subdivision of the state, an agency of the United States or a person may apply to the commissioner to reserve sufficient water to maintain a specified instream flow or level of water at a specified point on a stream or body of water, or in a specified part of a stream, throughout a year or for specified times, for

(1) protection of fish and wildlife habitat, migration, and propagation;

(2) recreation and park purposes;

(3) navigation and transportation purposes; and

(4) sanitary and water quality purposes.

(b) Upon receiving an application for a reservation under this section, the commissioner shall proceed in accordance with AS 46.15.070.

(c) The commissioner shall issue a certificate reserving the water applied for under this section if he finds that

(1) the rights of prior appropriators will not be affected by the reservation;

(2) the applicant has demonstrated that a need exists for the reservation;

(3) there is unappropriated water in the stream or body of water sufficient for the reservation; and

Sec. 46.15.130. Priority. (a) Priority of appropriation made under this chapter dates from the filing of an application with the commissioner.

(b) Priority of appropriation perfected before July 1, 1966, shall be determined as provided in § 135 of this chapter. (§ 1 ch 50 SLA 1966)

Sec. 46.15.133. Notices; objections. (a) Upon receipt of an application, the commissioner shall prepare a notice containing the location and extent of the proposed appropriation, the name and address of the applicant and other information he considers pertinent. The notice shall state that within 15 days of publication or service of notice, persons may file with the director written objections, stating the name and address of the objector, and any facts tending to show that rights of the objector or the public interest would be adversely affected by the proposed appropriation.

(b) The commissioner shall publish the notice at the applicant's expense in one issue of a newspaper of general distribution in the area of the state in which the water is to be appropriated. The commissioner shall also have notice served personally or by certified mail upon an appropriator of water or applicant for or holder of a permit who, according to the records of the division of lands, may be affected by the proposed appropriation and may serve notice upon any governmental agency, political subdivision or person; notice shall also be served upon the Department of Fish and Game and the Department of Environmental Conservation.

(c) Within 15 days of publication or service of notice, an interested person may file an objection. The commissioner may hold hearings upon giving due notice and shall grant, deny, or condition the application in whole or in part within 30 days of receipt of the last objection or, if the commissioner elects to hold hearings, within 180 days of receipt of the last objection. Notice of the order or decision shall be served personally or mailed to any person who has filed an objection.

(d) If no objection is filed, the commissioner may proceed to make his determination upon the application.

(e) A person aggrieved by the action of the commissioner or by the failure of the commissioner to grant, deny, or condition an application in accordance with (c) of this section may appeal to the superior court.

(f) The commissioner may, by regulation, designate types of appropriations which are exempt from this section and provide simplified procedures for ruling on the applications. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 52 ch 71 SLA 1972; am §§ 5, 6 ch 84 SLA 1980)

Revisor's note. — This section formerly appeared as AS 46.15.070. It was renumbered by the revisor of statutes for more logical arrangement.

Effect of amendment. — The 1980 amendment, effective June 19, 1980, substituted "if the commissioner elects to hold hearings, within 180 days of receipt of the last objection" for "at the conclusion of the hearing" at the end of the second sentence of subsection (c), and inserted "or by the failure of the commissioner to grant, deny, or condition an application in accordance with (c) of this section" near the middle of subsection (e).

Sec. 46.15.135. Determination of existing rights [Renumbered].

Revisor's note. — This section now appears as AS 46.15.065. It was renumbered by the revisor of statutes for more logical arrangement.

Sec. 46.15.140. Abandonment, forfeiture, and reversion of appropriations. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation if an appropriator, with intention to abandon, does not make beneficial use of all or a part of his appropriated water. An appropriation so forfeited and abandoned reverts to the state and the water becomes unappropriated water.

(b) The commissioner may declare an appropriation to be wholly or partially forfeited and shall revoke the certificate of appropriation if an appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of his appropriated water for a period of five successive years. (§ 1 ch 50 SLA 1966)

Sec. 46.15.145. Reservation of water. (a) The state, an agency or a political subdivision of the state, an agency of the United States or a person may apply to the commissioner to reserve sufficient water to maintain a specified instream flow or level of water at a specified point on a stream or body of water, or in a specified part of a stream, throughout a year or for specified times, for

(1) protection of fish and wildlife habitat, migration, and propagation;

(2) recreation and park purposes;

(3) navigation and transportation purposes; and

(4) sanitary and water quality purposes.

(b) Upon receiving an application for a reservation under this section, the commissioner shall proceed in accordance with AS 46.15.070.

(c) The commissioner shall issue a certificate reserving the water applied for under this section if he finds that

(1) the rights of prior appropriators will not be affected by the reservation;

(2) the applicant has demonstrated that a need exists for the reservation;

(3) there is unappropriated water in the stream or body of water sufficient for the reservation; and

(4) the proposed reservation is in the public interest.

(d) After the issuance of a certificate reserving water, the water specified in the certificate shall be withdrawn from appropriation and the commissioner shall reject an application for a permit to appropriate the reserved water.

(e) A reservation under this section does not affect rights in existence on the date the certificate reserving water is issued.

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose or part or all of the findings no longer apply to the reservation, he may revoke or modify the certificate reserving the water in accordance with AS 46.15.140(b). (§ 7 ch 84 SLA 1980)

Effective date. — Section 12, ch. 84, SLA 1980, makes this section effective June 19, 1980, in accordance with AS 01.10.070(c).

Editor's note. — As to declaration of legislative policy, see § 1, ch. 175, SLA 1980, in Temporary and Special Acts and Resolves.

Sec. 46.15.147. Termination of permits. (a) If the commissioner has reason to believe that a person who holds an appropriation permit under this chapter is wilfully violating or has wilfully violated a term, condition, restriction or limitation of his permit, he may commence proceedings to terminate the appropriation permit under the Administrative Procedure Act (AS 44.62.330 — 44.62.630).

(b) When an appropriation permit is terminated under this section, the appropriation of water made by the permit reverts to the state and becomes unappropriated water. (§ 8 ch 175 SLA 1980)

Editor's note. — As originally enacted, this section was designated AS 46.15.145. However, since a section with that designation had already been enacted by SLA 1980, ch. 84, this section was redesignated AS 46.15.147.

Sec. 46.15.150. Preferred use. (a) An applicant who asserts and proves a preferred use shall be granted a permit and shall be granted preference over other appropriators. A preferred use of water is for a public water supply.

(b) To be entitled to a preference an applicant must show that his use will be prevented or substantially interfered with by a prior appropriation; the use is a preferred use; the applicant agrees to compensate a permit or certificate holder for the prior appropriation for any damages sustained by the preferred use, and other information which the commissioner requires by regulation. (§ 1 ch 50 SLA 1966)

Sec. 46.15.160. Transfer and change of appropriations. (a) The right to use water under an appropriation or permit shall be appurtenant to the land or place where it has been or is to be beneficially used, provided, that water supplied by one person to another person's property shall not be appurtenant to the property unless the parties so intend. An appurtenant water right shall pass with a conveyance of the land, or transfer, or by operation of law unless specifically exempted from the conveyance.

(b) With the permission of the commissioner, all or any part of an appropriation may be severed from the land to which it is appurtenant, may be sold, leased or transferred for other purposes or to other lands and be made appurtenant to other lands. A permit or certificate or a deed, lease, contract, assignment of permit or other instrument transferring an appropriation must be filed for record in the office of the commissioner and a certified copy of the instrument must be recorded in the recorder's office of the recording district in which the appropriation is located. (§ 1 ch 50 SLA 1966)

Sec. 46.15.170. Effect of recording. (a) A deed, lease, contract, assignment of permit or other instrument transferring an appropriation is void as against a subsequent innocent purchaser who in good faith paid a valuable consideration for the appropriation or any portion of it and whose instrument is first filed and recorded under § 160(b) of this chapter.

(b) A deed, lease, contract, assignment of permit or other instrument transferring an appropriation which is recorded under § 160(b) of this chapter is constructive notice of its contents to subsequent purchasers of the appropriation or any portion of it. An unrecorded instrument is valid between the parties to it and as against one who has actual notice of it. (§ 1 ch 50 SLA 1966)

Sec. 46.15.180. Crimes. A person who constructs works for an appropriation, or diverts, impounds, withdraws or uses a significant amount of water from any source without a permit or certificate of appropriation; or a person who violates an order of the commissioner to cease and desist from preventing any water from moving to a person having a prior right to use the same; or who disobeys an order of the commissioner requiring him to take steps to cause the water to so move; or who fails or refuses to install meters, gauges or other measuring devices or control works; or who violates an order establishing corrective control works; or who violates an order establishing corrective controls for an area or for a source of water, or who knowingly makes a false or misleading statement in a declaration of existing rights, is guilty of a misdemeanor. Crimes under this section are in addition to any other crimes provided by law. (§ 1 ch 50 SLA 1966)

Quoted in G & A Contractors, Inc. v Alaska Greenhouses, Inc., Sup. Ct. Op. No 987 (File No. 1763), 517 P.2d 1379 (1974).

Sec. 46.15.185. Appeals. Appeals to the superior court under this chapter are subject to the provisions of the Administrative Procedure Act, AS 44.62.560 — 44.62.570. (§ 1 ch 50 SLA 1966)

Article 3. Water Resources Board.

Section		Section	
190.	The Water Resources Board	220.	Board meetings
200.	Term of office	230.	Public meetings
210.	Duties of the board	240.	Compensation of board members

Sec. 46.15.190. The Water Resources Board. There is created the Water Resources Board composed of seven members having a general knowledge of the use and requirements for use of the waters of the state and the conservation and protection thereof, and the commissioner of environmental conservation or his designee shall serve as an additional, ex officio member serving without a vote. The commissioner of natural resources shall act as the executive secretary of the board, and shall provide clerical staff for the board. Members of the board are appointed by the governor, subject to confirmation by a majority of the members of the legislature in joint session. (§ 1 ch 50 SLA 1966; am § 1 ch 58 SLA 1972)

Sec. 46.15.200. Term of office. The term of office for members of the board is four years. The first members appointed serve as follows: two members serve for one year, three for two years and two for three years. If a vacancy occurs, the governor shall fill it by appointment for the unexpired term. The appointment shall be submitted to the legislature for confirmation at the next regular or special session. (§ 1 ch 50 SLA 1966)

Sec. 46.15.210. Duties of the board. The board shall inform and advise the governor on all matters relating to the use and appropriation of water in the state, including, but not limited to: the effect and adequacy of all state laws and regulations governing the establishment of water rights, the multi-purpose uses of water, the prevention of pollution and the protection of fish and game, studies of the state's water supplies and plans for future requirements, development of water resources, participation of local governmental units in the management of water resources, lands which are or may be needed for dams, reservoirs, flood dams, flood ways, canals or ditches for the impoundment, storage, flow and control of waters. (§ 1 ch 50 SLA 1966)

Sec. 46.15.220. Board meetings. The board shall hold one regular meeting annually at the state capital and one or more additional meetings at the time and place in the state the board selects for the transaction of business. (§ 1 ch 50 SLA 1966)

Sec. 46.15.230. Public meetings. The board may hold and conduct public meetings at any time or any place in the state in order to obtain public opinion on a water use problem or proposal and it may, by majority vote of all members, formally or informally delivered, authorize one or more of its members to hold and conduct a public meeting. (§ 1 ch 50 SLA 1966)

Sec. 46.15.240. Compensation of board members. Each member of the board is entitled to travel expenses and per diem as authorized for state boards by AS 39.20.180 while traveling to or from, or in attendance at, regular or special meetings or conferences authorized by the board. (§ 1 ch 50 SLA 1966)

Article 4. General Provisions.

Section
250. Enforcement authority
260. Definitions
270. Short title

Sec. 46.15.250. Enforcement authority. The following persons are peace officers of the state and they shall enforce this chapter:

(1) a state employee authorized by the commissioner;

(2) a police officer of the state. (§ 1 ch 50 SLA 1966)

Sec. 46.15.260 Definitions. In this chapter, unless the context otherwise requires,

(1) "appropriate" means to divert, impound, or withdraw a quantity of water from a source of water, for a beneficial use or reserve water in accordance with AS 46.15.145;

(2) "appropriation" means the diversion, impounding or withdrawal of a quantity of water from a source of water for a beneficial use or the reservation of water in accordance with AS 46.15.145;

(3) "beneficial use" means a use of water for the benefit of the appropriator, other persons or the public, that is reasonable and consistent with the public interest, including, but not limited to, domestic, agricultural, irrigation, industrial, manufacturing, fish and shellfish processing, navigation and transportation, mining, power, public, sanitary, fish and wildlife, recreational uses, and maintenance of water quality;

(4) "source of water" means a substantial quantity of water capable of being put to beneficial use;

(5) "water" means all water of the state, surface and subsurface, occurring in a natural state, except mineral and medicinal water;

(6) "commissioner" means the commissioner of the Department of Natural Resources;

(7) "director" means the director of the Division of Lands, Department of Natural Resources;

(8) "person" includes an individual, partnership, association, public or private corporation, state agency, political subdivision of the state, and the United States. (§ 1 ch 50 SLA 1966)

(9) "mineral and medicinal water" means

(A) water of a hot spring or spring with curative properties which has been reserved by the federal government under Public Land Order No. 399; and

(B) geothermal fluid, as the term is defined in AS 41.06.060. (am §§8 — 10 ch 84 SLA 1980; am §§ 10, 11 ch 175 SLA 1980)

Effect of amendment. — The first 1980 amendment, effective June 19, 1980, added "or to reserve water in accordance with AS 46.15.145" at the end of paragraph (1), added "or the reservation of water in accordance with AS 46.15.145" at the end of paragraph (2), inserted "fish and shellfish processing, navigation and transportation" near the middle of paragraph (3), and added "and maintenance of water quality" at the end of paragraph (3).

The second 1980 amendment substituted "subsurface" for "subsurfaces" near the middle of paragraph (5), and added paragraph (9).

As the rest of the section was not affected by the amendment, it is not set out.

Editor's note. — As to declaration of legislative policy, see § 1, ch. 175, SLA 1980, in Temporary and Special Acts and Resolves.

Sec. 46.15.270. Short title. This chapter may be cited as the Alaska Water Use Act. (§ 1 ch 50 SLA 1966)

THE SEAL OF THE STATE
OF ALASKA

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Introduced: 2/12/85
Referred: Resources and Judiciary

IN THE SENATE

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

SENATE BILL NO. 150

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section, which is pending before the commissioner on the effective date of this Act, is to continue under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under the procedures set out in AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation in whole or in part if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

(c) Failure to use beneficially, for five successive years, all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water, and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 4. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section

still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to insure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. sec. 334 (Indian General Allotment Act of

February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. sec. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. secs. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. sec. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water of the reserve, or hydrologically interconnected water, is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) -- (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting any objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (i) of this section.

(e) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights; and to take other action the commissioner decides is necessary. The

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purposes of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purposes of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(i) If the commissioner has initiated the adjudication, and the federal government or a private person who has been served under (c)(2) -- (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner shall exclude the federal government or that person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(j) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(k) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. sec. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems. The commissioner may initiate an adjudication under this section only if a federal reserved water right has been or might be asserted

(1) by the United States or any of its component agencies;

(2) by or on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4), or whose land is held in trust by the United States.

Any other Persons w/ Federal Rights

(b) Venue is proper if a complaint under this section is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In an action brought under (a) of this section, the court may initially appoint a designee of the commissioner as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. The master may be an employee of the state. In managing the action, the master may, with the court's permission, take such action as the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in any order or judgment any final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section are conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. A final order of the commissioner under AS 46.15.165, or a final judgment of a court under AS 46.15.166, is binding on all parties to the adjudication and on all persons who subsequently make an application for a water right. The court or the commissioner may retain continuing jurisdiction for the periods of time necessary to implement any adjudication order or judgment and to provide for any subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165.

(c) The commissioner may enter into arbitration with a private person or the federal government to resolve a water rights issue.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any federal court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. Nothing in AS 46.15 is an admission by the State of Alaska that a federal reserved water right exists in the state.

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty that may be imposed under AS 46.15.180 for violation of an order issued under AS 46.15, the department may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation, and for any related court costs and attorney fees incurred by the state in seeking enforcement of the order.

Clarify

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the department may

(1) inspect books; records; meters; gauges; well logs; works of appropriation, diversion, impoundment, withdrawal, or

control; and any other relevant information or physical condition;

(2) enter private property at all reasonable times, after first obtaining a search warrant from an appropriate judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by an administrative subpoena signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 7. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Introduced: 2/12/85
Referred: Resources and Judiciary

IN THE SENATE

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

SENATE BILL NO. 150

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost. (New Section - major appropriators must get conditional permit)

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section, which is pending before the commissioner on the effective date of this Act, is to continue under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under the procedures set out in AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation in whole or in part if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

(c) Failure to use beneficially, for five successive years, all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water, and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 4. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section

still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to insure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. sec. 334 (Indian General Allotment Act of

February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. sec. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. secs. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. sec. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water of the reserve, or hydrologically interconnected water, is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) -- (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting any objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (i) of this section.

(e) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights; and to take other action the commissioner decides is necessary. The

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purposes of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(i) If the commissioner has initiated the adjudication, and the federal government or a private person who has been served under (c)(2) -- (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner shall exclude the federal government or that person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(j) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(k) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. sec. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems. The commissioner may initiate an adjudication under this section only if a federal reserved water right has been or might be asserted

(1) by the United States or any of its component agencies;

(2) by or on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4), or whose land is held in trust by the United States.

(b) Venue is proper if a complaint under this section is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In an action brought under (a) of this section, the court may initially appoint a designee of the commissioner as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. The master may be an employee of the state. In managing the action, the master may, with the court's permission, take such action as the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in any order or judgment any final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section are conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. A final order of the commissioner under AS 46.15.165, or a final judgment of a court under AS 46.15.166, is binding on all parties to the adjudication and on all persons who subsequently make an application for a water right. The court or the commissioner may retain continuing jurisdiction for the periods of time necessary to implement any adjudication order or judgment and to provide for any subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165.

(c) The commissioner may enter into arbitration with a private person or the federal government to resolve a water rights issue.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any federal court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. Nothing in AS 46.15 is an admission by the State of Alaska that a federal reserved water right exists in the state.

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty that may be imposed under AS 46.15.180 for violation of an order issued under AS 46.15, the department may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation, and for any related court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the department may

(1) inspect books; records; meters; gauges; well logs; works of appropriation, diversion, impoundment, withdrawal, or

control; and any other relevant information or physical condition;

(2) enter private property at all reasonable times, after first obtaining a search warrant from an appropriate judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by an administrative subpoena signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 7. This Act takes effect immediately in accordance with AS 01.-10.070(c).

EW → BA → file

cc MV
D. Hor
Tom H

Introduced: 2/12/85
Referred: Resources and Judiciary Land & Water Mgmt.

FEB 19 1985

Director's Office

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

IN THE SENATE

SENATE BILL NO. 150

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section, which is pending before the commissioner on the effective date of this Act, is to continue under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under the procedures set out in AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

2/19/

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation in whole or in part if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

(c) Failure to use beneficially, for five successive years, all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water, and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 4. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section

still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to insure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. sec. 334 (Indian General Allotment Act of

February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. sec. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. secs. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. sec. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water of the reserve, or hydrologically interconnected water, is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) -- (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting any objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (i) of this section.

(e) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights; and to take other action the commissioner decides is necessary. The

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purpose of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(i) If the commissioner has initiated the adjudication, and the federal government or a private person who has been served under (c)(2) -- (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner shall exclude the federal government or that person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(j) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(k) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. sec. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems. The commissioner may initiate an adjudication under this section only if a federal reserved water right has been or might be asserted

(1) by the United States or any of its component agencies;

(2) by or on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4), or whose land is held in trust by the United States.

(b) Venue is proper if a complaint under this section is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In an action brought under (a) of this section, the court may initially appoint a designee of the commissioner as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. The master may be an employee of the state. In managing the action, the master may, with the court's permission, take such action as the commissioner would be authorized to take in an administrative adjudication under AS 46.15.-165.

(d) In an adjudication under this section, the court may incorporate in any order or judgment any final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section are conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. A final order of the commissioner under AS 46.15.165, or a final judgment of a court under AS 46.15.166, is binding on all parties to the adjudication and on all persons who subsequently make an application for a water right. The court or the commissioner may retain continuing jurisdiction for the periods of time necessary to implement any adjudication order or judgment and to provide for any subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165.

(c) The commissioner may enter into arbitration with a private person or the federal government to resolve a water rights issue.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any federal court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. Nothing in AS 46.15 is an admission by the State of Alaska that a federal reserved water right exists in the state.

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty that may be imposed under AS 46.15.180 for violation of an order issued under AS 46.15, the department may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation, and for any related court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the department may

(1) inspect books; records; meters; ganges; well logs; works of appropriation, diversion, impoundment, withdrawal, or

control; and any other relevant information or physical condition;

(2) enter private property at all reasonable times, after first obtaining a search warrant from an appropriate judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by an administrative subpoena signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 7. This Act takes effect immediately in accordance with AS 01.-10.070(c).

SB 150 cont'd

Governor's transmittal letter dated February 12:

Dear Senator Bennett:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the adjudication of water rights and making miscellaneous amendments to the Alaska Water Use Act (AS 46.15). The bill comes as a result of the Alaska Water Resources Board resolution 84-5, dated March 14, 1984, recommending the adoption of specific statutory procedures for the administrative and judicial adjudication of water rights, particularly federal reserved water rights.

A federal reserved water right is one created by implication when the federal government withdraws land for a specific purpose, such as for a national forest, Indian reservation, or national monument. The United States Supreme Court first recognized federal reserved water rights in Winters v. United States, 207 U.S. 564 (1908), an Indian reservation case. Since that time, court cases have extended the doctrine to many other types of federal withdrawals. Since a federal reserved water right is created by implication, no specific quantity of water and no priority date for the water right is established until the court does so by decree. To facilitate the ascertainment of the existence of a federal reserved water right, its quantity, and its priority date, Congress passed the McCarran Amendment, 43 U.S.C. sec. 666, allowing water adjudication suits to be brought against the federal government in state courts. The statute requires the adjudication of all rights within a hydrologic basin where a federal reserved water right may exist. This has created lawsuits involving literally thousands of defendants in some of the western states, where there are many appropriators and not enough water. The complexity and expense of such litigation has prompted many western states to enact specific adjudication legislation to facilitate the determination of water rights. The attached bill accordingly draws from the experience of other states and their adjudication statutory schemes.

Section 1 of the bill amends AS 46.15.040 to add a disclaimer to the Water Use Act, asserting that a right to appropriate water which the state grants is not a state guarantee of a particular water quality, volume, or pressure, or that water may be withdrawn at a particular cost. Appropriators in adjudications in other western states have raised this "guarantee" argument. While courts that have reached the issue have rejected the argument, nonetheless it would serve the expeditious resolution of water disputes in Alaska if the lack of guarantee were specified in the Water Use Act.

SB 150 cont'd

Section 2 of the bill adds a new subsection to AS 46.15.065, the current statute setting out the procedures for handling individual declarations of water rights existing before July 1, 1966. Under AS 46.15.065(b)(1), the commissioner of natural resources set the deadline for filing those declarations, and approximately 15 are pending. This new subsection makes clear the relationship between the procedures for handling those declarations and the proposed procedures (AS 46.15.165 and 46.15.166 in the bill) for handling basinwide water rights adjudications.

Section 3 of the bill amends AS 46.15.140 to clarify the existing abandonment and forfeiture provisions and to create a rebuttable presumption that if an appropriator does not beneficially use the water covered under a certificate for a period of five successive years, it is the appropriator's obligation to prove to the commissioner that the appropriation has not been abandoned.

Section 4 of the bill clarifies how the commissioner may terminate an in-stream flow reservation.

Section 5 contains the body of the adjudication provisions. It first creates a new AS 46.15.165, which would allow the commissioner of the Department of Natural Resources to initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a particular hydrologic basin. Under AS 46.15.165, the commissioner would give notice to all relevant appropriators and landowners, including governmental agencies. When the hydrologic basin includes land or water held in trust by the United States for Alaska Natives, such as the Annette Island Reserve, notice would also be sent to relevant authorities in order to protect the Natives' interests, if any, in a federal reserved water right. A person or entity claiming a federal reserved water right who is served with notice, but who fails to consent to an administrative adjudication, would be excluded as a participant. Under AS 46.15.165 the commissioner would have authority to adopt procedural regulations and to appoint a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; and to make recommendations to the commissioner. Any final determination of water rights the commissioner makes would be subject to an administrative appeal to superior court. Section 5 also creates a new AS 46.15.166 providing that when a federal reserved water right may be involved, and the claimant refuses to consent to an administrative adjudication, the commissioner could initiate the adjudication in superior court, consistent with the McCarran Amendment, 43 U.S.C. sec. 666. In that instance, the bill gives the superior court authority to appoint a designee of the commissioner as a master to perform the same functions a master would in an administrative adjudication, but under the court's supervision.

SB 150 cont'd

While the design of the adjudication bill is to provide a procedure for the adjudication of both non-federal and federal reserved water rights, a new AS 46.15.165 makes clear that nothing in the Alaska Water Use Act is to be construed as an admission against the State of Alaska that a federal reserved water right exists in any particular context.

Section 6 of the bill adds a new AS 46.15.255 and 46.15.256, to clarify the Department of Natural Resources' authority to take action to remove unsafe, as well as unpermitted, works of appropriation if the appropriator refuses to do so, and to inspect records of an appropriator pertinent to the permitted or certificated use of water under the Water Use Act.

Given the experience of states other than Alaska in adjudicating water rights and the large number of federal reservations in Alaska, a sound statutory system for adjudication is imperative. Therefore, I urge your prompt action on this bill.

Sincerely,

Bill Sheffield
Governor

SB 151

SENATE BILL NO. 151 by the Rules Committee by request of the Governor, entitled:

"An Act amending the controlled substance, imitation controlled substance, and forfeiture laws."

was read the first time and referred to the Health, Education and Social Services Committee and the Judiciary Committee.

Department of Corr[illegible] fiscal note is zero. Department of Law fiscal note [illegible] with analysis: "This bill would streamline and standardize forfeiture procedures, making it easier to execute forfeitures. The bill would also slightly increase the number of controlled substances and imitation controlled substance cases the department can successfully prosecute by correcting omissions, ambiguities, contradictions, and an overbreadth problem which exists in portions of our current laws. Although there will be a slight increase in the number of cases handled, this increase will be more than offset by the efficiencies that will be realized by streamlining current laws."

SB 151 cont'd

Governor's transmittal letter dated February 12:

Dear Senator Bennett:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill which makes several changes in Alaska's laws regarding controlled substances and imitation controlled substances. These changes are needed to eliminate ambiguities, contradictions, omissions, and an overbreadth problem which exist in current law, and to improve the state's ability to forfeit property which has been used in violation of the drug laws.

A section-by-section analysis of the bill, explaining in detail the effect of and reasons for the proposed changes, appears at the end of this letter. In brief summary, sec. 1 of the bill consolidates most state forfeiture procedures in a single new article added to AS 09. This consolidation of state forfeiture procedures will minimize the possibilities of unintended inconsistencies in coverage and reduce the volume of laws that are required whenever forfeiture is authorized.

Section 2 of the bill provides that anyone who attempts to obtain possession of a controlled substance through fraud or other deceptive techniques commits the same class of crime and faces the same penalty as someone who successfully obtains possession of a controlled substance through fraud or other deception.

Section 3 adds the commissioner of corrections to the nine member Controlled Substances Advisory Committee. Sections 4 and 7 add necessary cross-references to other statutes. Section 5 is a minor amendment which clears up a drafting oversight and potential overbreadth problem in the existing definition of an "imitation controlled substance."

Section 6 of the bill broadens the description of property which is subject to forfeiture to the state, and will eliminate some difficult proof problems caused by the language of the current law. Section 8 defines "violation" of the drug laws to include attempts and solicitations to violate the law. Section 9 repeals statutes replaced by the provisions contained in sec. 1 of the bill.

In order to allow more effective enforcement of our criminal and civil laws against drug abuse in Alaska, I urge your prompt and favorable action on this bill.

Section-by-section Analysis of Bill

Section 1:.

This section of the bill has two related purposes. First, it specifies the procedures applicable to the forfeiture of property authorized by AS 11.73.060 and AS 17.30.110.

Introduced: 2/12/85
Referred: Resources and Judiciary

IN THE SENATE

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

SENATE BILL NO. 150

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section, which is pending before the commissioner on the effective date of this Act, is to continue under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under the procedures set out in AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation in whole or in part if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

(c) Failure to use beneficially, for five successive years, all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water, and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 4. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section

still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to insure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. sec. 334 (Indian General Allotment Act of

February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. sec. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. secs. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. sec. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water of the reserve, or hydrologically interconnected water, is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) -- (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting any objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (i) of this section.

(e) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights; and to take other action the commissioner decides is necessary. The

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purposes of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(i) If the commissioner has initiated the adjudication, and the federal government or a private person who has been served under (c)(2) -- (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner shall exclude the federal government or that person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(j) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(k) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. sec. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems. The commissioner may initiate an adjudication under this section only if a federal reserved water right has been or might be asserted

(1) by the United States or any of its component agencies;

(2) by or on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4), or whose land is held in trust by the United States.

(b) Venue is proper if a complaint under this section is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In an action brought under (a) of this section, the court may initially appoint a designee of the commissioner as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. The master may be an employee of the state. In managing the action, the master may, with the court's permission, take such action as the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in any order or judgment any final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section are conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. A final order of the commissioner under AS 46.15.165, or a final judgment of a court under AS 46.15.166, is binding on all parties to the adjudication and on all persons who subsequently make an application for a water right. The court or the commissioner may retain continuing jurisdiction for the periods of time necessary to implement any adjudication order or judgment and to provide for any subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165.

(c) The commissioner may enter into arbitration with a private person or the federal government to resolve a water rights issue.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any federal court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. Nothing in AS 46.15 is an admission by the State of Alaska that a federal reserved water right exists in the state.

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty that may be imposed under AS 46.15.180 for violation of an order issued under AS 46.15, the department may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation, and for any related court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the department may

(1) inspect books; records; meters; gauges; well logs; works of appropriation, diversion, impoundment, withdrawal, or

control; and any other relevant information or physical condition;

(2) enter private property at all reasonable times, after first obtaining a search warrant from an appropriate judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by an administrative subpoena signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 7. This Act takes effect immediately in accordance with AS 01.-10.070(c).

DRAFT

Bradley
01/20/86

CIRCLED SECTIONS SHOW CHANGES FROM ORIGINAL BILL

Original sponsor: Rules/Governor

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 150 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

Omit to Applicable Persons

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF

APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency or a municipality may not abandon or forfeit an appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, the portion of the certificate covered by the revocation revert to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall revie each reservation under this section to determine whether the purpos described in (a) of this section for which the certificate reservir

water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation

imposed under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area;

(5) serve the order on any other person claiming a federal reserved water right;

(6) serve the regional corporation and village corporation established under 43 U.S.C. 1601-1628 (Alaska Native Claims Settlement Act) whose land is located within the adjudication area; and

(7) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) - (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within

the adjudication area, unless the person is entitled to a federally reserved water right and has failed to consent under (k) of this section.

(f) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary. Employment by a federal, state or local governmental agency does not disqualify an individual from appointment as master under this subsection if the commissioner determines that the individual is otherwise impartial and qualified to act as master.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses,

and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federally reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, if a federally reserved water right has been or might be asserted by an agency of the United States

on its own behalf or on behalf of a person described in AS 46.15.165(c)(3) - (6), file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) Venue is proper in a complaint filed under (a) of this section if the complaint is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the

commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation and for court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the commissioner may

(1) inspect books, records, meters, gauges, well logs, works of appropriation, diversion, impoundment, withdrawal, or control and other relevant information or physical condition;

(2) enter private property at all reasonable times after obtaining a search warrant from a judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by a subpoena or subpoena duces tecum signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 8. This Act takes effect immediately in accordance with AS 01.10.070(c).

Offered: 3/10/86
Referred: Rule

Original sponsor: Rules/Governor

IN THE SENATE BY THE JUDICIARY COMMITTEE

CS FOR SENATE BILL NO. 150 (Judiciary) am

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) The commissioner's issuance of a permit under AS 46.15.080 or of a certificate under AS 46.15.065 or 46.15.120 does not represent a guarantee by the state to the permittee or certificate holder that water will be available for appropriation at a certain volume, quality, artesian pressure, or cost. This subsection does not, however, alter the right a permittee or certificate holder may have against a later appropriator, including a government agency.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years. A property owner who has a water right, whether for residential, agricultural, industrial, or mining use, but has not developed that property to the point of water use, may file a notice of intention to retain that water right with the commissioner.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) If the commissioner revokes a certificate in whole or in part, the portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns or claims land within the adjudication area if the land is held in trust by the United States for the person or if the patent, deed, or certificate to the land from the United States was issued under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), any other allotment act, or the Alaska Native Townsite Act of May 25, 1926, 44 Stat. 629, and serve the order on the United States on behalf of the person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area;

(5) serve the order on any other person claiming a federal reserved water right within the adjudication area;

(6) serve the regional corporation and village corporation established under 43 U.S.C. 1601-1628 (Alaska Native Claims Settlement Act) that has a pending land selection or has acquired ownership to land under that act that is located within the adjudication area; and

(7) serve the order on each mining claimant of record with the United States and the state within the adjudication area as of the date of the order initiating the administrative adjudication.

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the

last known address that the applicant, certificate holder, permittee, or claimant has given to the division of the department responsible for administration of water rights. A person served under (c)(1) - (7) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (c) of this section.

(f) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their

active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with

the concurrence of the attorney general, if a federal reserved water right has been or might be asserted by an agency of the United States on its own behalf or on behalf of a person described in AS 46.15.-165(c)(3) - (6), file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) The venue for an action filed under (a) of this section shall be established by rule of the supreme court under AS 22.10.030.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation and for court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the commissioner may

(1) inspect books, records, meters, gauges, well logs, works of appropriation, diversion, impoundment, withdrawal, or control and other relevant information or physical condition;

(2) enter private property at all reasonable times after obtaining a search warrant from a judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by a subpoena or subpoena duces tecum signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 8. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Offered: 5/6/86
Referred: Judiciary

Original sponsor: Rules/Governor

IN THE SENATE BY THE RESOURCES COMMITTEE

HOUSE CS F[illegible] CS FOR SENATE BILL NO. 150 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) The commissioner's issuance of a permit under AS 46.15.080 or of a certificate under AS 46.15.065 or 46.15.120 does not represent a guarantee by the state to the permittee or certificate holder that water will be available for appropriation at a certain volume, quality, artesian pressure, or cost. This subsection does not, however, alter the right a permittee or certificate holder may have against a later appropriator, including a government agency.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years. A person who has a permit to develop a use of water including but not limited to residential, agricultural, industrial, or mining use, but has not developed that property to the point of water use before permit expiration, may file a request for permit extension with the commissioner.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) If the commissioner revokes a certificate in whole or in part, the portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within

the adjudication area;

(3) serve the order on any person who owns or claims land within the adjudication area if the land is held in trust by the United States for the person or if the patent, deed, or certificate to the land from the United States was issued under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), any other allotment act, or the Alaska Native Townsite Act of May 25, 1926, 44 Stat. 629, and serve the order on the United States on behalf of the person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area;

(5) serve the order on any other person claiming a federal reserved water right within the adjudication area;

(6) serve the regional corporation and village corporation established under 43 U.S.C. 1601-1628 (Alaska Native Claims Settlement Act) that has a pending land selection or has acquired ownership to land under that act that is located within the adjudication area; and

(7) serve the order on each mining claimant of record with the United States and the state within the adjudication area as of the date of the order initiating the administrative adjudication.

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is suffi-

cient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, permittee, or claimant has given to the division of the department responsible for administration of water rights. A person served under (c)(1) - (7) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (k) of this section.

(f) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by

the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initi-

ating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, if a federal reserved water right has been or might be asserted by an agency of the United States on its own behalf or on behalf of a person described in AS 46.15.-165(c)(3) - (6), file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) The venue for an action filed under (a) of this section shall be established by rule of the supreme court under AS 22.10.030.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a

jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation,

diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation and for court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the commissioner may

(1) inspect books, records, meters, gauges, well logs, works of appropriation, diversion, impoundment, withdrawal, or control and other relevant information or physical condition;

(2) enter private property at all reasonable times after obtaining a search warrant from a judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by a subpoena or subpoena duces tecum signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 8. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Introduced: 2/12/85
Referred: Resources and Judiciary

IN THE SENATE

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

SENATE BILL NO. 150

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section, which is pending before the commissioner on the effective date of this Act, is to continue under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under the procedures set out in AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke the certificate of appropriation in whole or in part if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

(c) Failure to use beneficially, for five successive years, all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water, and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency may not abandon or forfeit a certificate of appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 4. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section

still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to insure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. sec. 334 (Indian General Allotment Act of

want Nature Corp.

February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. sec. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. secs. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. sec. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water of the reserve, or hydrologically interconnected water, is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) -- (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting any objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (i) of this section.

(e) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication; to hold hearings; to take testimony; to collect evidence; to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights; and to take other action the commissioner decides is necessary. The

master may be an employee of the state.

(f) Any division of the department, or other departments, may provide support during the adjudication, in the form of documentary and testimonial evidence; research; and scientific analysis. If funding permits, the commissioner may obtain similar support from sources outside government. Any state agency may assert a water right on behalf of the state in the adjudication.

(g) In managing an adjudication, the commissioner may take such action as is necessary for the efficient and fair administration and use of the state's water, including but not limited to

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering such interlocutory orders as may be appropriate to dispose of all or part of the issues in the adjudication, and designating these orders as final ones for the purposes of any appeal to superior court under (j) of this section; and

(4) allocating to a participant any extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(h) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(i) If the commissioner has initiated the adjudication, and the federal government or a private person who has been served under (c)(2) -- (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner shall exclude the federal government or that person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(j) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(k) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. sec. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems. The commissioner may initiate an adjudication under this section only if a federal reserved water right has been or might be asserted

(1) by the United States or any of its component agencies;

(2) by or on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4), or whose land is held in trust by the United States.

(b) Venue is proper if a complaint under this section is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In an action brought under (a) of this section, the court may initially appoint a designee of the commissioner as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. The master may be an employee of the state. In managing the action, the master may, with the court's permission, take such action as the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in any order or judgment any final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section are conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. A final order of the commissioner under AS 46.15.165, or a final judgment of a court under AS 46.15.166, is binding on all parties to the adjudication and on all persons who subsequently make an application for a water right. The court or the commissioner may retain continuing jurisdiction for the periods of time necessary to implement any adjudication order or judgment and to provide for any subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute, and may administratively adjudicate it under AS 46.15.165.

(c) The commissioner may enter into arbitration with a private person or the federal government to resolve a water rights issue.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any federal court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. Nothing in AS 46.15 is an admission by the State of Alaska that a federal reserved water right exists in the state.

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty that may be imposed under AS 46.15.180 for violation of an order issued under AS 46.15, the department may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation, and for any related court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the department may

(1) inspect books; records; meters; gauges; well logs; works of appropriation, diversion, impoundment, withdrawal, or

control; and any other relevant information or physical condition;

(2) enter private property at all reasonable times, after first obtaining a search warrant from an appropriate judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by an administrative subpoena signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 7. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Bradley
1/16/86

Original sponsor: Rules/Governor

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 150 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF

APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) If the commissioner revokes a certificate in whole or in part, that portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that

the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 6. AS 46.15.145 is amended by adding a new subsection to read:

(g) A state agency may not abandon or forfeit an appropriation in whole or in part except after public notice.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or

if the patent or deed to the land contains a restriction on alienation imposed under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area; and

(5) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) - (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federally reserved water right and has failed to consent under (k) of this section.

(f) In an adjudication under this section, the commissioner may

appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary. Employment by a federal, state or local governmental agency does not disqualify an individual from appointment as master under this subsection if the commissioner determines that the individual is otherwise impartial and qualified to act as master.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court

under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federally reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, if a federally reserved water right has been or might be asserted by an agency of the United States on behalf of a person whose patent or deed to land contains a restriction on alienation imposed by a federal statute cited in AS 46.15.165(c)(3) or (4) or whose land is held in trust by the United States, with the concurrence of the attorney general, file on behalf of the state a complaint in superior court to

initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) Venue is proper in a complaint filed under (a) of this section if the complaint is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each

person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity. use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 8. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation and for court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the commissioner may

(1) inspect books, records, meters, gauges, well logs, works of appropriation, diversion, impoundment, withdrawal, or control and other relevant information or physical condition;

(2) enter private property at all reasonable times after obtaining a search warrant from a judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by a subpoena or subpoena duces tecum signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 9. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Bradley
1-27-86

Amendment

Original sponsor: Rules/Governor

Attn. J. Hora

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 150 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) The commissioner's issuance of a permit under AS 46.15.080 or of a certificate under AS 46.15.065 or 46.15.120 does not represent a guarantee by the state to the permittee or certificate holder that water will be available for appropriation at a certain volume, quality, artesian pressure, or cost. This subsection does not, however, alter the right a permittee or certificate holder may have against a later appropriator, including a government agency.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency or a municipality may not abandon or forfeit an appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, the portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose

described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns or claims land within the adjudication area if the land is held in trust by the

United States for the person or if the patent, deed, or certificate to the land from the United States was issued under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), any other allotment act, or the Alaska Native Townsite Act of May 25, 1926, 44 Stat. 629, and serve the order on the United States on behalf of the person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area;

(1) (5) serve the order on any other person claiming a federal reserved water right; (within the adjudication area.)

(6) serve the regional corporation and village corporation established under 43 U.S.C. 1601-1628 (Alaska Native Claims Settlement Act) that has a pending land selection or has acquired ownership to land under that act that is located within the adjudication area; and

(7) serve the order on each mining claimant of record with the United States and the state within the adjudication area as of the date of the order initiating the administrative adjudication; failure of the commissioner to notify a mining claimant under this subsection does not prevent the commissioner from adjudicating the rights of parties in the adjudication.

(2)

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is

sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, permittee, or claimant has given to the division of the department responsible for administration of water rights. A person served under (c)(1) - (7) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (k) of this section.

(f) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary. Employment by a federal, state or local governmental agency does not disqualify an individual from appointment as master under this subsection if the commissioner determines that the individual is otherwise impartial and qualified to act as master.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses, and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or

delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, if a federal reserved water right has been or might be asserted by an agency of the United States on its own behalf or on behalf of a person described in AS 46.15.-165(c)(3) - (6), file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) Venue is proper in a complaint filed under (a) of this section if the complaint is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative

adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation and for court costs and attorney fees incurred by the state in seeking enforcement of the order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the commissioner may

(1) inspect books, records, meters, gauges, well logs, works of appropriation, diversion, impoundment, withdrawal, or control and other relevant information or physical condition;

(2) enter private property at all reasonable times after obtaining a search warrant from a judicial officer if the owner refuses consent tc entry; and

(3) compel the production of relevant information by a subpoena or subpoena duces tecum signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 8. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Original sponsor: Rules/Governor

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 150 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

(d) The commissioner's issuance of a permit under AS 46.15.080 or of a certificate under AS 46.15.065 or 46.15.120 does not represent a guarantee by the state to the permittee or certificate holder that water will be available for appropriation at a certain volume, quality, artesian pressure, or cost. This subsection does not, however, alter the right a permittee or certificate holder may have against a later appropriator, including a government agency.

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency or a municipality may not abandon or forfeit an appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, the portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose

described in (a) of this section for which the certificate reserving water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 6. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns or claims land within the adjudication area if the land is held in trust by the

United States for the person or if the patent, deed, or certificate to the land from the United States was issued under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), any other allotment act, or the Alaska Native Townsite Act of May 25, 1926, 44 Stat. 629, and serve the order on the United States on behalf of the person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area;

(5) serve the order on any other person claiming a federal reserved water right within the adjudication area;

(6) serve the regional corporation and village corporation established under 43 U.S.C. 1601-1628 (Alaska Native Claims Settlement Act) that has a pending land selection or has acquired ownership to land under that act that is located within the adjudication area; and

(7) serve the order on each mining claimant of record with the United States and the state within the adjudication area as of the date of the order initiating the administrative adjudication.

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, permittee, or claimant has given to the division of the department responsible

for administration of water rights. A person served under (c)(1) - (7) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within the adjudication area, unless the person is entitled to a federal reserved water right and has failed to consent under (k) of this section.

(f) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses,

and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federal reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, if a federal reserved water right has been or might be asserted by an agency of the United States

on its own behalf or on behalf of a person described in AS 46.15.-165(c)(3) - (6), file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) Venue is proper in a complaint filed under (a) of this section if the complaint is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the

commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

Mary Lou Hasle 762-4317 -DNR-

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DRAFT

Bradley
01/20/86

Original sponsor: Rules/Governor

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 150 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making miscellaneous amendments to the Alaska Water Use Act (AS 46.15); establishing procedures for administrative and judicial adjudication of water rights under that Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.040 is amended by adding a new subsection to read:

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(d) A right to appropriate water granted under this chapter may not be construed against the state as a guarantee of a particular water level or volume, except as provided in AS 46.15.145, as a guarantee of a particular artesian pressure or water quality, or as a guarantee that water may be withdrawn or diverted at a particular cost.

Same

* Sec. 2. AS 46.15.065 is amended by adding a new subsection to read:

(f) The adjudication process for a declaration filed under (a) of this section that is pending before the commissioner on the effective date of this Act continues under the procedures set out in this section until the commissioner finally determines whether the declarant is entitled to a certificate. If a certificate is issued under this section, the certificate holder may be included as a participant in an adjudication under AS 46.15.165 or 46.15.166.

Same

* Sec. 3. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF

APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and revoke or amend the certificate of appropriation as to the unused quantity of water if an appropriator, with intention to abandon, does not make beneficial use of all or a part of the [HIS] appropriated water. [AN APPROPRIATION SO FORFEITED AND ABANDONED REVERTS TO THE STATE AND THE WATER BECOMES UNAPPROPRIATED WATER.]

(b) The commissioner may declare that an appropriator has [AN APPROPRIATION TO BE] wholly or partially forfeited an appropriation, and shall revoke the certificate of appropriation in whole or in part if the [AN] appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of the [HIS] appropriated water for a period of five successive years.

* Sec. 4. AS 46.15.140 is amended by adding new subsections to read:

(c) Failure to use beneficially for five successive years all or part of the water granted in a certificate of appropriation raises a rebuttable presumption that the appropriator has abandoned or forfeited the right to use the unused quantity of water and shifts to the appropriator the burden to prove otherwise to the satisfaction of the commissioner.

(d) A state agency or a municipality may not abandon or forfeit an appropriation in whole or in part except after public notice.

(e) If the commissioner revokes a certificate in whole or in part, the portion of the certificate covered by the revocation reverts to the state and the water becomes unappropriated water.

* Sec. 5. AS 46.15.145(f) is amended to read:

(f) At least once each 10 years the commissioner shall review each reservation under this section to determine whether the purpose described in (a) of this section for which the certificate reserving

water was issued and the findings described in (c) of this section still apply to the reservation. If the commissioner determines that the purpose, or part or all of the findings, no longer apply to the reservation, the commissioner [HE] may revoke or modify the certificate reserving the water after notice, hearing when appropriate, and a written determination that the revocation or modification is in the best interests of the state [IN ACCORDANCE WITH AS 46.15.140(b)].

* Sec. 5. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.165. ADMINISTRATIVE ADJUDICATIONS. (a) The commissioner may, by order, initiate an administrative adjudication to quantify and determine the priority of all water rights and claims in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) In the order initiating an administrative adjudication, the commissioner shall describe the appropriate geographic and hydrologic boundaries of the adjudication area. During the adjudication, the commissioner may adjust the boundaries to ensure the efficient administration of water appropriations among users.

(c) Upon initiation of the adjudication, the commissioner shall

(1) serve the order on each applicant, certificate holder, or permittee listed in the department's records within the adjudication area;

(2) serve the order on any agency of the federal, state, or a local government with management authority over land or water within the adjudication area;

(3) serve the order on any person who owns land within the adjudication area if the land is held in trust by the United States or if the patent or deed to the land contains a restriction on alienation

imposed under 25 U.S.C. 334 (Indian General Allotment Act of February 8, 1887, 24 Stat. 389, as amended and supplemented), 25 U.S.C. 372 (the Allotment Act of June 25, 1910, 36 Stat. 855), or 43 U.S.C. 270-1, 270-2 (the Allotment Act of May 17, 1906, 34 Stat. 197), and on the United States on behalf of any such person;

(4) serve the order on the United States and the appropriate governing body of the Annette Island Reserve established by 25 U.S.C. 495 (the Act of March 3, 1891, 26 Stat. 1101) if the land or water, including hydrologically interconnected water, of the Annette Island Reserve is within the adjudication area;

(5) serve the order on any other person claiming a federal reserved water right;

(6) serve the regional corporation and village corporation established under 43 U.S.C. 1601-1628 (Alaska Native Claims Settlement Act) whose land is located within the adjudication area; and

(7) publish the order once each week during four consecutive weeks in a newspaper of general circulation in the adjudication area.

(d) Service of an order under (c) of this section does not constitute an admission by the state that the person served with the order has a water right.

(e) Service of the order under (c)(1) of this section is sufficient if mailed by certified mail, return receipt requested, to the last known address that the applicant, certificate holder, or permittee has given to the division of the department responsible for administration of water rights. A person served under (c)(1) - (4) of this section who fails to appear in a timely manner and assert a claim as prescribed by the commissioner is estopped from subsequently asserting an objection to the adjudication of that person's water rights within

the adjudication area, unless the person is entitled to a federally reserved water right and has failed to consent under (k) of this section.

(f) In an adjudication under this section, the commissioner may appoint an impartial qualified person as a master to preside over the adjudication, to hold hearings, to take testimony, to collect evidence, to propose to the commissioner an order adjudicating the validity of, quantifying, and determining the priority of all water rights, and to take other action the commissioner decides is necessary. Employment by a federal, state or local governmental agency does not disqualify an individual from appointment as master under this subsection if the commissioner determines that the individual is otherwise impartial and qualified to act as master.

(g) A state agency may assert a water right on behalf of the state in the adjudication.

(h) A division of the department or another state agency may provide documentary and testimonial evidence, research, and scientific analysis during the adjudication. The commissioner may provide evidence, research, or analysis from sources outside government.

(i) In conducting an adjudication, the commissioner may take action necessary for the efficient and fair administration and use of the state's water including

(1) determining indispensable, necessary, and convenient parties to the adjudication;

(2) classifying applicants, certificate holders, permittees, and claimants in groups that share similar interests, such as by the amount of water used or the type of use, and restricting their active participation in the adjudication by appointing group representatives for the purposes of receiving notices, examining witnesses

and other adjudicatory functions;

(3) entering interlocutory orders appropriate to a disposal of all or part of the issues in the adjudication, and designating the orders as final for the purposes of an appeal to the superior court under (1) of this section; and

(4) allocating to a participant the extra costs that the state has incurred in conducting the adjudication because the participant has in bad faith asserted a claim to water wholly without merit or has unreasonably delayed the proceeding.

(j) For the purposes of asserting a water right in an adjudication, a certificate issued under this chapter is prima facie evidence of the water right and its priority date.

(k) If the commissioner has initiated the adjudication and the federal government or a private person who has been served under (c)(2) - (4) of this section asserts a federally reserved water right but fails to consent in writing to the adjudication, then the commissioner may exclude the federal government or the person, respectively, as participants in the adjudication. The commissioner may negotiate the terms of the written consent.

(l) A person adversely affected by a final order of the commissioner adjudicating water rights under this section may appeal to the superior court within 30 days after the decision is mailed or delivered to the person.

(m) The commissioner may adopt regulations setting out procedures for administrative adjudications under this section.

Sec. 46.15.166. JUDICIAL ADJUDICATIONS. (a) Instead of initiating an adjudication under AS 46.15.165, the commissioner may, with the concurrence of the attorney general, if a federally reserved water right has been or might be asserted by an agency of the United States

on its own behalf or on behalf of a person described in AS 46.15.165(c)(3) - (6), file on behalf of the state a complaint in superior court to initiate a judicial adjudication consistent with 43 U.S.C. 666 to quantify and determine the priority of all water rights in a drainage basin, river system, ground water aquifer system, or other identifiable and distinct hydrologic regime, including any hydrologically interrelated surface and ground water systems.

(b) Venue is proper in a complaint filed under (a) of this section if the complaint is filed in a judicial district in which all or a part of the hydrologic regime is located.

(c) In a complaint brought under (a) of this section, the court may appoint an impartial, qualified person as a master to hold hearings, take testimony, collect evidence, and make recommendations to the court regarding the scope and content of a proposed judicial decree that would finally adjudicate the validity of water rights, quantify them, and determine priorities among the water right appropriations in the adjudication area. Employment by a federal, state, or local government agency does not disqualify an individual from appointment as master under this subsection if the court determines that the individual is otherwise impartial and qualified to act as master. The master may, with the court's permission, take action that the commissioner would be authorized to take in an administrative adjudication under AS 46.15.165.

(d) In an adjudication under this section, the court may incorporate in an order or judgment final orders of the commissioner previously issued under AS 46.15.165.

(e) Proceedings under this section shall be conducted without a jury.

Sec. 46.15.167. EFFECT OF DECISION. The final order of the

commissioner under AS 46.15.165 and the final judgment of a court under AS 46.15.166 are binding on each party to the adjudication and on each person who subsequently makes an application for a water right. The court or the commissioner may retain jurisdiction for a period of time necessary to implement an adjudication order or judgment and to provide for subsequent water appropriations.

Sec. 46.15.168. OTHER ACTIONS. (a) The state may timely intervene as a party in a superior court action potentially involving a determination of the validity, quantity, use, reservation, or priority of water rights.

(b) The commissioner may accept a remand from a state or federal court of a water rights dispute and may administratively adjudicate the dispute under AS 46.15.165.

(c) The commissioner may enter into arbitration to resolve a water rights dispute.

(d) The commissioner may incorporate and apply as binding upon the parties to an administrative adjudication under AS 46.15.165 any court decree concerning the state hydrologic regime involved in the adjudication.

Sec. 46.15.169. FEDERAL RESERVED WATER RIGHTS. This chapter does not represent a commitment by the state to a specific federal reserved water right.

* Sec. 7. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.255. ENFORCEMENT. (a) In addition to a penalty imposed under AS 46.15.180 for violation of an order issued under this chapter, the commissioner may

(1) remove or abate unpermitted works of appropriation, diversion, impoundment, or withdrawal;

(2) install corrective controls or control works; and

(3) seek enforcement of the order by filing an action in the superior court.

(b) A person who violates an order issued under AS 46.15.180 is liable for all costs of removal, abatement or installation and for court costs and attorney fees incurred by the state in seeking enforcement of th order.

Sec. 46.15.256. DATA COLLECTION AUTHORITY. To carry out the provisions of this chapter, the commissioner may

(1) inspect books, records, meters, gauges, well logs, works of appropriation, diversion, impoundment, withdrawal, or control and other relevant information or physical condition;

(2) enter private property at all reasonable times after obtaining a search warrant from a judicial officer if the owner refuses consent to entry; and

(3) compel the production of relevant information by a subpoena or subpoena duces tecum signed by the commissioner if the commissioner reasonably believes the information is necessary to carry out the purposes of this chapter.

* Sec. 8. This Act takes effect immediately in accordance with AS 01.-10.070(c).