HB

51

Testimony on CS for House Bill No. 51 ( )
House Finance Committee
Presented by Al Ewing, Deputy Commissioner
Department of Environmental Conservation
February 20, 1997

Mr. Chairman and members of the Committee, I appreciate this opportunity to present testimony on the CS for HB 51. You have been provided with a letter from Commissioner Brown on this bill which provides in detail our strong concerns. Additionally, we have provided to you a copy of a letter from the Regional Administrator of Region 10 of the U.S. Environmental Protection Agency (EPA) which details their concerns with the bill.

I won't reiterate the content of those letters in detail. Commissioner Brown's letter clearly enumerates the reasons the department is strongly opposed to HB 51.

The language of HB 51 seems to indicate confusion about some of the basics of the Clean Water Act (CWA). There are three major provisions of the CWA that are relevant to HB 51. The first has to do with technology-based standards, the second is focused on water quality standards and the third concerns permitting of pollutant discharges.

Development of technology-based standards is the domain of the EPA. EPA, through exhaustive examination of available treatment technology on an industry by industry basis, determines what level of treatment is technologically and economically practicable. EPA is also charged with identifying best available treatment technology. Out of this examination comes effluent limits or limits on the concentration of pollutants that an industry can discharge. The CWA objective is zero discharge of pollutants, and for a number of industries technology is available to achieve zero discharge of pollutants.

Technology standards are not based on the conditions of a particular water body. They are applicable in all states and territories of the United States, without regard to the water body to which the discharge goes. A technology based standard may well require the discharge to be cleaner than the receiving water. It may go so far, as I mentioned above, to require zero discharge of pollutants just because it is technologically possible to do so Again, setting technology-based standards is the domain of the EPA.

The CWA gives the states responsibility for setting water quality standards. In other words, it is up to Alaska to determine what uses are possible for the waters of this state and to set standards to protect those uses. The EPA assists in this effort by providing both numerical and narrative criteria on which the states can base water quality standards. They also provide guidance on the process and procedures for establishing water quality standards. When states fail to carry out their responsibility for setting water quality standards, the EPA may prescribe federal standards in lieu of state standards. That is how Alaska came to be covered by the National Toxics Rule (NTR), which has created numerous problems for permitting. It is important to note that standards and criteria are two different things. Criteria are a subset of water quality standards.

Both technology-based standards and water quality standards may come into play when permit limits are set for a particular discharger. If effluent limits (federally established technology-based limits) result in a discharge that is as clean or cleaner than the water quality standards for the water body receiving the discharge, then nothing more needs to be done. If the federally established technology-based limits are insufficient to meet water quality standards, then one of two things, or a combination of these two things needs to be considered - a mixing zone may be utilized, or additional treatment technology may be employed, or a combination of the two.

A very serious problem with HB 51, is that it confuses the concepts and the terminology associated with water quality criteria, water quality standards, technology based effluent limits, permitting, and compliance.

Now, having said this, we recognize that Alaska's water quality standards, which clearly are the responsibility of the state, are not as good as they could be. We have a major effort underway, utilizing extensive public involvement to make needed improvements to our standards.

In Governor Knowles' partnership with industry, he commits to keeping Alaska open for business. In return he asks for three things: create jobs, use Alaska businesses, and "do it right". Doing it right means being a good neighbor, including setting fair standards that ensure water quality is maintained for all uses and giving Alaskans a participatory voice in setting these standards.

Governor Knowles has given DEC the charge to ensure that our standards protect our waters for all users and to actively consult with Alaskans in setting those standards. Where changes are needed, we are aggressively making those changes.

Last year, we evaluated and reached a decision on regulations regarding suspended sediments and petroleum hydrocarbon particulates. After careful evaluation, we decided that no changes were appropriate at that time.

We have under way a rewrite of our mixing zone regulations. I personally have spent close to a hundred hours meeting with affected Alaskans and considering ways to make these regulations understandable, workable, and adequately protective of our resources. To ensure that we have achieved this objective, we will be going out for an additional period of public review. During this time, we will once again sit down with the broad range of interests to ensure that we fully understand and balance those interests in the best way possible.

We have focused on what we believe, and what Alaskans have told us, are unduly restrictive requirements of the NTR. Our negotiations with EPA have resulted in agreement by EPA to withdraw Alaska from coverage by 19 acute aquatic criteria. When withdrawal is completed, Alaska will be able to utilize

our site specific procedures and thereby be more flexible in permit requirements.

Arsenic limits are also currently prescribed by the NTR. We have focused on freeing Alaska from this overly restrictive federal limit. Commissioner Brown has written letters, met and discussed this issue with regional and national EPA leaders, and has written in support of an Alaska Miners Association petition to have this limit removed. Last week, Governor Knowles signed a petition to the Administrator of EPA demanding that the NTR criteria, which is 277 times more restrictive than Alaska's drinking water standard, be lifted until research has been completed to determine an appropriate limit. We are seeing movement by EPA and expect to see results from the Governor's petition in the not too distant future.

Last Fall, Governor Knowles sent a letter to 1200 Alaskans asking them to identify the most critical water quality standards issues having an impact on permitting, resource protection or compliance. That survey identified 12 issues including such things as petroleum hydrocarbons, total dissolved solids, coliform bacteria, and procedures for setting site specific standards and reclassifying water bodies. Working in conjunction with a water quality advisory group, DEC has teams of people working on each of these issues with the charge to develop scientifically sound solutions that we will carefully review with all interested Alaskans. We expect to bring all twelve of these issues to resolution over the next 10 months.

Our goal is to carefully protect Alaska's water resources, but at the same time to remove unnecessary obstacles and expense for development. We are committed to our partnership with industry, but we are equally committed to doing it right.

Resources available to DEC to accomplish these goals are very limited and, if I believe what I read, likely to be further reduced by this body. We can however achieve our goals if we don't have too many obstacles placed in our way.

HB 51 is an obstacle! It would do absolutely nothing to help us achieve our goal of removing Alaska from the clutches of the NTR. It would not help in our battle to be released from coverage by the federal arsenic limit which is 277 times more restrictive than our Alaska drinking water standard. It would do nothing to help us resolve any of the dozen problems identified by Alaskans as the most pressing water quality issues.

In a time of diminishing resources, HB 51 creates new and costly bureaucratic procedures which will divert our scarce resources from dealing with the problems and achieving the results Alaskans want most. In a time when we are working to Alaskanize our standards, as in the case of arsenic, HB 51 would hitch the state to the federal train to be pulled wherever they care to take us.

I firmly believe that DEC is on the right track! Look at our agenda. Look at our progress. Look at our results. We are doing what Alaskans want us to do and we are doing it in a responsible way. Please don't divert us to a side track. Please don't put us on the federal track. If the process ain't broken, please don't break it!

Thank you for this opportunity to testify. I will be happy to address your questions.

Alaska State Legislature

Please enter into the record my testimony to the HFIN committee name

committee on HB 51 bill/subject . dated 2-20-97 .

RE: HB51

Dear Committee member:

This bill concerns Trout Unlimited because it will weaken overall the beneficial effects (for all Alaskans) of the State's clean water standards.

This bill amounts to an unfunded mandate. By mandating ADEC accept the burden of investigating any individually proposed reduction of federal water quality standards this bill will place a tremendous burden on the department to fulfill its (the bills) intention. Unless of course there is amendments to budget such efforts.

This bill infers an industrial priority for water uses. With this inference rests the well being of other renewable natural resource dependent industries in Alaska. It is our opinion that we must proceed with this type of action very cautiously because our gains with regard to jobs may very well be measured in lost jobs to other industries.

The public process is in jeopardy with regard to this bill. It appears that this bill will disregard the public input process. If ADEC fulfills the described actions of the bill there appears to not be an opportunity for public involvement in this process which will certainly affect the public's water resources in Alaska.

Trout Unlimited's position on water quality is one of a conservative approach recognizing the value of clean water for both human and fishery resource needs. Industrial needs, especially nonrenewable extractive, must not be placed above renewable resource requirements. History demonstrates this to be folly, expensive folly.

Sincerely yours in conservation,

Dennis H. Randa, President
Alaska Council of Trout Unlimited
P.O. Box 3055
Soldotna, Ak 99669

Copy on file 2/20/97

HOUSE COMMITTEE REPORT

(11)

Date Referred to Committee: January 31, 1997 **FURTHER REFERRALS:**

Date of Committee Action: 2/27/97

The FINANCE Committee considered: **HB 51**

HOUSE BILL NO. 51 **REGULATIONS OF DEPT OF ENV. CONSERVATION**

"An Act relating to the Department of Environmental Conservation."

recommends it be replaced with the following committee substitute CSHB 51 (FIN) [ ] the same title [✓] a new title

[ ] additional referral to _____ Committee
[ ] attached amendment(s)

ADOPTS: _____ Letter of Intent

ATTACHES NEW FISCAL NOTE(s): (Dept) APPROVES PREVIOUS: (Dept/Date)

2. [✓] fiscal note(s) DEC Fish & Game [ ] fiscal note(s) _____

[ ] zero fiscal note(s) _____ [ ] zero fiscal note(s) _____

SIGNING WITH RECOMMENDATIONS		DP	DNP	NR	AM
	Therriault	✓			
	FOSTER	X			
	Mulder	X			
	Martin	Y			
	Kohring	X			
	T. Davies				X
	Grussendinf				X
	Moses		/	X	
	Kelly	—			
	G. Davis	X			

CO CHAIR'S SIGNATURE _____ _____

Therriault

FISCAL NOTE

STATE OF ALASKA
1997 LEGISLATIVE SESSION

BILL NO. CSHB 51(FIN)

Revision Date: 2/25/97
Title: An Act Relating to the Department of Environmental Conservation
Sponsor: Rep. Rokeberg
Requester: House Finance

Dept. Affected: Fish and Game
BRU: Habitat and Restoration
Component: Habitat
COMPONENT SERIAL NO. 486

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 98	FY 99	FY 100	FY 01	FY 02	FY 03
PERSONAL SERVICES	37.5	37.5	37.5	37.5	37.5	37.5
TRAVEL	6.0	6.0	6.0	6.0	6.0	6.0
CONTRACTUAL	4.0	4.0	4.0	4.0	4.0	4.0
SUPPLIES	3.0	3.0	3.0	3.0	3.0	3.0
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	50.5	50.5	50.5	50.5	50.5	50.5
CAPITAL EXPENDITURES	50.5	50.5	50.5	50.5	50.5	50.5
CHANGE IN REVENUES ( )	0.0	0.0	0.0	0.0	0.0	0.0

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	50.5	50.5	50.5	50.5	50.5	50.5
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other						
TOTAL	50.5	50.5	50.5	50.5	50.5	50.5

Estimate of any current year (FY97) cost: $ 0.0

POSITIONS

FULL-TIME	0.5	0.5	0.5	0.5	0.5	0.5
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

This bill proposes certain procedures that must be followed in order to develop state water quality standards for which there is no corresponding Federal water criteria. Alaska has standards for total suspended solids, turbidity, and stream sediment accumulation for which there is no corresponding Federal criteria. It is difficult to estimate the cost on conducting the work to demonstrate the need for such standards, because it is hightly dependent on availability of site-specific data. Development of site specific criteria cost to the Department of Fish and Game has been as high as $62,000 for one site. This fiscal note assumes a cost of $10,000 per site with a maximum of five sites per year.

Prepared by: Janet Kowalski, Director JK
Division: Habitat and Restoration
Phone: 465-4105
Date: 2/25/97

Approved by Commi Frank Rue Gerald Bruce for
Agency: Department of Fish and Game
Date: 2/25/97

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FISCAL NOTE

STATE OF ALASKA
1997 LEGISLATIVE SESSION

BILL NO. CSHB 51 (O&G)

Revision Date: 2/5/97
Title: An Act relating to the Department of Environmental Conservation
Sponsor: Reps Rokeberg and Kelly
Requestor: House Finance Committee

Department Affected: Environmental Conservation
BRU: Department-wide
Component: All

COMPONENT SERIAL NO. 633

Expenditures/Revenues: (Thousands of Dollars)

OPERATING EXPENDITURES	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03
PERSONAL SERVICES	95.1	95.1	95.1	95.1	95.1	95.1
TRAVEL	3.0	3.0	3.0	3.0	3.0	3.0
CONTRACTUAL	174.0	174.0	174.0	174.0	174.0	174.0
SUPPLIES	1.0	1.0	1.0	1.0	1.0	1.0
EQUIPMENT	3.0	3.0	3.0	3.0	3.0	3.0
LAND&STRUCTURES	0.0	0.0	0.0	0.0	0.0	0.0
GRANTS,CLAIMS	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**276.1**	**276.1**	**276.1**	**276.1**	**276.1**	**276.1**
CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0
CHANGE IN REVENUES ( )	0.0	0.0	0.0	0.0	0.0	0.0
FUND SOURCE						
1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	276.1	276.1	276.1	276.1	276.1	276.1
1005 GF/Program Receipt	0.0	0.0	0.0	0.0	0.0	0.0
1006 GF/MHTIA	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	276.1	276.1	276.1	276.1	276.1	276.1

Estimate of any current year (FY97) cost: $ 0.0

POSITIONS:

FULL-TIME	1	1	1	1	1	1
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary.)

See attached.

Prepared by: Susan Braley
Division: Air & Water Quality
Phone: 907-465-5308
Date: 2/18/97

Approved by Commissioner:
Agency: Department of Environmental Conservation
Date: 2/18/97

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CSHB 51 (O&G)

The fiscal impact in HB 51 is in **Sections 4 & 5** of the bill.

To meet the requirements under these sections, we anticipate one additional full time staff position would be required to handle the requests to change a State water quality standard allowed in Sec. 46.03.085(c) and Section 36.03.087(b), as well as a full review of the regulations required in Section 5 of the bill. The timelines required in 46.03.085(c) would mean a staff person would have to give immediate and full time attention to the requested change.

Because of the contentious nature of making changes to the state water quality standards, it is vital that we seek and have available for the public, third party expertise on the water quality standard in question. Past experience with contractual funding for third party expertise shows that costs run from $20,000 to $75,000 depending on the complexity of the issue. For example, an initial review done just on settling velocities of sediment for the A-J Mine's tailing impoundment cost the Department $20,000 in 1994. Given the estimate of four changes requested per year, it is estimated that $100,000 in contractual expenses will be incurred per year to gather third party expertise on the issues. Public notice and hearing costs run approximately $10,000 per regulatory change. Contractual funding is also included for consultation with a Department of Law attorney at .25 FTE, as necessary to implement the regulatory provisions of the bill.

Therefore, the fiscal note includes:

Line 100	1 FTE professional staff (Envir. Specialist III)	**$95,100**
Line 200	Travel (hearings, research)	$3000
Line 300	Contractual Costs for 3rd party expertise	$100,000
	Public Notice costs	$40,000
	Department of Law RSA	$34,000
Line 400	Supplies	$1000
Line 500	Equipment	$3000
	TOTAL SECTION 4 & 5 PER YEAR	**= $276,100**

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

130 Seward Street, Suite 409
Juneau, Alaska 99801-2105

MEMORANDUM March 4, 1997

SUBJECT: CSHB 51(FIN)

TO: Representative Gene Therriault
Attn: Mike

FROM: Terri Lauterbach
Legislative Counsel

Enclosed is your new CS with the change requested by Mike Tibbles.

I think that, for grammatical consistency, the change made at page 4, line 18, by amendment T.6 means that "permit limits" should appear somewhere in Sec. 46.03.087(a) because page 4, line 18 is referring back to the types of things that the department is suppos[illegible]e justifying under subsection (a). I urge your review of this issue.

TML:glc
97-134.glc

Enclosure

#1

Replaced By 1A 2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 1, line 5, following "to"

Delete "implement water quality"

Insert "adopt"

Page 1, line 5, following "evidence"

Insert "that ensure that water quality standards are sufficient to protect human health and the propagation of fish and wildlife"

#2

adopted N/O 2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 1, line 6, following "that"

Delete "state agencies possessing the necessary expertise to implement AS 46.03.085 - 46.03.088, enacted by sec. 3 of this Act, coordinate their efforts to enable cost efficiencies in adopting regulations"

Insert: "the department in implementing AS 46.03.085 - 46.03.088, enacted by sec 3 of this Act, coordinate its efforts with other state agencies to achieve cost efficiencies, and in adopting regulations consider measures"

#3

adopted N/O 2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 1, line 11, following "on"

Delete "scientifically measurable"

Insert "scientific"

#4

withdrawn

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 1, line 12, following "with."

Delete through line 13

#5

withdrawn

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 1, line 12, following "criteria"

Delete "and"

page 1, line 12, following "feasible"

Delete "to comply with."

Insert "and ensure the protection of human health and the propagation of fish and wildlife."

#16

withdrawn

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 1, line 13, following "action"

Insert ", and the courts provide checks against excesses by both the executive and the legislative branches of government"

#7

Failed 3/7

2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page ~~2~~ 3, line 9:

Following "Within"

Delete "90"

Insert "180"

withdrawn 2/27/97

#5

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 2, line 14, following "the"

Insert "natural and"

Page 2, line 17, following "develop"

Delete "water quality standards"

Insert "permit conditions"

Page 2, line 20, following "the"

Delete "background"

Insert "natural"

Page 2, line 21, following "the"

Delete "background"

Insert "natural"

Page 2, line 22, following "the"

Delete "standards"

Insert "criterion"

Page 2, line 22, following "quality"

Delete "criterion"

Insert "standard"

Page 2, line 23, following "the"

Delete "background"

Insert "natural"

Page 2, line 24, following "the"

Delete "background"

Insert "natural"

Page 2, line 25, following "water"

Delete "constitutes the criterion that"

Insert "shall be used to set the permit conditions which"

Page 3, line 5, following "standards"

Delete ", criteria,"

#9

Failed 4-6

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 3, line 9, following "and"

Insert "scientific and economic"

#10

Failed 3/7

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 3, delete lines 18 - 22

#11

Failed 3/6

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 3, delete lines 23 - 28

#12

passed 7/3

AMENDMENT 2/27/97

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 4, line 15, following "chemical,"

Delete "and"

Insert "or"

Page 4, line 20, following "chemical,"

Delete "and"

Page 4, line 20, following "physical"

Insert ", or economic"

#13

withdrawn 2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

Page 4, following line 24:

Following "Sec. 46.03.088."

Delete through page 5, line 2

Insert "Definitions. (a) In this section "water quality criteria" are scientific information regarding the maximum concentrations of specific chemicals or other pollutants in water which are consistent with the protection of aquatic life or human health. (b) "Standards" are legally enforceable state-established requirements that consist of the uses for which a water body should be protected and the criteria or pollution limits which are necessary to protect those uses. (c) "natural condition" means the condition of a water body before human impact; and (d) "background condition" means the condition of a water body after human influence."

adopted as amended

NO OBJ

2/27/97

#14

0-LS0091\T.6
Lauterbach
2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE KELLY

TO: Draft CSHB 51( ) ("T" Version)

Page 1, line 7:

Delete "sec. 3"

Insert "sec. 4"

Page 2, following line 7:

Insert a new bill section to read:

"* **Sec. 3.** AS 46.03.080 is amended by adding a new subsection to read:

(b) If the available evidence reasonably demonstrates that the natural condition of a body of water does not meet the requirements of the quality or purity standards that would otherwise be applicable to the classification of the water adopted under (a) of this section, the natural condition of the water shall constitute the applicable standard of quality or purity."

Renumber the following bill sections accordingly.

Page 2, line 20:

Delete "if the available"

Page 2, line 21 - 25:

Delete all material.

Page 4, lines 15 - 16:

Delete "or discharge characteristics"

Page 4, line 18:

Delete "discharge standard"

Insert "permit limits"

Page 4, lines 20 - 21:

Delete " , ~~and physical conditions~~ or discharge characteristics"

Insert ~~"or economic conditions"~~

Page 5, line 10:

Delete "sec. 3"

Insert "sec. 4"

TA #1

as amended 2/27/97

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE DAVIES

TO: CS HB 51 ( )

(1) Page 1, line 5, following "to"

NO OBJ Delete "implement water quality" laws ~~after laws to implement water quality stds~~

÷ Insert "adopt"

Page 1, line 5, following "evidence"

(2) Insert "that ensure that water quality standards are sufficient to protect human health and the propagation of fish and wildlife"

Failed

laws and implement water quality standards ~~regulations~~

ALASKA MARINE CONSERVATION COUNCIL
Box 101145 Anchorage, Alaska 99510
(907) 277-5357; 277-5975 (fax); amcc@igc.apc.org

February 20, 1997

Representative Mark Hanley
Alaska House of Representatives
State Capitol
Juneau, AK 99801

RE: HB 51 hearing before the House Finance Committee

Dear Representative Hanley:

On behalf of our membership, the Alaska Marine Conservation Council strongly opposes HB 51, a bill before your Finance Committee today. AMCC is a community-based organization formed by fishermen and composed of commercial and sport fishers, subsistence users, scientists, and coastal residents throughout Alaska who rely on healthy marine ecosystems for livelihood and sustenance.

HB 51 is exactly the *wrong* direction for Alaska on issues of water quality. While we have many serious concerns with this bill, we would like to highlight two of the most problematic:

- HB 51 would not allow Alaska to set water quality standards based on multiple use compatibility which is required by the federal Clean Water Act. This is absolutely unacceptable and inappropriate for Alaska in that it grants preferential treatment to industrial polluters *over* fishing if a conflict occurs.

- HB 51 limits Alaska's water quality standards to meeting the weakest standard in the nation by preventing establishment of more stringent standards in any situation.

In short, HB 51 jeopardizes the health and welfare of all Alaskans, particularly our members who rely on healthy waters for their livelihoods. *We urge you to oppose this bill and also to oppose HB 128* - a similar bill in nature that has been directed through the House Resources Committee. Alaska's coastal economies are directly dependent on the health of our waters, and to support this bill is nothing short of turning your back on all of those constituents and citizens.

Thank you for your consideration of our comments.

Sincerely,

Steve Ganey
Project Coordinator

cc: House Finance Committee
Governor Tony Knowles
All members of the State House and Senate

People throughout Alaska working to protect the health and diversity of our marine ecosystems

ALASKA STATE LEGISLATURE
House of Representatives

COMMITTEE ASSIGNMENTS:

LABOR & COMMERCE COMMITTEE, CHAIRMAN
SPECIAL COMMITTEE ON OIL & GAS, MEMBER
JUDICIARY COMMITTEE, MEMBER
CORRECTIONS BUDGET SUBCOMMITTEE, MEMBER
ADMINISTRATION BUDGET SUBCOMMITTEE ,MEMBER
HESS BUDGET SUBCOMMITTEE, MEMBER

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JUNEAU, AK 99801-1182
PHONE: (907) 465-4968
FAX: (907) 465-2040

Representative Norman Rokeberg

Letters of Support
HB 51
Distributed After Distribution Of Bill Packet

FAIRBANKS GOLD MINING, INC.

a subsidiary of

AMAX GOLD INC.

FORT KNOX MINE

February 25, 1997

Honorable Norman Rokeberg
Alaska House of Representatives
State Capitol
Juneau, Alaska 99801-1182

Dear Representative Rokeberg:

You had asked for Fairbanks Gold Mining's position on House Bill 51. We support it, and we also support House Bill 128 as introduced by Representative Hudson. We believe it is good public policy for the Alaska legislature to provide direction to state agencies such as the Department of Environmental Conservation (DEC).

AS46.03.870, which is intended to provide direction to DEC on water quality issues, is too vague, thereby, if effect, authorizing DEC to set policy. Thus, more guidance is needed from elected officials, and HB51 would do that.

As we have discussed with you, it would enhance the bill to have a definitions section added at the appropriate time.

Sincerely,

Stephen A. Lang
General Manager

P.O. Box 73726, #1 Fort Knox Road, Fairbanks, Alaska 99707-3726 USA
Telephone (907) 488-4653 Facsimile (907) 490-2290

PLACER DOME U.S. INC.
DONLIN CREEK PROJECT
5011 JEWEL LAKE ROAD, SUITE 205
ANCHORAGE, ALASKA 99502
(907) 243-1957
FACSIMILE (907) 243-6628

FEB 1 0 1997

February 6, 1997

Representative Norm Rokeberg
State Capitol
Juneau, Alaska 99801-1182

Representative Rokeberg:

On behalf of Placer Dome U.S. Inc., I would like to thank you for taking the time to meet with Joe Danni, Dave Parish and me on January 14 and allowing us to provide you with a brief update of our Donlin Creek exploration activities. As we discussed, we cannot say whether or not we have a gold mine at this time, but we are very encouraged by our results, and will continue to invest exploration dollars in the project during 1997.

It was encouraging to hear the support for the mining industry in Alaska and gratifying to hear that our hiring programs are a benefit to the area.

We feel the single most important legislative issue facing our project is the need for acceptable, workable and defensible modifications to the existing water quality standards.

Once again, thank you.

Sincerely,

Stanley T. Foo
Placer Dome U.S. Inc.
State Manager, Alaska

P.S. - My family and I are very excited about relocating to Alaska in 1997.

cc J. Danni-PDUS Vice President of Human Resources and Public Affairs

Fairbanks North Star Borough **Assembly**

809 Pioneer Road P.O. Box 71267 Fairbanks, Alaska 99707-1267 907/459-1000
Fax 907/459-1224

March 18, 1996

Mr. Al Vezey, Representative
Alaska State Legislature
State Capitol (MS 3105)
Juneau, Alaska 99801-1182

MAR 18 1996

Dear Representative Vezey:

Enclosed for your information is a copy of Fairbanks North Star Borough Resolution 96-022, recently adopted by the Assembly.

The resolution addresses the EPA's recent proposal for changing the National Pollutant Discharge Elimination System permits.

I would call your attention to the third page which expresses the most fundamental problem in government. We have jumped track from our constitutional foundation by delegating the authority to create law to unelected bureaucracies.

Your efforts to return us to our constitutional foundations are greatly appreciated. It is time the legislature re-assert its duty to make law. The bureaucracy does not govern us. It is there to serve the people, comply with the law of the elected representative, and perform in an advisory capacity when the legislature is crafting law.

Please alert others in the legislature of our resolution, particularly any committees which will debate your proposed legislation.

Sincerely,

Bob

Bob Logan, Assemblymember
Fairbanks North Star Borough

Enclosure as stated
Faxed 3/18/96, original mailed

Post-it® Fax Note 7671	Date 3/18	# of pages ▶ 4
To Rep. Al Vezey	From Bob Logan	
Co./Dept.	Co. FNSB Assembly	
Phone #	Phone #	
Fax #	Fax #	

Dist. by Rep. Vezey

By: Bob Logan
Ladd McBride
Hank Bartos
Larry Hackenmiller
Dan LaSota
Karen Parr
Jay Quakenbush
Paul Chizmar
Cheryl Kilgore

Introduced: 03/14/96
Amended: 03/14/96
Adopted: 03/14/96
Immediate Reconsideration
Failed: 03/14/96
Adopted: 03/14/96

RESOLUTION NO. 96-022

A RESOLUTION OPPOSING THE DRAFT ENVIRONMENTAL PROTECTION AGENCY'S MODIFICATIONS OF A GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES, AS IT RELATES TO ALASKA

WHEREAS, the Environmental Protection Agency (EPA) has issued draft NPDES General Permit (GP)modifications and is currently accepting public comment; and

WHEREAS, the draft GP is a substantive change to the existing GP because of its impact on existing GP holders, expanded application to new operators and new reporting rules; and

WHEREAS, the draft GP contains unrealistic restrictions including prohibiting moving an outfall location during the mining season, and requiring a minimum 1,000 foot separation distance between dischargers having modified turbidity limits; and

WHEREAS, there is no scientific basis for requiring an arsenic level of 0.18 ppb as proposed in the draft GP. EPA headquarters in Washington DC does not support this level and has already approved arsenic levels of 50 ppb in at least 25 states. To impose this requirement only on Alaska placer mines is arbitrary and capricious; and

WHEREAS, the draft GP includes reporting requirements for arsenic levels that are below detection, and then can charge the miner civilly and/or criminally if arsenic is found. Also, the levels are in conflict with requirements accepted by EPA headquarters; and

WHEREAS, the draft GP assumes "0" for background levels of arsenic and turbidity which is seldom the case. The current GP assumes actual background; and

WHEREAS, the draft GP is in conflict with and seeks to override state regulations which allow mixing zones; and

WHEREAS, for the first time this draft GP requires that all dredgers have an NPDES permit and stipulations of this draft GP are so onerous that no dredge miner will qualify for a GP. The proposed changes will add between 1,000 and 2,000 new permittees, all of which will be forced to have an individual permit. Because of the otherwise minimal impact, these miners are not required to have any other permit. This proposed change is without scientific basis and is a violation of due process. The draft GP will not only increase the number of individual permits but will increase permit processing costs rather than reducing the costs which was the purpose of the new GP; and

WHEREAS, the Forty-mile River and some other areas surrounded by "Wild & Scenic River" designations, are state-owned navigable waterways and not a Wild & Scenic River as envisioned in the draft GP. It is arbitrary and capricious to require a different standard for this state river or any other river or stream unless there is scientific support for those standards. To date, no such support has been offered; and

WHEREAS, EPA does not have the people to process the new Gps or the Ips that will be generated by the requirements contained in the draft GP. Also, there is not time for EPA to review all existing Gps, publish them, and still issue them in time for the upcoming mining season; and

WHEREAS, economic damage from these restrictions will be felt in commercial placer mining and all related support industries as well as in recreational mining which is a resident and tourist activity.

NOW, THEREFORE, BE IT RESOLVED that the Fairbanks North Star Borough Assembly respectfully requests the Environmental Protection Agency to (1) withdraw from the settlement; (2) discard the draft GP; and (3) hold public hearings in each state of Region 10 (including at least two locations in Alaska) before any other draft GP is included in a settlement agreement.

BE IT FURTHER RESOLVED that this arbitrary and capricious action demonstrates to our Congressional Delegation that it is time to take regulatory authority away from nonelected bureaucracies and place the authority to write law where it belongs under the constitution. . . with those who are elected.

BE IT FURTHER RESOLVED that copies of this resolution shall be sent to the Honorable Bill Clinton, President of the United States of America; Carol Browner, Administrator, United States Environmental Protection Agency; Tim Hamlin of the United States Environmental Protection Agency, Region 10; all members of Alaska's Congressional Delegation; the Honorable Tony Knowles, Governor, State of Alaska, the Honorable Michele Brown, Commissioner, Alaska Department of Environmental Conservation and all members of the Interior Delegation.

PASSED AND APPROVED THIS 14TH DAY OF MARCH, 1996.

Cheryl Kilgore
Presiding Officer

ATTEST:

Mona Lisa Drexler, CMC/AAE
Municipal Borough Clerk

Ayes: Parr, Hackenmiller, Logan, Bartos, McBride, Quakenbush, LaSota, Chizmar and Kilgore
Noes: Layne St. John

0-LS0091\T
Lauterbach
2/17/97

Adopted
2/18/97

CS FOR HOUSE BILL NO. 51( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTIETH LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVES ROKEBERG AND KELLY, Foster, Hodgins, Vezey, Bunde, Cowdery, Mulder, Kohring, Williams

A BILL

FOR AN ACT ENTITLED

"An Act relating to water quality and the procedures required to implement certain federal regulatory changes."

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

*** Section 1.** FINDINGS AND INTENT. The legislature confirms that it is the policy of the state to implement water quality laws based on scientific and technical evidence. The legislature specifically requests that state agencies possessing the necessary expertise to implement AS 46.03.085 - 46.03.088, enacted by sec. 3 of this Act, coordinate their efforts to enable cost efficiencies in adopting regulations that encourage the creation and retention of jobs for Alaskans and the economic development of the state's natural resources consistent with the public interest. It is the legislature's intent that Alaska's water quality regulations be adopted and implemented in a credible manner, be based on scientifically measurable criteria, and be economically feasible to comply with. The people of Alaska express their will through the legislature, and regulations implement legislative action.

*** Sec. 2.** AS 46.03.050 is amended by adding a new subsection to read:

copy on file

(b) The department may continue to investigate the feasibility of securing federal approval under 33 U.S.C. 1342(b) of the state's permit program for discharges into navigable water so that the department has authority to administer the national pollutant discharge elimination system in the state in lieu of the federal permit program otherwise applicable to the state under 33 U.S.C. 1342(a). Nothing in AS 46.03.085 - 46.03.088 may be interpreted to prevent the department from continuing its effort to secure approval under 33 U.S.C. 1342(b).

* Sec. 3. AS 46.03 is amended by adding new sections to read:

Sec. 46.03.085. Water quality standards. (a) In adopting and applying water quality standards, the department, consistent with 33 U.S.C. 1251 - 1376 (Clean Water Act),

(1) shall ensure that the standards are sufficient to protect human health and propagation of fish and wildlife;

(2) shall consider reasonably available information on the background condition of bodies of water, including the presence of naturally occurring pollutants, such as arsenic;

(3) shall use scientific justification to develop water quality standards that can be reliably measured;

(4) may not require water discharged by a user to be of a higher quality than the background condition of the water receiving the discharge; if the available evidence reasonably demonstrates that the background condition of a body of water does not meet the standards contained in the water quality criterion applicable to that water under regulations of the department and the background condition maintains and protects the existing uses of the water, then the background condition of that body of water constitutes the criterion that must be met by a discharge into that body of water; and

(5) shall provide procedures for permitting mixing zones in state bodies of water under regulations adopted by the department.

(b) Except when setting standards under AS 03.05.011(a) for shellfish growing areas, as defined in the national shellfish sanitation program manual of operations published by the Food and Drug Administration, the department may adopt a water

quality standard or other regulation related to water quality that is more restrictive than applicable federal water quality criteria or regulations only after following the procedures in AS 46.03.087(b).

(c) Notwithstanding AS 44.62.230, a person may submit a written request to the department to amend the state's water quality standards, criteria, or other regulations to incorporate a reduction in or elimination of a federal water quality standard, criteria, or other regulation. The request must state clearly and concisely the state and federal standard, criteria, or regulation in question and provide the department with the reasons and basis for the requested amendment. Within 90 days after receiving the request, or by another date mutually agreed on by the applicant and the department, the department shall either propose regulations to incorporate the reduction or elimination of the federal provision or initiate the procedure required under AS 46.03.087(b). If, following the procedure under AS 46.03.087(b), the department is unable to make the written findings required under AS 46.03.087(b)(3), the department shall propose regulations that amend the state's water quality standards to incorporate the reduction in or elimination of the federal water quality criteria or regulations.

(d) Except as otherwise provided in AS 46.03.087, the measurement of constituents other than sediment to determine whether a permittee is in compliance with permit limitations based on water quality shall be by methods approved in writing by the United States Environmental Protection Agency or by substantially equivalent methods approved by the department.

(e) Except as otherwise provided in AS 46.03.087, the measurement of sediment to determine whether a permittee is in compliance with permit limitations based on water quality shall be by the volumetric Imhoff cone method for settleable solids. However, this subsection may not be construed to limit the department's authority to adopt water quality criteria for total suspended solids to meet United States Environmental Protection Agency requirements.

Sec. 46.03.087. Special procedures for certain water quality regulations. (a) The department may, after following the procedures in this section, adopt a

(1) water quality standard or discharge standard that is more restrictive

than applicable federal water quality criteria or discharge standards;

(2) water quality standard or discharge standard for which there is no corresponding federal water quality criteria or discharge standard; or

(3) regulation that allows the use of a method that is not substantially equivalent to methods approved by the United States Environmental Protection Agency for the measurement of constituents to determine whether a permittee is in compliance with permit limitations related to water quality.

(b) Before adopting a standard or regulation governed by (a) of this section, the department shall

(1) make available to the public, at convenient locations, copies of the proposal and the findings of the department that describe the basis for the proposal;

(2) consider and prepare a written finding assessing the economic and technological feasibility of the proposal; and

(3) find in writing, as applicable, that

(A) biological, chemical, and physical conditions or discharge characteristics in the area of the state or at the particular site where the standard or regulation applies reasonably require the water quality standard, discharge standard, or method of measurement to protect human health and welfare or propagation of fish and wildlife; and

(B) biological, chemical, and physical conditions or discharge characteristics are significantly different in that area of the state or at that particular site from those upon which the corresponding federal criteria or regulations are based.

Sec. 46.03.088. Definition of "background condition." In AS 46.03.085 - 46.03.087, and in regulations of the department that relate to water quality, "background condition" means the biological, chemical, and physical conditions of a body of water outside the area of influence of the discharge under consideration. When the department performs background sampling to determine a background condition during an enforcement action, the department shall measure conditions that are upslope or outside the area of influence of the discharge. If several discharges to a body of water exist and an enforcement action is being taken, the department's

background sampling shall measure conditions immediately upslope from each discharge.

* Sec. 4. TRANSITIONAL REVIEW OF REGULATIONS. (a) The Department of Environmental Conservation shall, during the triennial review process of regulations that is required under 33 U.S.C. 1313(c) (Clean Water Act), review its water quality regulations that are in effect on the effective date of this Act in order to determine if they comply with federal requirements and are not more stringent than applicable federal regulations. If the review indicates that there are state regulations that are more stringent than applicable federal regulations, the department shall determine whether it could justify those regulations under the requirements of AS 46.03.087(b)(3), enacted by sec. 3 of this Act. If the department determines that it cannot meet the requirements of AS 46.03.087(b)(3), the department shall adopt the necessary revisions to the regulations. It is the legislature's intent that the department complete its review of all regulations governed by this subsection and its adoption of all necessary revisions required under this subsection within four years after the effective date of this section.

(b) The Department of Environmental Conservation shall, by January 31, 1999, and annually thereafter until all of the state water quality regulations in effect on the effective date of this Act are reviewed, prepare a written report on the status of the department's review and revisions required under (a) of this section. The department shall submit the report to the governor and notify the legislature that the report is available.

Handout — 2/19/97 testimony

DECLARATION OF DICK MYREN

I, Dick Myren, do declare as follows:

1. I am a retired fishery research biologist from the National Marine Fisheries Service (NMFS) laboratory located at Auke Bay, Alaska. I received a general doctorate degree from Cornell University in 1964 under Dr. John Barlow, Professor of Oceanography. My doctoral dissertation was on pollution in a Long Island, N.Y. estuary involving biological oceanography. Prior education included two years in graduate school at the University of Washington School of Fisheries with several courses in physical and chemical oceanography. Employment since my doctorate was primarily in baseline monitoring studies at Port Valdez in conjunction with the Trans-Alaska Pipeline and the tanker deballist facility. I have one major publication on these studies and one in draft at the NMFS Auke Bay laboratory.

2. On the morning of March 18, 1992, I called Tom Kessler of Kessler and Associates, the Forest Service's oceanography consultant for the EIS, to question him about his work on the mixing zone and oceanography near Point Sherman, Lynn Canal. He agreed the calculation on page 5 of Technical Memorandum #4, Lynn Canal Flushing and Submarine Waste Water Discharge, Jan. 4, 1992, was wrong. We agreed that the flushing rate as he defined it, and as calculated, was in error by a factor of 10. The 20 day flushing rate should have been approximately 200 days, and the 12 day rate should have been approximately 120 days. These figures are derived simply by dividing 65,000,000,000 cu. meters by 4,000 cu. meters/sec. and by 12,000 cu. meters/sec.

3. The incorrect flushing time of 20 days is also quoted in the FEIS on page 4-39, and is used as the basis for the calculations in Table 4-16 on page 4-40.

Dated this 19th day of March, 1992.

Dick Myren

Enclosure (3)

State of Alaska

Office of the Governor

TONY KNOWLES
Governor
P.O. Box 110001
Juneau, Alaska 99811-0001

NEWS RELEASE

Bob King
Press Secretary
Claire Richardson
Deputy Press Secretary
907-465-3500
FAX: 907-465-3533

FOR IMMEDIATE RELEASE: January 24, 1997 97-027

KNOWLES APPLAUDS STRONG GROWTH IN MINING

Receives Alaska Minerals Commission's 1997 Report

Governor Tony Knowles underscored his commitment to the state's mining industry today when he received the 1997 Alaska Minerals Commission report highlighting a third consecutive year of strong growth since he took office.

"New mines are coming on line around the state, especially in rural Alaska, and Alaskans are filling lots of new jobs," Knowles said. "My priority is creating public-private partnerships that improve the economic and regulatory climate for environmentally sound mining efforts that result in more and better jobs for Alaskans."

The mining year was highlighted by the commissioning of a new mine at Fort Knox near Fairbanks and the construction of the Illinois Creek Mine near Galena. Together the mines will employ about 485 workers and are expected to produce about 420,000 ounces of gold each year.

Alaska Minerals Commission chairwoman Irene Anderson thanked Knowles for taking action on recommendations made by the commission last year. "The continued funding of the airborne geophysical surveys is just one of the legislative and administrative actions that have contributed significantly to continued strong growth of the mining industry," Anderson said.

Some of the commission's recommendations for 1997 include the state assuming control of a federal program monitoring the discharge of pollutants into streams, continued investment in aerial mapping of Alaska's mineral resources, and support of the Alaska Mineral and Energy Resource Education Fund.

-more-

"The growth of high-paying mining jobs combined with the continued protection of our environment shows that the relationship between my administration and the mining industry is working very well," Knowles said. "We're not only creating jobs by developing our resources, we're doing it right."

Commerce Commissioner William Hensley, whose staff provided administrative and professional support to the Alaska Minerals Commission says it is recommending that the state should take control of the federal National Pollutant Discharge Elimination System program to simplify the permit process.

"At present, a federal agency based in Seattle runs the program. The commission believes the process would be more efficient if it was operated by Alaskans. The water quality standards would remain subject to federal approval," Hensley said.

Another area the commission would like to see changes in is the airborne surveying of Alaska's geophysical features. Up until now, efforts have been short term.

"The commission feels strongly that mapping should be institutionalized rather than based on annual appropriations," Hensley said. "Competition for mining investment dollars is fierce and some countries have been mapping for years. They understand that if you don't have the information you can't play in the mining game."

During today's presentation of the report, Knowles pledged to continue working to maintain the positive trend in Alaskan mining activity and told commission members that he and his staff would carefully examine the 1997 recommendations.

-30-

Radio stations: For actualities, call 1-800-478-5669, in Juneau, call 465-5213.

Attachment 2/19/97

Alaska Wilderness Recreation & Tourism Association

P.O. Box 22827
Juneau, AK 99802
Phone (907) 463 3038
Fax (907) 463.3280
E mail awrta@alaska.net

February 20, 1997

House Finance Committee Members

Dear Sirs:

The Alaska Wilderness Recreation and Tourism Association (AWRTA) is a trade association representing 300 travel and tourism related businesses across Alaska. Our members share a common concern for the quality of Alaska's natural environment and resources, which are the basis for their businesses. Alaska's reputation and image as pristine and unspoiled is what attracts visitors, and is becoming increasingly valuable in a world where these qualities are constantly threatened.

We are extremely concerned by the proposals made in H.B. 51. The bill lowers water quality standards and weakens the state's ability to protect Alaskans' health and economic interests in clean water.

The bill makes the dirtiest uses of water the dominant uses. It means that the state can no longer apply the multiple use provisions of the Clean Water Act to meet the needs of industries that rely on clean water in setting water quality standards. This will affect not only tourism uses, including sectors dependent on sport-fishing and wildlife viewing, but also commercial fishing.

H.B. 51 also imposes new, confusing, and costly requirements that shift the burden of ensuring water quality from the industrial users who want to reduce it, to the state and the public, including those of us who rely on clean water for our livelihood.

We are particularly concerned about the message that this type of legislation sends about Alaskans' stewardship of its its natural resources and environment. At a time when other states and countries around the world are wrestling with how to ensure safe water supplies, our legislators are creating new threats to ours. And while the tourism and commercial fishing industry spend huge sums to market Alaska as a place where clean water and a pristine environment mean the highest quality products and experiences, the legislature is considering legislation that sends the opposite message.

Please withdraw this flawed bill. Let all affected industries and the public continue to work with state resource managers to develop regulatory standards that protect our waters and all users' interests in them.

Sincerely,

Steve

Steven Behnke
Executive Director

Alaska Environmental Lobby, Inc.
P.O. Box 22151 Juneau, Alaska 99802
Phone: 907-463-3366
Fax: 907-463-3312

HB 51 - Twentieth Legislature

"An act relating to the Department of Environmental Conservation"

Clean water is critical to the economic prosperity and health of Alaskans. Unlike the majority of states, Alaska enjoys a reputation for having pristine waters. Resource extractive industries in Alaska should be willing to meet high water quality standards, designed to protect our pristine waters, rather than to underwrite legislative attempts to weaken our standards. The Alaska Environmental Lobby is opposed to this bill because it would:

- jeopardize the health and welfare of Alaskans and their ability to protect their water resources by lowering Alaska's water quality standards to the lowest level of standards nationwide,
- lead to greater confusion, delays, and litigation in the permitting process,
- violate a basic principle of the Clean Water Act by ignoring the concept of multiple users when setting water quality standards,
- introduce a definition of "background condition" that would make polluted water the standard for future discharges,
- require DEC to deal with new, time-intensive, confusing procedures for administering water quality standards, without the benefit of sufficient additional funding.

At a time when Alaskans demand state control over the state's natural resources, HB 51 would hand over the power to determine the quality of Alaska's waters to the federal government. At a time when Alaskans are attempting to convince the rest of the nation of our good stewardship of federal lands, such as ANWR and NPR-A, HB 51 would show the nation how willing we are to compromise our water quality to placate industry. The state's unique attributes that Alaskans value so highly - our abundant fish runs, our rich estuaries, our cold, clean streams - must be protected by unique standards drafted by professional resource managers in concert with the industrial interests within the state and with over-sight by all concerned Alaskans.

Susan E. Schrader, Executive Director
2/17/97

Patty Ginsburg
RCAC

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3

To Pauline	From ANC
Co. (H) LIN	Co.
Dept.	Phone # 258-8111
Fax # 465-2278	Fax #

RCAC on HB 51

• The Regional Citizens' Advisory Council of Prince William Sound (RCAC) is an independent non-profit corporation formed after the Exxon Valdez oil spill. Our mission is citizens promoting environmentally safe operation of the Valdez Marine Terminal and associated tankers. RCAC advises Alyeska Pipeline Service Co., crude oil shippers, regulatory agencies and the public on ways to prevent oil spills, improve spill response capability, and otherwise mitigate the environmental impacts of the terminal and tankers.
RCAC's 18 member organizations include communities impacted by the 1989 Exxon Valdez Oil Spill, as well as commercial fishing, aquaculture, Native, recreation, tourism and environmental interests.

• This bill significantly changes one of the most important aspects of environmental law in Alaska. We urge you to slow down and recommend referral to the Resources Committee. Alaskans care about water quality. We urge you to give affected communities, [illegible] and concerned citizens the time and opportunity to analyze and understand this bill. Please don't decide this public policy until the public has had a chance to tell you what they think.

• Current water quality standards emphasize pollution prevention. HB 51 moves the emphasis away from prevention, to a wait and see approach. Worry about the damage after it's done.

• This bill puts a much higher priority on SOME types of jobs. It relegates certain economic resources – fisheries and a spectacular environment so important to tourism – to a distant second. Under this bill, state regulators

would have to prove fish are dying in order to set standards higher than the federal minimum. Under this bill, it's not enough that a pollutant may be wreaking havoc on the reproductive cycles of certain fish. They have to die before ADEC could set higher standards.

• This removes the very flexibility that Alaskans have always insisted on to manage their own affairs. Why would we want to be bound only by federal standards? We have unique circumstances, challenges and problems in Alaska. We must retain the flexibility to address site-sepcific needs and issues, and to do so with common sense and regard for the interests of all Alaskans.

• For the past two years, RCAC has been participating in a cooperative working group with EPA, ADEC and Alyeska on a new federal discharge permit for Alyeska's ballast water treatment facility. After two years, we have consensus of citizens, regulators and the regulated industry. Yes, it's hard work. Yes, it's complicated and frustrating at times. But it works. And it's a good way to avoid lawsuits and bitter fighting. And it's a good way to balance economic, social and environmental needs of a complex world. HB 51 would throw us back to the dark ages.

• The ballast water treatment facility at the Valdez Marine Terminal ~~is a unique plant. It~~ discharges an average of 16 million gallons of ~~oily saltwater~~ effluent into Port Valdez every day. Among the water quality standards used here is a limit on total aqueous hydrocarbons. It's a state standard with no federal equivalent. In theory, HB 51 would allow the state to set its own standards where no federal standards exist, but the burden of so-called 'scientific proof' is set so high that we would likely see no limits at all. How

then do we protect Port Valdez from oil-containing discharges such as the recent one from the Alyeska ballast water treatment plant?

• Alaska is one of the few states that has not been delegated to administer the federal National Pollutant Discharge Elimination System permit program. RCAC has no position on who should administer the program. But it's absolutely imperative that ADEC have adequate funding to do the job if indeed the state takes it over.

ALASKA STATE LEGISLATURE
House of Representatives

COMMITTEE ASSIGNMENTS:

OIL & GAS, CHAIRMAN
LABOR & COMMERCE, VICE CHAIRMAN
ADMINISTRATIVE REGULATION REVIEW, VICE CHAIRMAN
HEALTH, EDUCATION & SOCIAL SERVICES, MEMBER
ECONOMIC DEVELOPMENT, MEMBER

INTERIM:
716 WEST 4TH AVENUE, SUITE 640
ANCHORAGE, AK 99501
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SESSION:
STATE CAPITOL
JUNEAU, AK 99801-1182
PHONE: (907) 465-4968
FAX: (907) 465-2040

Representative Norman Rokeberg

SUMMARY OF CHANGES INCLUDED IN PROPSED FIN CS

Listed below are the differences between Version L which passed out of the House Oil and Gas Committee and Version T blank CS for Finance dated 2/17/97:

1. Title change: DELETED CURRENT title AND REPLACED with new title:

   An Act relating to water quality and the procedures required to implement certain federal regulatory changes.

2. Section 1. FINDINGS AND INTENT. Page 1, Line 9 after interest:

   INSERT: "It is the legislature's intent that Alaska's water quality regulations be adopted and implemented in a credible manner, be based on scientifically measurable criteria and be economically feasible to comply with. The people of Alaska express their will through the legislature and regulations implement legislative action.

3. Section 2.

   DELET language in VERSION L on Page 1, Lines 10-12 and inserted language in Findings and Intent on Page I, Lines10-12 on Version T

   DELET AND INSERT: Page 1, Lines 12-15 AND Page 2, Lines 1-5 in Version L:
   TO: Page 4, Line 24 Version T

4. Section 3.

   VERSION L Page 2, Line 7 after "department":
   DELETE: "shall"
   INSERT: "may"

   VERSION L Page 2, Line 11 after 1342(a) .

   DELETE: Lines 11-14

   INSERT: "Nothing in AS 43.03.085 and AS 43.03.88 shall be interpreted to prevent the department from continuing its effort to secure approval under 33 U.S.C 1342(b).

5. Section 4.

VERSION L Page 2, Lines 27, 28, 30 and 31:

DELETE: "natural"
INSERT: "background"

VERSION L Page 3 Lines 10-15:

DELETE: Lines 10-15

INSERT:

"Notwithstanding AS 44.62.230, a person may submit a written request to the department to amend the state's water quality standards, criteria or other regulations to incorporate a education in or an elimination of federal water quality standard, criteria or regulation. The request must state clearly and concisely the federal standard, criteria or other regulation in question and provide the department with the reasons and basis for the requested amendment. Within 90 days after receiving the request, or by another date mutually agreed on by the applicant and the department, the department shall either propose regulations to incorporate the reduction or elimination of the federal provision or initiate the procedure required under AS 46.03.087(b)."

VERSION L Page 4, Lines 19 and 24:

DELETE: "hydrologic"
INSERT: "biological, chemical, and physical"

A1

TONY KNOWLES, GOVERNOR
410 Willoughby Ave., Ste 105
Juneau, AK 99801-1795
PHONE: (907) 465-5065
FAX: (907) 465-5070
http://www.state.ak.us/dec/home.htm

DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER

February 18, 1997

The Honorable Mark Hanley
The Honorable Gene Therriault
Co-Chairmen, House Finance Committee
Juneau, AK 99801

Dear Representatives Hanley and Therriault:

Please accept this letter as the department's written concerns with CSHB51 (O&G) which is presently in your committee. For reasons outlined below, we are strongly opposed to this legislation.

The sponsor's statement for HB 51 says that the intent is to "foster resource development within the State of Alaska while endeavoring to simplify the regulatory climate." The bill does neither. It is ambiguous and several of its provisions are contradictory. Rather than simplifying the regulatory climate, it adds yet another layer of process, process that in turn adds no value to developing well reasoned water quality standards.

Therefore, to the extent the intent of the legislation is unclear, it is hard for us to make any specific recommendations on how to fix it. And, to the extent unclear legislation becomes law, everyone's costs go up. Our limited staff time would be diverted from permitting to sorting out the new, confusing process set out in this bill which would apply in nearly every instance when water quality standards are proposed.

Going through the bill section-by-section, I will highlight some of the major problems we see with the legislation.

Section 1. The Department supports the policy of enabling cost efficiencies, creation and retention of jobs for Alaskans, and the economic development of the State's natural resources. But that development must be done right. Doing it right means setting standards based upon sound science, prudent resource management, and full public involvement. For water quality standards, public health and multiple use compatibility must also be compelling policies.

Section 2. This section applies to all the Department's environmental programs. While the basis of certain aspects of environmental rules is science, several of the authorities modified by this language relate to construction standards, which are not "science" based. In addition, environmental regulations often reflect societal choices, not pure science. Mixing zones are a classic example. They are not based solely on "science" as required by this section rather they are societal choices allowing a portion of a water body to be used by one user only.

This section also creates confusion regarding "background condition." There are terms of art

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This section also creates confusion regarding "background condition." There are terms of art dealing with "background" and "natural condition." These maybe factors when dealing with permitting or compliance but are generally not issues in standards setting. In fact, a serious source of confusion in the bill is the lack of distinction between standard settings, permit issuance, and compliance monitoring. Standards are only one part of a sound water management program. Standards set basic levels of protection for public health, resource values, and other water uses. Permitting sets the terms and conditions for particular discharges to ensure that human or aquatic life health is not harmed and that other water users are not shut out by the first user on the block. Compliance is verifying that the permit terms are being followed.

To apply this, say there's a standard of X parts per billion for a contaminant. This standard was set based upon aquatic life mortality or human health impacts from long-term exposure. An operator discharging into a water body would have to show that his discharge would not cause a violation of that standard in the water body. However, in permitting the discharge the agency can factor in individual circumstances. For example a mixing zone can be designed when there is no feasible treatment technology and no public health or aquatic life risk is posed from the specific discharge into the specific water body. If so, the operator could then have a permit to meet the standard at the edge of a mixing zone rather than at the point of discharge. Finally, in compliance checking, if the standard is exceeded but the source of the exceedance stems from a different operator upstream, enforcement discretion is used so that the downstream water user is not responsible for pollution from an upstream user.

There are other site specific tools to make sure that standards are imposed in a common sense manner. But, trying to deal with industrial permitting and compliance issues through a broad brush downgrading of standards relegates public health and resource protection to incidental and secondary consideration at best.

Section 3. We don't see the need for this section as now written in the committee substitute. At industries' request, the Department is looking into the possibilities of assuming NPDES delegation from EPA. We will be awarding a contract soon to present strategies with costs and possible funding sources. No statutory authority is necessary or needed for us to continue this project.

Enclosed you will find a letter from EPA regarding this bill and indicating that its adoption would likely preclude state assumption of the NPDES program. For all delegations, the EPA -- as do all other federal agencies that delegate programs to the states - looks at a variety of issues, including whether or not the state is "at least as stringent" as the federal rules. To the extent this legislation dictates that water quality standards be set based only on the least stringent "science" without the other considerations in the Clean Water Act including protection for shared users, we would not have a program that was at least as stringent as the federal government.

The reason the federal government has such a requirement -- that the states be at least as stringent -- is to ensure all people in this country have the same basic public health and environmental protection. That is, no matter where you live in the United States, there is a floor below which no state may go. Some programs do allow states to do case-by-case adjustments, just

like our state water quality program allows an applicant to use the natural condition of a water body as a basis for a water quality standard change that is less restrictive than the federal criteria. The Clean Water Act and federal regulations adopted under it were intended solely as a floor to give states the ability to tailor standards to local conditions. Those criteria were not meant -- and in many cases may not be able to be used -- as a mandatory ceiling.

Section 4. Section (a) conflicts with the Clean Water Act, for many reasons. In addition to the reasons stated above, all existing and potential uses are required to be protected in the Act, including protection of propagation of fish, shellfish, wildlife recreation in and on the water, domestic water supply, agricultural, industrial, and navigational uses. This bill ignores that multiple use protection.

We also believe that setting in statute specific measurement tools as is proposed in Section (e) is short sighted. If it is in statute, we have no way to allow someone to use another method if they so desire.

Finally, the heart of this section is to establish special procedures for adopting water quality standards that are more stringent that federal criteria. Testimony on the bill indicates that this idea was taken from Alaska's air statute. There is a critical difference however between the federal Clean Air Act and the Clean Water Act that makes this concept difficult if not impossible to apply to water quality standards. The Clean Air Act gives EPA authority to set ambient air quality standards; the Clean Water Act does not.

As a result, this "special" procedure would come into play nearly every time the state proposed any water quality standard or discharge limit, including mixing zones. Not only will this add cost and time to the entire process but, because of other processes already provided for in state law, it is very likely that the Department will have multiple simultaneous requests. That is, requests could be filed under the process in this bill, requests could be filed under the Administrative Procedures Act (AS 44.62.220) and finally through the triennial review. Effectively, what we would have is the ability for groups with opposing views to use these processes to fight each other and unduly delay projects.

There is no requirement that the person petitioning the department to change the state's standard provide the department with any information upon which to make a decision. Under the Administrative Procedures Act, the petitioner must provide the department with the information needed to make a decision. AS 44.62.230 lays out what any department must do when it receives a petition to adopt, change, or repeal a regulation. It says that within 30 days we must either deny the petition or schedule a hearing. It is unclear to me how this process is flawed to the point that an entirely new, duplicative, and simultaneous process must be created.

Section 46.03.087(b) requires that the department make a finding on the economic feasibility of a given standard. How do we make the determination that something is or is not "economically feasible?" On an individual basis? By industry group? Based on what kind of information? Does the most financially marginal operation set the standards for the state? To require that water quality standards be set by considering only whether the person can afford to comply puts thousands of

Alaskans at risk from detrimental health effects.

We don't know what is meant by the terms "hydrological conditions" or "discharge characteristics." These are not terms of art in the water world. EPA's criteria are based on laboratory toxicity tests. This seems to be another example of confusion between standard setting and permitting.

Section 5. This section requires DEC to continually be on the look out for changes in federal water quality criteria. I question the wisdom in using Department resources in this way, just for the sake of becoming as minimally stringent as possible. When faced with the choice of creating a comparison table from the 6,700 pages of federal guidance, and dealing with actually addressing water quality standards that we know need review, we have chosen the latter.

In summary, setting water quality standards that assure Alaskans' long-term public health and water quality needs is by its nature a complex and intensive process blending science and public policy choices. The science used to justify many positions taken on these issues can be as numerous as the individuals looking at the information. What works for one party will not work for another. That's why it takes continual interactive public discussion to achieve that balance. Reducing water quality standards by blanket statements, adding yet another process to follow, and passing confusing and contradictory legislation will not advance that effort.

Sincerely,

Michele Brown,
Commissioner

Enclosures:
- Water Quality Work Group Package
- EPA Letter dated February 14, 1997

cc: The Honorable Eldon Mulder (w/encl)
The Honorable Gary Davis (w/encl)
The Honorable Richard Foster (w/encl)
The Honorable Pete Kelly (w/encl)
The Honorable Vic Kohring (w/encl)
The Honorable Terry Martin (w/encl)
The Honorable John Davies (w/encl)
The Honorable Ben Grussendorf (w/encl)
The Honorable Carl Moses (w/encl)
Pat Pourchot, Legislative Director, Office of the Governor (w/encl)

ISSUE	APPROACH	TO WQWG	TO COMMISSIONER
petroleum hydrocarbons -- re-evaluate Total Aromatic Hydrocarbon, Total Aqueous Hydrocarbon, and oil & greese standard	Research and report available information, including background of current standards, alternative compound specific data, and other states' criteria.	4/30/97	5/15/97
dissolved metals -- criteria for metals should be based on dissolved meta and bioavailable metal species	Research and report on derivation of EPA criteria, federal guidance, evolution of EPA conversion factors, and bioavailability of dissolve vs. Particulate metals.	3/31/97	4/15/97
reclassification -- define in detail the process and requirements for petitioners to follow	Draft reclassification guidance document for petitioners, including a decision treee and application information.	5/1/97	5/15/97
fecal coliform -- sampling frequency should be changed from 5/month to once/week.	Review origin of fecal coliform sampling requirements in permits and make changes in DEC written guidance on monitoring requirements, as appropriate.	2/3/97	3/5/97
total dissolved solids -- State should re-evaluate the TDS standards	Review TDS information on other states, Canada, DEC paper, and DPA TDS research ... look at differences between WQS and DW regs, review in-state TDS studies ... report results and recommendations for TDS changes to consider regs changes.	5/15/97	6/5/97
compliance schedules -- change regulations to allow DEC and/or EPA to enter into water quality compliance schedules in permits	Review court decisions on need for compliance schedule language i standards and propose language for regulation change.	2/3/97	2/28/97
National Toxics Rule -- Alaska needs to get out from under the NTR	DEC to discuss approaches with EPA and make appropriate request, after conceptual approval given.	12/19/96	letter signed by Commissioner
303(d) Listing -- develop science-based criteria and guidelines for adding and removing streams from the listing of impaired water bodies	Review federal and other states regulations and guidance ... develop guidance document for Alaska.	4/22/97	5/6/97
Arsenic -- State should adopt its own human health criteria	Petition EPA for exemption during interim period of EPA research, allowing Alaska standard to be in effect.	Advised @ 12/19 meeting	ongoing Commissioner discussions w/EPA
acute toxicity -- consider an acute whole effluent toxicity criterion for effluents	Review and report on whole effluent toxicity information and make recommendations for changes.	2/1/97	2/15/97
pH -- re-evaluate the State's pH criteria	Review regulations and resolve discrepancies with State and federal regulations.	2/14/97	3/5/97
non-indigenous species -- address this issue and consider adopting WQS to protect State waters from such a threat	Assemble information about the issue and consult with federal agencies on situation ... make recommendations.	1/20/97	2/21/97

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

REPLY TO
ATTN OF: OW-134

FEB 14 1997

Michele Brown, Commissioner
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Dear Commissioner Brown:

EPA has completed its review of the CS(L) for House Bill 51 (CSHB 51) in response to your request for comments. CSHB 51 would establish a procedure to change State water quality standards that are more stringent than Federal water quality criteria. We have several concerns about how this legislation could affect the Alaska's water quality standards (WQS) program and the likelihood of authorizing the State of Alaska to operate the Federal National Pollutant Discharge Elimination System (NPDES) permitting program. EPA's concerns fall into three categories: inconsistencies/interpretation problems, WQS program problems, and NPDES program problems.

Inconsistencies/Interpretation

The bill contains ambiguous language and inconsistencies with portions of the Clean Water Act (CWA) dealing with WQS and NPDES permitting. Examples of inconsistencies and interpretation problems that are of concern to EPA are highlighted below.

- CSHB 51 § 46.03.087(a)(1) and (2) refer to the adoption of "water quality standards and discharge standards." We are not certain what is meant by the term "discharge standard." Discharge standards could be interpreted to mean effluent limits or effluent guidelines. National NPDES regulations do not allow permit limits that are less restrictive than technology-based effluent guidelines.

- § 46.03.085(b) refers to "other regulation related to water quality." We are concerned about what this phrase may include. Since there are no Federal criteria or regulations for mixing zones and zones of deposit, these NPDES tools could be affected by this legislation.

- § 46.085(c) provides a timeframe during which DEC must amend the WQS to incorporate a reduction or elimination in the federal water quality criteria or follow the procedure in § 46.087(b). There is no explanation of how the reduction or elimination of the criterion is to be justified and how it will be consistent with the CWA or the Federal water quality standards regulations (40 CFR Part 131).

- § 46.03.085(a) states that DEC, in adopting and applying WQS, "shall ensure that the standards are sufficient to protect human health and propagation of fish and wildlife." This provision is not consistent with the CWA. Section 101(a)(2) of the CWA provides for the protection of propagation of fish, shellfish, wildlife, and recreation in and on the water. Section 303(c)(2)(A) of the CWA includes additional uses that WQS should protect: domestic water supply, agricultural, industrial, and navigational uses. Any changes to WQS that are made in accordance with this legislation may not protect all designated uses in the Alaska WQS and the CWA.

Overall, these types of interpretation problems will likely result in some confusion about how CSHB 51 should be implemented and mixed expectations in the regulated community and the public. These kinds of problems will likely contribute to a more resource-intensive water management program.

WQS Program

As you know, any change in a state WQS requires review and approval by EPA. EPA has serious concerns regarding both the process for WQS revision, and the basis for such revisions in §§ 46.03.085(c) and 46.03.087(b). Based on these concerns, it is possible that WQS that Alaska revises under these provisions will not be approvable.

First, we are concerned whether 90 days [see § 46.03.085(c)] provides adequate time for DEC to make scientifically sound decisions, as required by Federal WQS regulations, about whether a WQS change is warranted. Our concerns are heightened by the fact that HB 51 contains no provisions that require those who are requesting the amendment to supply any data or justification to support the need for the change. Since the burden of proof for determining whether a standards change is needed rests with DEC, these decisions may be based on little or no information. Ninety days may not allow DEC to collect adequate supporting data. Additionally, this section of CSHB 51 appears to overlap with existing portions of the Alaska WQS regulations [18 AAC 70.025(d)]. This section in the Alaska WQS regulations already contains a provision that allows the use of "natural conditions" as the basis for WQS changes [18 AAC 70.025(b)] that are less restrictive than Federal criteria and it requires the applicant

seeking the WQS change to provide DEC with the data and information needed to make the determination.

Second, we are concerned that the technical basis in CSHB 51 for any proposed WQS changes is tied to "hydrologic conditions or discharge conditions" [§ 46.03.087(b)]. EPA Federal criteria are based on laboratory toxicity tests and do not necessarily consider hydraulic conditions or discharge characteristics. It is doubtful that a change in a criterion that is based strictly on "hydrologic conditions and discharge characteristics" will be scientifically defensible for protection of all designated uses. Therefore, such changes to WQS may not result in approvable WQS regulations. Where the change is to adopt criteria that are less stringent than the existing criteria, there needs to be a justification that the criteria are adequate to fully protect the use.

EPA is also concerned about how the requirements in Sections 4 and 5 will be implemented. Section 5 of this bill requires DEC to conduct a triennial review and identify State regulations that are more stringent than Federal regulations. The Federal WQS regulations direct States to, "at least once every three years, hold public hearings for the purpose of reviewing applicable water quality standards, and, as appropriate, modifying and adopting standards". Section 4 of CSHB 51 contains provisions that require a 90-day review of individual portions of the Alaska WQS regulations. The 90-day review is triggered by a request to change a State WQS because it may be more stringent than a Federal criterion. It is conceivable that DEC would be responsible for numerous 90-day reviews and standard changes required in Section 4 at the same time that it is required to conduct the triennial review that is contained in Section 5. This would result in a confusing, time-consuming, piecemeal approach to WQS and management of the water quality program.

NPDES Program

EPA Region 10 continues to be interested in authorizing the State of Alaska to operate the National Pollutant Discharge Elimination System (NPDES) program throughout the State. As you know, we have provided DEC a grant for the purpose of conducting an analysis that details both the costs and options for assuming the NPDES program. The results of the analysis should be available in late spring. To obtain NPDES program authorization, the State must demonstrate that adequate resources are available to successfully manage an NPDES program.

In addition, the Alaska Attorney General would need to examine existing state statutes and regulations to determine whether the state has all the necessary legal authorities to operate an NPDES permitting and compliance program. Any missing legal provisions would need to be enacted before the state applies for authorization. Also, EPA would have to be assured

that the state does not have statutes or regulations that are incompatible with authorization.

Sec. 46.03.085(a)(3) of CSHB 51 states that the Department "shall use scientific justification and water quality criteria that can be reliably measured." Some Federal water quality criteria are established at levels below detection (e.g. dioxin). It is not clear if these criteria would be considered to not "be reliably measured." While compliance determinations are based on the minimum level of quantification, permit limits must be established using the water quality criterion value and may be below the detection level. This language could be construed to disallow issuance of permits with appropriate limits and therefore could jeopardize attempts by Alaska to pursue authorization of the NPDES program.

In addition, § 46.03.085(a)(4) states that DEC "may not require discharged water to be of higher quality than the natural conditions of the receiving water." On occasion, technology-based limitations (established either through national guidelines or best professional judgment of the permitting authority) require a discharge to be higher in quality (i.e., meet a higher standard) than the receiving water. This language would contradict the NPDES regulations which require achievement of technology-based limitations without regard for receiving water conditions. Again, this will jeopardize any future State attempts to assume the NPDES program.

Conclusions

We believe that the problems discussed above would create added confusion and inefficiencies in the implementation of Alaska WQS program rather than improved responsiveness and effectiveness. To implement CSHB 51 would require additional time and effort on the part of DEC staff. Yet, the resource-intensive nature of CSHB 51 would not contribute to the development of the capacity needed to assume the NPDES program. Furthermore, certain provisions of CSHB 51 may create legal problems that will jeopardize both approval of State WQS revisions and authorization of the NPDES program.

We appreciate the opportunity to review and provide comments on CSHB 51. If you have any questions about these comments contact me at (206) 553-0422 or Marcia Lagerloef, at (206) 553-0176.

Sincerely,

Chuck Clarke
Regional Administrator

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER

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February 20, 1997

The Honorable Mark Hanley
The Honorable Gene Therriault
Co-Chairmen, House Finance Committee
Juneau, AK 99801

Dear Representatives Hanley and Therriault:

As you requested during the hearing on February 18, we have reviewed the blank committee substitute for HB 51 adopted by the House Finance Committee. Our concerns with this proposal are outlined below. We remain strongly opposed to this legislation.

As a starting point, I think it would be useful to try to explain the difference between "criteria" and "standards" and the respective roles of EPA and the states in establishing water quality standards.

Generally speaking, EPA will not adopt standards and the states will not develop criteria. "Water quality criteria" are scientific information regarding the concentrations of specific chemicals or other pollutants in water which protect aquatic life or human health. In other words, criteria is the amount of pollution a water body can stand before it becomes impaired. Criteria must be used in establishing a water quality standard. EPA's criteria are guidance for states when they establish water quality standards unless a state, through a rigorous scientific process, has developed its own criteria.

"Standards" are legally enforceable state-established requirements that consist of two things; one, the uses a water body should be protected for and; two, the criteria or pollution limits which are necessary to protect those uses. So to have a water quality program based on criteria only completely eliminates the modification of those criteria to the given uses made of a particular body of water.

Section 1. The Department supports the policy of enabling cost efficiencies, creation and retention of jobs for Alaskans, and the economic development of the State's natural resources. But that development must be done right. Doing it right means setting standards based upon sound science, prudent resource management, and full public involvement. For water quality standards, public health and multiple use compatibility must also be compelling policies.

Added to this section is language that water quality regulations be adopted and implemented in a credible manner, a standard to which I hold all of our regulations. This sentence then goes on to say that they must be based on scientifically measurable criteria and be economically feasible to comply with. These last two issues are concerns.

There are two types of water quality criteria and standards -- numeric and narrative. As the name implies, numeric criteria are "measurable" and are expressed as concentrations of chemicals, usually as micrograms per liter (ug/l). Narrative criteria however are expressed as descriptive statements; for example "free from toxic pollutants in toxic amounts." This kind of criteria or standard is used to protect against toxic effects when no numeric concentration is available or the specific chemicals in an effluent cannot be identified. They are also used to protect aesthetic qualities of water and ensure its natural beauty. Narrative criteria and standard, therefore, may not necessarily be "scientifically measurable."

Economical feasibility is also a concern. How do we make the determination that something is or is not "economically feasible?" On an individual basis? By industry group? Based on what kind of information? Does the most financially marginal operation set the water quality standards for the state? To require that water quality standards be set by considering only whether the person can afford to comply puts thousands of Alaskans at risk from detrimental health effects.

Section 2. We don't see the need for this section as written, although we appreciate the support for our ability to assume primacy. At industries' request, the Department is looking into the possibilities of assuming NPDES delegation from EPA. We will be awarding a contract soon to present strategies with costs and possible funding sources. The cost of this contract is not a factor in our fiscal note.

We must note that EPA's letter of February 14, 1997, which was previously provided to the committee, states that EPA views this legislation as a barrier to state assumption of the NPDES program.

Section 3. Section (a) conflicts with the Clean Water Act, for many reasons. In addition to the reasons stated above, all existing and potential uses are required to be protected in the Act, including protection of propagation of fish, shellfish, wildlife recreation in and on the water, domestic water supply, agricultural, industrial, and navigational uses. This bill ignores that multiple use protection.

Section (a)(2) and (a)(4) create confusion regarding "background condition." "Background" and "natural condition" are terms of art. "Natural" is the condition of a water body before human impact. "Background condition" is that which exists after human influence -- which may or may not be the same as "natural". Natural conditions may be a factor in standards setting, and both background and natural conditions may be factors when dealing with permitting and compliance, but they can't be used interchangeably

In fact, a serious source of continued confusion in the bill is the lack of distinction between standard settings, permit issuance, and compliance monitoring. Standards are only one part of a sound water management program. Standards set basic levels of protection for public health, resource values, and other water uses. Permitting sets the terms and conditions for particular discharges to ensure that human or aquatic life health is not harmed and that other water users are not shut out by the first user on the block. Compliance is verifying that the permit terms are being followed.

To apply this, say there's a standard of X parts per billion for a contaminant. This standard was set based upon aquatic life mortality or human health impacts from long-term exposure. An operator discharging into a water body would have to show that his discharge would not cause a violation of that standard in the water body. However, in permitting the discharge the agency can factor in individual circumstances. For example a mixing zone can be designed when there is no feasible treatment technology and no public health or aquatic life risk is posed from the specific discharge into the specific water body. If so, the operator could then have a permit to meet the standard at the edge of a mixing zone rather than at the point of discharge.

Finally, in compliance checking, if the standard is exceeded but the source of the exceedance stems from a different operator upstream, enforcement discretion is used so that the downstream water user is not responsible for pollution from an upstream user. Section (a)(4) as written would allow for successive and cumulative pollution of a water body, effectively limiting the number of users of a given water body. It also conflicts with the Clean Water Act's requirements that when designating uses of a water body and the appropriate criteria for those uses, the state must take into consideration the water quality standards of the downstream users.

There are other site specific tools to make sure that standards are imposed in a common sense manner. But, trying to deal with industrial permitting and compliance issues through a broad brush downgrading of standards relegates public health and resource protection to incidental and secondary consideration at best.

We also believe that setting in statute specific measurement tools as is proposed in Section (e) is short sighted. If it is in statute, we have no way to allow someone to use another method if they so desire.

Finally, the heart of this section is to establish special procedures for adopting water quality standards that are more stringent than federal criteria. Testimony on the bill indicates that this idea was taken from Alaska's air statute. There is a critical difference, however, between the federal Clean Air Act and the Clean Water Act that makes this concept difficult, if not impossible, to apply to water quality standards. The Clean Air Act gives EPA the responsibility to set ambient air quality standards; the Clean Water Act does not.

As a result, this "special" procedure would come into play nearly every time the state proposed any water quality standard or discharge limit, including mixing zones. Not only will this add cost and time to the entire process but, because of other processes already provided for in state law, it is likely that the Department could have multiple simultaneous requests. That is, requests could be filed under the process in this bill, requests could be filed under the Administrative Procedures Act (AS 44.62.220) and finally through the triennial review. Effectively, what we would have is the ability for groups with opposing views to use these processes to fight each other and unduly delay projects.

AS 44.62.230 already lays out what any department must do when it receives a petition to adopt, change, or repeal a regulation. It is unclear to me how this process is flawed to the point that an

entirely new, duplicative, and simultaneous process must be created.

Section 46.03.087(b)(2) requires that the department make a finding on the economic feasibility of a given standard. As stated above, determining "economic feasibility" is problematic at best.

Section 46.03.087(b)(3) requires that we find an area's biological, chemical, or physical condition, or it's "discharge characteristics" reasonably require the proposed standard. EPA's criteria are based on laboratory toxicity tests. This seems to be another example of confusion between standard setting and permitting.

Section 4. This section requires DEC to continually be on the look out for changes in federal water quality criteria. I question the wisdom in using Department resources in this way, just for the sake of becoming as minimally stringent as possible. When faced with the choice of creating a comparison table from the 6,700 pages of federal guidance, and dealing with actually addressing water quality standards that we know need review, we have chosen the latter.

In summary, setting water quality standards that assure Alaskans' long-term public health and water quality needs is by its nature a complex and intensive process blending science and public policy choices. The science used to justify many positions taken on these issues can be as numerous as the individuals looking at the information. What works for one party will not work for another. That's why it takes continual interactive public discussion to achieve that balance. Reducing water quality standards by blanket statements, ignoring the need for multiple uses of water so necessary for our economic development, adding yet another process to follow, and passing confusing and contradictory legislation will not advance that effort.

Sincerely,

Michele Brown,
Commissioner

cc: The Honorable Eldon Mulder
The Honorable Gary Davis
The Honorable Richard Foster
The Honorable Pete Kelly
The Honorable Vic Kohring
The Honorable Terry Martin
The Honorable John Davies
The Honorable Ben Grussendorf
The Honorable Carl Moses
Pat Pourchot, Legislative Director, Office of the Governor

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DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER

February 25, 1997

The Honorable Pete Kelly
Alaska State House of Representatives
Capitol Building, Room 411
Juneau, AK 99801

Dear Representative Kelly:

Your letter of February 22, 1997 identifies a problem with DEC water quality regulations which came to our attention during our recent permitting action for the Cominco Red Dog mine. You make the statement in your letter that "One of the problems in ADEC's regulations is the way 'natural conditions' language is used in 18 AAC 70.025(b). This language allows the use of 'natural conditions' lower than those that would protect uses in 18 AAC 70.020(b), only if the 'natural conditions' fully protect the uses in 18 AAC 70.020(b)." We share your conclusion that current language under 18 AAC 70.025 (b) is not logical when applied in all circumstances, particularly when a waterbody has been misclassified.

We have begun discussions within ADEC on how we could improve our regulations to more rationally address waters with natural conditions that exceed the criteria of 18 AAC 70.020. We are looking at a number of options. One option would be to remove the natural condition provision from 18 AAC 70.025 entirely, and replace it with a new regulation that would presumptively establish natural conditions as water quality standards when they exceed the criteria of 18 AAC 70.020. The new regulation would not require that the natural condition fully protect all designated uses.

In my view, a provision of that sort would be appropriate as an introductory section in our standards, perhaps as an addition to 18 AAC 70.010. That regulation already provides that the standards "specify the degree of degradation that may not be exceeded in a water body as a result of human actions." Obviously ADEC cannot and would not take any enforcement action against a discharger based on the natural condition of the receiving water. Instead, the issue of how to account for impaired natural conditions usually arises when setting effluent limits in a discharge permit. Since EPA writes such permits in Alaska, and also approves any changes to our water quality standards, we intend to include that agency in our deliberation on how best to take natural conditions into account. A quick legislative fix, depending on how it is interpreted by EPA, could prove a detriment to those seeking permits rather than a help.

Your letter requested specific language to correct the standards problem you have identified. I haven't done that because I am not yet sure what the best fix is. We are giving priority to the revision and improvement of our water quality standards and when we have determined the best fix, we will proceed with the change. However, given the mandatory procedures that accompany any rule-making under the

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Administration Procedures Act, I cannot commit to an effective date for a new natural condition regulation during this legislative session. I expect we will have a revised rule in effect during this calendar year.

Again, I thank you for your interest and suggestions. I look forward to a continued productive dialogue on this and related issues.

Sincerely,

Alvin L. Ewing
Deputy Commissioner

cc: The Honorable Eldon Mulder
The Honorable Gary Davis
The Honorable Richard Foster
The Honorable Pete Kelly
The Honorable Vic Kohring
The Honorable Terry Martin
The Honorable John Davies
The Honorable Ben Grussendorf
The Honorable Carl Moses
Pat Pourchot, Legislative Director, Office of the Governor

AE/cm (H:\HOME\CMILLER\EWING\KELLY.WPD)

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DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER

February 25, 1997

The Honorable Mark Hanley
The Honorable Gene Therriault
Co-Chairmen, House Finance Committee
Alaska State House of Representatives
Capitol Building
Juneau, AK 99801-1182

Dear Representative Hanley:

In the interest of ensuring full deliberation on HB 51, I would like to follow up on some issues raised at last week's hearing.

A question arose on how HB 51 shifts the burden of proof from the discharger to the state. Unfortunately, I don't believe my response was either clear or complete. The answer is that the bill imposes upon the department the burden of proving "economics" in standard setting. Economics has never been, nor should be, part of standards setting, although it is a very legitimate consideration in other aspects of water resources management, such as permitting or treatment technology requirements.

Water quality standards are set based upon the science which determines the levels of pollutants a water body can absorb before harm occurs. The Clean Water Act and the federal water quality criteria -- to which this bill requires the state to defer -- are set solely upon science. They do not factor in the costs of compliance whatsoever. In short, standards are science, not economics, based. Yet, HB 51 switches the burden from a wastewater discharger working with the department to meet the protective, science based water quality standards to DEC, to demonstrate that those standards are economic to achieve.

DEC does indeed have responsibility to work with dischargers to find reasonable ways to meet water quality standards and that is where economics and feasibility are valid factors. We have a variety of tools to do that, including mixing zone standards, site specific standards, reclassification procedures and the flexibility to deal with the circumstances where natural conditions exceed standards.

I was also asked what this bill would require DEC to do that it isn't already required to do. There are at least three significant areas. The first is the issue of economic analysis for standard setting that I just described. The second is the requirement for DEC to go through the entire body of federal water quality criteria (over 6,700 pages) looking for instances where state standards could be construed to be more stringent than federal criteria. We think it is a far more useful task to work on

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periodically reviewing and updating standards that we know are in need of re-analysis.

The third new requirement is the proposed AS 46.03.087 (b) (3) finding before DEC can adopt or retain a standard more stringent than the federal counterpart. Since state standards normally apply to the entire state, DEC would have to evaluate the biological, chemical and physical conditions of the entire state, to show both: (1) that the state standard is required to protect humans, fish and wildlife (087 (b) (3) (A)); and (2) those conditions are different from those on which the federal criterion is based.

For example, the state regulates turbidity to protect fish habitat. The federal criterion is a narrative provision limiting effects on photosynthetic activity from increased sediment, while the state standard is numeric and factors in background levels. We consider the federal criterion unusable in Alaska because it doesn't work in shallow lakes and clear streams, and it depends on a seasonal norm that would be hard to determine in variable waters. The transitional review would pick up this standard as more stringent than the federal criteria. To retain the turbidity standard under HB 51, DEC would have to make the proposed .087 (b) (3) finding. The process would be a serious burden on finite department resources to address a standard with which no one has raised a problem. Current law does not place that burden on DEC. Instead, if someone has reason to believe that the turbidity standard is flawed, they can either petition for a regulation change through the Administrative Procedures Act, or seek relief through other means such as site-specific criteria, reclassification, mixing zones, etc.

Finally I would observe that good legislation begins with a clear objective and is based on a sound legal and factual basis. We remain unclear on the objective of HB 51 and I would like to point out two statements made during the hearing that I don't believe have a factual basis.

One testifier stated that several problems affecting small placer miners have gone unaddressed by DEC for a number of years. He provided no specifics, except to say that state regulations require dischargers to put water with high sediment loads coming from glacier fed streams back into the stream cleaner than they received it. That simply is not true. DEC has a regulatory provision that allows consideration of natural background conditions when setting limits in permits. We routinely use that provision and I am not aware of any situation where state regulations have resulted in a permit requiring a discharger to return wastewater to a stream cleaner than natural background.

Regarding natural background conditions Representative Pete Kelly, in a recent letter, pointed out language in DEC's regulations that is problematic in limited circumstances such as the naturally toxic waters in the area of the Cominco Red Dog mine. I have provided committee members with a copy of my response.

Representative Pete Kelly asserted during committee discussions that there are many state requirements that are much more onerous than federal requirements. If that statement is true, I wish someone would come forward and indicate precisely what those requirements are. States have the responsibility under the Clean Water Act (CWA) for establishing water quality standards and cover many areas the federal guidance does not address. However, when states fail to do their job,

according to EPA, EPA will impose criteria, like it did for arsenic. In fact, Representative Kelly used arsenic to attempt to illustrate his point. However, it does not support his assertion. The federal imposition of an arsenic standard which makes no sense for Alaska is precisely why we should not automatically defer to the federal government. The Governor had to petition EPA for relief of that standard and recently learned that the petition was granted.

The department's position remains that HB 51 provides absolutely no help in addressing the standards Alaskans have highlighted as being of most concern. It would, in fact, hinder the aggressive action plan we have underway to address those issues.

Thank you for your thoughtful consideration of our comments.

Sincerely,

Alvin L. Ewing
Deputy Commissioner

Enclosure

cc: The Honorable Eldon Mulder
The Honorable Gary Davis
The Honorable Richard Foster
The Honorable Pete Kelly
The Honorable Vic Kohring
The Honorable Terry Martin
The Honorable John Davies
The Honorable Ben Grussendorf
The Honorable Carl Moses
Pat Pourchot, Legislative Director, Office of the Governor

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

FEB 20 1997

Reply To
Attn Of: AOO

Michele Brown, Commissioner
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Dear Commissioner Brown:

This letter is a follow-up to my February 14, 1997, letter concerning House Bill 51. In re-looking at the proposed legislation, I thought it worth clarifying an additional area of potential confusion in the bill.

The potential confusion concerns the use of the terms "standards" and "criteria" throughout the bill, with these terms sometimes being used in a manner inconsistent with how they are used in the Federal Clean Water Act and the State of Alaska's water quality standards regulation.

According to language in the Clean Water Act and Alaska's water quality standards regulations, water quality standards consist of two parts. The first part is designated beneficial uses, such as "drinking water supply," or "growth and propagation of fish and other aquatic organisms." For any particular waterbody, there are typically a number of beneficial uses designated. The second part of water quality standards is the "criteria" necessary to protect the designated beneficial uses. Criteria are the maximum concentrations of pollutants that can occur in a waterbody without jeopardizing the beneficial uses of the waterbody. An example of a criterion for a marine waterbody with the designated use "growth and propagation of fish and other aquatic life" would be 2.9 micrograms per liter of copper. (i.e., this concentration of copper is the maximum concentration that can be present in a marine waterbody and still ensure the survival and reproduction of fish and other organisms.)

Only when the beneficial uses and the criteria necessary to protect them are combined do water quality "standards" exist. The Clean Water Act gives the responsibility to the states, not to the Federal Government, to adopt water quality standards.

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The Clean Water Act requires the Environmental Protection Agency (EPA) to develop a list of national water quality criteria that are protective of beneficial uses. In developing these numbers, EPA relies on currently available scientific information about the effects of pollutants on aquatic organisms. The scientific basis for each criterion EPA develops is published in a criteria development document. It is important to note that these numbers are not national "standards" or "criteria" that all states must meet. The EPA national criteria merely constitute guidelines that states must consider in adopting criteria as part of their water quality standards. If a state adopts a criterion that is less stringent than EPA's guidelines, the state must provide a scientifically defensible basis for the criterion. Ultimately, EPA must review and approve all revisions to state water quality standards.

This Clean Water Act approach differs markedly from that established in the Clean Air Act for ambient air quality "standards." Please note that the use of the term "standards" has a different connotation under the Clean Air Act than it does under the Clean Water Act.

The Clean Air Act directs EPA to identify and set national standards for pollutants which may reasonably be anticipated to protect public health and the environment. EPA has set national primary and secondary ambient air quality standards for six common air pollutants since 1970 (carbon monoxide, particulate matter, ozone, lead, sulphur dioxide, and nitrous dioxide). Primary standards are designed to protect public health. Secondary standards are designed to protect the public welfare and the environment.

In order to set these standards, EPA must first conduct an extensive scientific and technical assessment of the pollutant of concern. This review is summarized in a "criteria document." The criteria document puts forth what is known about the health effects of an air pollutant.

Based on the health effects documented in the criteria document, EPA then sets a national ambient air quality standard that is the same for any location in the United States. For example, the primary and secondary standard for carbon monoxide is 9 parts per million in all 50 states.

In summary, an ambient air quality standard developed under the Clean Air Act differs from a standard under the Clean Water Act in two important ways. First, the air quality standard is more analogous to a water quality criterion, which is only part of a water quality standard. Second, a national ambient air quality standard is a planning tool that states use to set

emission limits and other air quality control requirements that sources must meet and that assure attainment and maintenance of the national ambient air quality standards. In contrast, EPA's water quality criteria are unenforceable guidelines that states use in developing their own water quality standards.

Without clarification and proper use of these terms, additional inconsistencies and interpretation problems above and beyond those already mentioned in my February 14 letter would result.

Again, we appreciate the opportunity to provide comments on House Bill 51. If you have any questions about these supplemental comments, please feel free to contact me at (206) 553-0479, Rick Albright at (907) 271-3422 or Marcia Lagerloef at (206) 553-0176.

Sincerely,

Chuck Clarke
Regional Administrator

Resource Development Council
for Alaska, Inc.

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
(907) 276-0700 Fax: (907) 276-3887 e-mail: rdc@aonline.com

Legislative and Administrative Packet

Resource Development Council for Alaska, Inc.
Board of Directors' visit to the Capitol
February 19th - 20th, 1997
Juneau, Alaska

Includes latest:

- RDC Legislative Matrix
- RDC year-at-a-glance breakfast meetings
- Summary: RDC Legislative and Administrative Priorities
- RDC Issues & Activities Update
- RDC letter to DEC regarding Water Quality Change at Kensington Mine
- RDC letter to Gov. Knowles on National Toxics Rule
- RDC Letter of Support for SJR 9
- RDC testimony on SB 35/ HB 23
- RDC comments on CSHB 51
- RDC comments on ADEC's actions at Red Dog and Ikalukrok Creek
- RDC Journal of Commerce article on Water Quality
- AMEREF at-a-glance
- RDC Board Members in attendance

Resource Development Council
Legislative Update

Legislation of Interest to RDC and its members *denotes action since last report

Bill #	Land & Water Management
HB 29	Oil & Gas Bonding. by Rokeberg. reducing the amount for which proof of financial responsibility must be provided to DEC in conjunction with the operation of certain onshore oil & gas exploration and exploration facilities. Referred to Oil & Gas and Resources.
HB 46	Mining Claims on Public Lands. by Kelly and Therriault. Passed House 37- 3 on 2/7/97. Referred to Senate Resources.
HB 51	Water Quality Standards. by Rokeberg. Kelly and Foster. et al. changes water quality discharge standards. RDC testified on HB 51 on 1/23/97. Referred to Finance. *(Hearings scheduled for 2/18 & 2/20 @ 1:30 p.m.).*
HB 128	Water Quality Standards. by Hudson. relating to water quality and establishing the Water Science Oversight Board. Referred to Resources & Finance. *(Hearing scheduled for 2/18 @ 1 p.m.).*
HCR 1	North Slope Natural Gas. by Barnes. Phillips. et al. encourages the state to provide a stable and appropriate fiscal & regulatory environment to promote the Alaska LNG project. Passed the House on 1/29/97. Passed the Senate on 2/6/97. Transmitted to Governor on 2/10/97.
HJR 12	Leases in NPRA. by Green. Hodgins et al. urges the Secretary of the Interior to conduct competitive oil & gas lease sales within NPRA. Passed House 37- 3 on 2/7/97. Referred to Senate Resources. *(Hearing scheduled for 2/19 @ 3:30).*
	Transportation/ Access
HB 23	Access. by Masek. relating to traditional means of access. Refers only to Title 38 public land. Referred to Resources and Finance. RDC testified on HB 23 on 1/23/97.
SB 35	DNR Access. by Green. Pearce and Taylor. relating to traditional means of access for traditional recreational use, and establishes Chilkat State Park. Refers only to Title 41 park land. Referred to Resources & Finance. RDC testified on SB 35 on 1/23/97. *(Hearing scheduled for 2/20 @ 8:00 a.m.).*
SJR 13/ HJR 20	RS 2477 Rights of Way. by Halford. Phillips & Taylor. endorses continuing efforts to preserve and protect the original meaning of RS 2477. Referred to Resources. HJR 20 referred to Resources. *(Hearing scheduled for 2/20 @ 1 p.m.).*
	Other Issues
HB 28	Repeal Coastal Zone Management Program. by Therriault and Kelly. repeals the CZMP and the Alaska Coastal Policy Council. Referred to Resources & Finance. *(Hearing scheduled for 2/20 @ 1:00 p.m.).*
HB 58	Civil Liability (Tort Reform). by Porter & Cowdery. Referred to Judiciary and Finance. *(Hearings scheduled for 2/19 & 2/21).*
HJR 2	Legislative repeal regulations. by Rokeberg and James. a constitutional amendment that allows for legislative repeal of regulations by majority vote. Referred to State Affairs. Judiciary & Finance.
SJR 9/ HJR 13	ANWR Leasing. by Pearce. Adams. et al. endorses ANWR leasing. Passed Senate 17-0-2. Referred to House Resources. *(Hearing scheduled for 2/18).* HJR 13 referred to Oil & Gas. then Resources.
SB 41	Environmental & Health/ Safety Audits. by Leman. Pearce and Taylor. authorizes environmental and health safety self-audits. Promotes business compliance with environmental laws by allowing businesses to perform their own internal environmental audits. Referred to Judiciary & Finance.
AMEREF	$50.000 General Fund Request. for the Department of Education for the AMEREF Program for FY 97. This will fund the DOE Program Director @ 60% and other related costs for the program and will continue the public/private partnership.

Current status as of 12:05 PM, February 14, 1997

compiled by Craig Lyon
Special Assistant, RDC

RDC's 1996 Breakfast-at-a-Glance

Date	Speaker	Topic
1/4/96	Vern McCorkle, Publisher, Jim Martin, Vice President, Alaska Business Monthly	*"Will Anchorage and Alaska still be able to compete by the year 2000?"*
1/11/96	Dennis Rehberg, Lieutenant Governor of Montana	*"War for the West: Federal Lands and Resource Development"*
1/18/96	Frank Murkowski, United States Senator	*"The Budget Process and what it means for Alaska"*
1/25/96	James Kenworthy, Executive Director, AK Science & Technology Foundation	*"Co-Investing with AK Science & Technology Foundation: Value-added Projects*
2/1/96	Stoney Wright, Alaska Plant Materials Center, Alaska Department of Natural Resources	*"New Developments in Wetlands Revegetation"*
2/8/96	Art Sheunemann, Executive Director, Alaska Seafood Marketing Institute	*"Alaska Seafood: Holding our Ground in the Pacific Rim"*
2/15/96	Ken Boyd, Director, Division of Oil & Gas, Alaska Department of Natural Resources	*"1996 Oil & Gas Issues Round-up"*
2/22/96	Brad Tuck, Professor of Economics & Interim Dean, School of Public Affairs, UAA	*"Economic Impact of Heavy Oil Development"*
2/29/96	Jim Duncan, Senate Minority Leader, Alaska State Legislature	*"Juneau Report: Prospects for Closing the Fiscal Gap"*
3/7/96	Cliff Davis, Vice President, Alaska Projects, Echo Bay Mines Alaska	*"A-J Mine Update: New Alternatives Unveiled"*
3/21/96	John Rense, Chief Operating Officer, NANA Regional Corporation	*"Update on Red Dog Mine"*
3/28/96	Ernie Piper, Special Assistant to the Commissioner, ADEC	*"Regulatory Issues Facing Resource Development"*
4/4/96	John Morgan, President, BP Exploration (Alaska) Inc.	*"Overcoming Challenges in Alaska's Oil Frontier"*
4/11/96	Mayor Rick Mystrom	*"Come Bond with the Mayor: Setting the Stage for Economic Development"*
	Senator Ted Stevens	*"Special Bonus - Federal Update"*
4/18/96	Neal Fried, Labor Economist, Alaska Department of Labor	*"Economic Trends in Alaska's Basic Industries"*
	John Donohue, General Manager, Unocal	*"Royalty Relief"*
4/25/96	Jerry Boughton, Entomologist, U.S. Forest Service	*"Forest Health Update: Insect & Disease Conditions in Alaska"*
	Troy Reinhart, Public Relations Manager, Ketchikan Pulp Company	*"Extending Ketchikan Pulp Company's Timber Supply Contract"*
5/2/96	Dave Morgan, City Manager, City of Whittier	*"Whittier Road Access: A Development Forecast for Prince William Sound"*
5/9/96	Dale R. Lindsey, CEO/President, Harbor Enterprises, Inc.	*"Entrepreneurship, the AK Economy & Environment:A Personal Philosophy on Survivorship"*
5/16/96	Senate President Drue Pearce & House Speaker Gail Phillips	*"Report on the Nineteenth Alaska Legislature"*
5/23/96	Jay K. Taylor, President & CEO, Placer Dome U.S., Inc.	*"Placer Dome U.S., Inc.: The Mine Development Process"*
5/30/96	Governor Tony Knowles	
6/13/96	Steve Martin, Superintendent, Denali National Park & Preserve	*"Proposed South Side Denali Visitor Developments"*
	Jim Stratton, Director, Alaska State Parks	
	Sally Gibert, Conservation System Unit Coordinator	
7/9/96	Victor J. Riley, Jr., Chairman of the Board, KeyCorp	
9/5/96	John Horn, Central Regional Director, AK Dept. of Transportation & Public Facilities	*"Transportation Needs & Priorities in Alaska"*
9/12/96	Ernesta Ballard, Environmental Consultant, Ballard & Associates	*"Ketchikan Pulp Mill: Issues and Survival"*
9/19/96	Cynthia Quarterman, Director, U.S. Minerals Management Service	*"Update on Federal OCS Leasing Program"*
9/26/96	Randal Buckendorf, Environmental Chemist, Contaminated Sites Regulation, ADEC	*"Dvlpmt. of AK Contaminated Sites Cleanup Standards & Risk Assessment Principles"*
10/3/96	James Jinks, VP & Sr. Legislative Counsel, United Services Automobile Association	*"Regulatory Excesses: Impact on Business"*
10/10/96	Bennett Brooks, Lead Trade Specialist, AK Department of Environmental Conservation	*"Alaskans Abroad: Challenges and Opportunities"*
	Charles F. Becker, Director, AK Export Assistance Center, U.S. Dept of Commerce	
10/17/96	Mike Belowich, Vice President, Nerox Power Systems	*"Jonesville Coal Mine Update"*
10/24/96	Joseph Fields, Chairman, Kantishna Holdings	*"The Denali Railway System Project Overview"*
10/31/96	Dave Sutter, Land Manager, ARCO Alaska, Inc.	*"New Arctic Oil: The Alpine Discovery"*
11/7/96	General Richard Lawson, President, National Mining Association	*"New International Threats to Alaska Mining"*
11/14/96	Representative Mark Hanley, House Finance Co-chair	*"Preview of the Upcoming Legislative Session"*
11/21 & 22/96	Resource Development Council's 17th Annual Conference	*"Sharpening Alaska's Competitive Edge: Competing for Capital in a Global Economy"*
12/5/96	Bill Schoephoester, President of Board, Alaska Chadux Corp.	*"Realistic Compliance for Oil Spills"*
12/12/96	Fuller Cowell, Publisher, Kent Pollock, Managing Editor, Anchorage Daily News	*"The Newspaper's Role in Resource Development"*
12/19/96	Janet Kowalski, Director, Division of Habitat & Restoration, AK Department of Fish & Game	*"Permitting & Regulatory Challenges for Alaska"*

Resource Development Council for Alaska, Inc.

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
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RDC's 1997-1998 Legislative and Administrative Priorities

Land and Water Management

• **Water:** Monitor and participate in regulatory and legislative arenas on water quality issues, community wastewater needs, mixing zones, watershed classification, NPDES, reclassification of water bodies, and wetlands. Continue to advocate for standards and methods which are technically achievable, economically feasible and which reflect realistic risk analysis for Alaska conditions.

• **Forestry:** Support funding and increased action to address bug infestation and salvage options on state and federal lands. Support innovative forest management initiatives and the Reforestation Fund in Alaska. Support adequate funding and enforcement of the Alaska Forest Practices Act which includes private land. Advocate and educate on state and federal forestry issues, including a long-term timber supply and increased access.

• **Oil, gas, coal and mineral production:** Support legislative and/or administrative initiatives to encourage new exploration and development, as well as enhanced production from existing fields.

• **Land designations/exchanges/buy-outs:** Analyze for direct or cumulative effect on resource industries, communities and Alaska's economic development future. Oppose withdrawals such as proposed habitat conservation areas.

Transportation/Access

• **Transportation opportunities:** Support access corridors, construction of new transportation facilities, maintenance of existing infrastructure and strong safety standards.

• **Tourism:** Support increased access to tourism opportunities throughout Alaska including helicopter landing sites, airports and rural airstrips, ports, docks and roadways which improve quality of life for residents and visitors alike.

• **Specific projects:** Support improved service and maintenance of the Alaska marine highway, upgrading facilities for residents and visitors; funding maintenance and improvements to the Dalton

highway; construction of a Whittier road access through railroad tunnel with modifications for vehicle pullouts and improve tunnel for safety (DOT/PF Alternative Three); construction of State route 10 (Copper River highway) and a road to Shepard's Point (Cordova) for deep water port access, improved spill response capability and economic diversification opportunities.

• **ANILCA Title XI:** Work with Pacific Legal Foundation to ensure recent settlement is adopted through the federal regulatory process, supporting RDC position on access guarantees.

• **RS 2477 rights-of-way:** Support actions to designate and settle historic RS 2477 rights-of-way across public lands in Alaska, respecting private property rights.

Other Issues

• **ANWR education & advocacy:** Support legislative effort on ANWR issue to open 1002 Study Area lands for oil and gas exploration. Work to stop Wilderness designation. Support funding to educate and lobby at the national level.

• **Regulatory:** Streamline permitting, implement realistic regulations and generally improve the regulatory climate for resource industries.

• **Fisheries:** Support shore-based processing and fisheries policies that assure access and revenues for Alaska's "home fleet." Support reducing waste and better by-catch management, protecting while utilizing resource.

• **Long-range planning:** Support long-range state fiscal planning which includes revenue-enhancement by resource development.

• **Value-added opportunities:** Support value-added opportunities wherever possible throughout Alaska, in all resource sectors.

• **Tax and royalties:** Support fair, equitable taxes and royalties competitive with other national and global jurisdictions, which stimulate jobs, resident opportunities and economic development in Alaska.

• **Education:** Support funding for Alaska-specific educational efforts at all levels about resources and their fundamental economic importance to Alaska and the nation. This includes state support for AMEREF at the K-12 levels.

• **Automatic sunsetting** of state standards if federal mandating standards are lowered or repealed.

• **Tort Reform:** Support liability reform efforts which will improve Alaska's business climate for natural resource development.

• **Research, develop and marketing:** Support the research, development and marketing of Alaska resources.

• **Privatization:** Consider privatizing Alaska government services and assets for efficiency and economic benefits.

Resource Development Council
for Alaska, Inc.

1997-98 Issues and Activities Update

RDC is actively involved in a wide range of issues of interest to Alaska's basic industries and critical to Alaska's economic future. RDC's efforts to educate on and advocate for Alaska resource development are supported by membership, events and special activities throughout the year.

Oil and Gas:

RDC continues to support legislative and administrative initiatives encouraging new exploration and development, such as Northstar. RDC worked with the Legislature and the Governor to enact a royalty adjustment bill for marginal and smaller fields, as well as incentives to enhance production from existing fields. RDC continues to testify and comment on other issues affecting the oil and gas industry, including efforts to open the Coastal Plain of ANWR to oil and gas development.

Forestry:

RDC supports funding and increased action to address insect infestations and salvage timber harvests on state and federal lands. Current efforts also support innovative forest management initiatives, including HB 212, a bill applying to the management and sale of state timber. RDC advocates a long-term timber supply and increased access on state and federal forest lands. RDC opposes land withdrawals which further diminish a dedicated timber base for harvest, and provides input to the Forest Service on the Tongass Land Management Plan.

Mining:

RDC supports legislative and administrative initiatives to encourage new exploration and development, as well as enhanced production from existing operations. RDC played a key role in the State's rulemaking on solid waste regulations, particularly the proposed waste disposal and permit fees. RDC works directly on water quality regulatory issues affecting mining, most recently commenting on proposed changes to mixing zones regulations. On the federal front, RDC continues to support reasonable Mining Law reform legislation in Congress. RDC has taken an active role in the extended process to re-open the A-J Mine near Juneau and to reclassify Red Dog and Ikalukrok Creeks in the Red Dog area. RDC is active in other key issues affecting the mining industry, such as RS-2477 rights-of-way, ANILCA Title XI access, the National Toxics rule as it applies to Alaska and natural background levels of pollutants like arsenic.

Tourism:

RDC staff and board continues to provide testimony and comment on a wide range of issues, projects and land management plans affecting tourism. Specific projects include the South Slope Denali Management Plan, the proposed road link to Whittier, the proposed Knik Glacier Visitors Center, Kenai Fjords National Park Plan, the Turnagain Arm Management Plan, Hatcher Pass Ski Resort development, the Seward SeaLife Center and related issues of access and management. Throughout 1997-98, RDC will continue to support increased access to tourism opportunities throughout Alaska, including helicopter landing sites on state and federal lands.

Fisheries:

RDC actively supports changes to the Magnuson/Stevens Act recently passed by Congress which strengthens value-added imperatives, inshore allocations and shore-based processing opportunities. RDC supports extension and expansion of the Community Development Quota (CDQ) program. Fisheries infrastructure is often built on coastal wetlands, so RDC comments on watershed issues such as wetlands use which directly affect commercial and sport activities. RDC continues to advocate for marine mixing zones and realistic zones of deposit for shore-based processing industries. RDC hosts educational forums on fisheries issues such as listing the Stellar Sea Lion on the endangered species list and by-catch management.

Water Quality:

RDC launched a broad effort to solicit comments on the state's administrative review of existing water quality standards. RDC supports the state standards and published in-depth comments. In 1997-98, RDC continues its active role to resolve other water regulatory issues, including rulemaking to establish standards for Alaska-specific human health criteria, mixing zones, ground water and contaminated sites regulations and community safe water and drinking water issues. RDC provided comments and continues to monitor the 305(b) report and the 303(d) list of impaired water bodies. RDC was instrumental in the development and passage of HB 342, an act relating to water quality which was vetoed by the Governor.

Transportation:

RDC continues to support construction of an all-Alaska gas pipeline, as well as access corridors, construction of new transportation facilities and maintenance of existing infrastructure to include airports, ports and highways. RDC has filed extensive comments on proposed regulations on helicopter access in the Tongass National Forest, traditional access in Denali State Park and on the proposed RS 2477 rules. RDC recently prevailed in negotiations with U.S. Department of the Interior on ANILCA Title XI access regulations.

Resource Education:

RDC administers the Alaska Mineral and Energy Resource Education Fund (AMEREF), which produces the highly-acclaimed Alaska Resources Kit, a multi-disciplined, K-12 education program which teaches the importance of mineral and energy resources. In 1997-98, RDC's goal is to produce 100 new kits to be distributed statewide to Alaska schools. AMEREF recently completed its new energy and environment module for the kits and is updating other materials. Teacher training programs are underway.

RDC's Annual Resource Conference:

Each November, RDC's Annual Conference features a wide range of speakers discussing the global competitiveness of Alaska's resource industries, forecasts and updates on projects and trends for Alaska's economy. This is RDC's largest educational forum. RDC's 1997 Conference will be November 20 and 20 at the Sheraton Anchorage Hotel.

Thursday Breakfast Forums & Speakers Bureau:

RDC hosts weekly breakfast presentations in Anchorage for the public (September-May) on a variety of statewide resource and economic issues. RDC staff and board members are active in making presentations across Alaska and the Lower 48 on a wide range of resource development issues. Classroom presentations for students and teachers are a vital aspect of RDC's educational efforts.

Community Outreach:

RDC Board and staff recently visited Glenallen and Valdez to meet with local business and community officials, as well as tour industrial sites and other local facilities. Presentations have been made most recently for local groups and media in Sitka, Kenai, Nikiski, Juneau, Anchorage and Fairbanks.

Task Forces:

RDC Board and staff serve Alaska in a variety of ways, including the DEC Alaska Wetlands Working Group, the Pacific Legal Foundation Board of Directors, the Minerals Information Institute, Endangered Species Act Reauthorization Advisory Group, the Public Relations Society of America, the Heritage Land Bank, Anchorage Planning and Zoning Commission, the Alaska Royalty Oil and Gas Advisory Board, the Anchorage Municipal Library Advisory Board and the Optimist Club of Fairbanks.

Resource Development Council for Alaska, Inc.

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
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February 14, 1997

Ms. Sharmon Stambaugh
Alaska Department of Environmental Conservation
410 Willoughby Avenue
Juneau, AK 99801-1795

Re: Proposed Water Quality Standards for Kensington Mine

Dear Ms. Stambaugh:

Thank you for the opportunity to comment on the Water Quality Standards Regulations, 18 AAC 70, to provide site-specific criteria for Sherman Creek at the Kensington Mine.

The Resource Development Council (RDC) supports the proposed change, which is necessary to accommodate the developer's mining plan and the users' preferred discharge location.

The change in the water quality standard would apply specifically to Sherman Creek during full-scale mining. The change under consideration concerns dissolved inorganic substances, measured as Total Dissolved Solids (TDS).

Throughout the planning, exploration and permitting stages of its Kensington project, Coeur Alaska has worked with the environmental community and commercial fishermen who have concerns about water quality. These interests have stated that they prefer a discharge in Sherman Creek over a marine discharge.

Coeur believes that all uses of Sherman Creek will be protected at the requested levels. Coeur has eliminated Cyanide from its milling process, which will significantly reduce the amounts of toxic metals in the mine effluent.

The background concentration of TDS in Sherman Creek averages 50 milligrams per liter (mg/l) and the current mine drainage is about 540 mg/l. Since concentrations are expected to increase during full-scale mining operations, Coeur has requested a TDS discharge of 1000 mg/l, with

sulfates not to exceed 500 mg/l, and chlorides not to exceed 200 mg/l. Under the current criterion for water supply, TDS may not exceed 500 mg/l, with neither sulfates nor chlorides exceeding 200 mg/l.

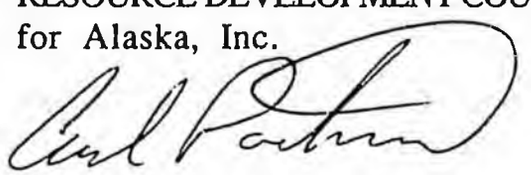
The current standards are based on limiting large amounts of magnesium sulfate and sodium sulfate, both minor sources of sulfate in Kensington's discharge. Dissolved magnesium sulfate and sodium sulfate can impair the taste of drinking water and can cause a laxative effect in large concentrations. The Kensington discharge is also low in chlorides, which, if present, can affect taste and aquatic life.

Not only are magnesium sulfate and sodium sulfate minor sources of sulfate in the Kensington discharge, Coeur is not planning to use Sherman Creek as a drinking water source.

RDC encourages DEC to change the water quality standard for the Kensington mine. Coeur's request is reasonable and is an important factor in the company's mining plan. Moreover, all uses of Sherman Creek will continue to be protected at the requested levels.

Sincerely,

RESOURCE DEVELOPMENT COUNCIL
for Alaska, Inc.



Carl Portman
Communications Director

Resource Development Council
for Alaska, Inc.

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
(907) 276-0700 Fax: (907) 276-3887 e-mail: rdc@aonline.com

February 14, 1997

Governor Tony Knowles
Box 110001
Juneau, AK 99811-0011

Dear Governor Knowles:

Thank you for recently taking such a firm stand on getting Alaska off the National Toxic Rule (NTR) list which RDC believes has been unfairly imposed by the Environmental Protection Agency (EPA).

Under Commissioner Brown, the Department of Environmental Conservation (DEC) has lately made great strides in the NTR debate, with arsenic in particular. EPA Region X now has enough information (including a 50-state comparative analysis which I hand-delivered to Administrator Chuck Clarke in December 1996) to make a qualified decision allowing Alaska to adopt its own water quality standards and criteria, tailored to Alaska conditions.

RDC is encouraging the Legislature to give statutory backing to your decision to pursue the arsenic standard separately. I believe EPA will appreciate the congruency from that direction, as well as from the Congressional delegation. Not only will it aid EPA's decision-making process in the short run, but it will strengthen Alaska's position in the judicial arena which is surely where the loyal opposition will force the issue next.

Looking forward to seeing you in the Capitol next week with the RDC board delegation,

RESOURCE DEVELOPMENT COUNCIL
for Alaska, Inc.

Becky L. Gay
Executive Director

copy Alaska Congressional delegation
Alaska State Legislature
RDC Board and H_20 committee
Commissioner Michele Brown

Resource Development Council
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February 10, 1997

Senator Rick Halford, Chair
Senate Resources Committee
State Capitol
Juneau, AK 99811

RE: SJR 9, urging the U.S. Congress to pass legislation to open the coastal plain of ANWR to oil & gas exploration, development and production.

I am writing on behalf of the Resource Development Council to urge your support of SJR 9, a resolution endorsing the opening of ANWR's Coastal Plain to environmentally-responsible oil and gas exploration and development.

Alaskans strongly supports a leasing, exploration and development program on ANWR's Coastal Plain. Their support is based on first-hand knowledge and experience with Arctic oil and gas development.

Oil Production from ANWR would continue Alaska's contribution to the nation's daily energy needs beyond the time when the giant reserves at Prudhoe Bay dry up, leasing in ANWR would probably result in a bigger incremental increase in domestic oil production than could be obtained from any other action.

Thank you for giving RDC the opportunity to comment on this resolution which deserves your strong support.

Sincerely,

Becky L. Gay
Executive Director

Resource Development Council
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January 23, 1997

TO: Senator Lyda Green, Chair
Senate State Affairs Committee
Members of the Senate State Affairs Committee

FROM: Craig Lyon, Special Assistant, RDC

RE: Support for SB 35, an act relating to Traditional Means of Access for Traditional Outdoor Uses.

Good afternoon. My name is Craig Lyon, Special Assistant with the Resource Development Council. Thank you for the opportunity to provide comment on SB 35. RDC strongly supports the intent of SB 35 and commends Senator Green for introducing this bill.

RDC encourages your prompt consideration of SB 35. Access to Alaska's vast lands is a major priority for RDC. It is imperative Alaska retain the widest possible range of multiple uses on its lands and preserve as many options as possible for access, especially traditional access for recreation and other uses.

Access is a paramount concern to RDC in light of the fact that so much of Alaska's federal and State conservation units are already managed for the preservation of backcountry qualities for those who demand solitude and untracked wilderness experiences. Alaska's parks, both state and federal, can contribute a great deal to tourism and local recreational needs, but reasonable access must be permitted. Tourism demands access and infrastructure to accommodate growing numbers of visitors, and these visitors, as well as local residents, demand a wide variety of opportunities, including flightseeing and aircraft landings. Traditional forms of access, including aircraft, snowmobiles and boats, are an essential element in Alaska's unique access equation. Statistics show air access is among the most popular and highest rated activities for Alaskans and their visitors. Air access quite often affords the only viable access to Alaska's largely inaccessible, roadless land base for people of all physical abilities and for those with a limited time margin.

SB 35 was introduced to protect the rights of Alaskans to access state land and water for recreational use. In a time when the federal government continues to restrict and prohibit access to many areas of the state, the Legislature needs to ensure that decisions to restrict access on State lands are made in a responsible, fair and well represented process.

Thank you for considering RDC's position on this bill, which deserves your support.

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January 21, 1997

Representative Bill Hudson, Co-Chair
Representative Scott Ogan, Co-Chair
House Resources Committee
State Capitol
Juneau, AK 99801-1182

RE: Support for HB 23, an act relating to Traditional Means of Access for Traditional Outdoor Uses.

Dear Representative Hudson & Ogan:

The Resource Development Council (RDC) encourages your prompt consideration of HB 23, an act relating to traditional means of access for traditional outdoor uses.

Access to Alaska's vast lands is a major priority of RDC. It is imperative Alaska retain the widest possible range of multiple uses on its lands and preserve as many options as possible for access, especially traditional access for recreation and other uses.

Access is a paramount concern to RDC in light of the fact that so much of Alaska's federal and State conservation units are already managed for the preservation of backcoun' y qualities for those who demand solitude and untracked wilderness experiences. Alaska's parks, both state and federal, can contribute a great deal to tourism and local recreational needs, but reasonable access must be permitted. Tourism demands access and infrastructure to accommodate growing numbers of visitors, and these visitors, as well as local residents, demand a wide variety of opportunities, including flightseeing and aircraft landings.

This legislation would make the process of increasing access restrictions and prohibitions more open to the people of Alaska. HB 23 would help ensure that all Alaskans would have proper representation by their elected officials in cases involving restrictions on traditional recreational access. Important access decisions would be kept at the legislative level where they will be debated openly.

Traditional forms of access, including aircraft, snowmobiles and boats, are an essential element in Alaska's unique access equation. Alaskans are very defensive of their rights to access the vast public lands of this northern state.

Thank you for considering RDC's position on this bill, which deserves your support.

Sincerely,

RESOURCE DEVELOPMENT COUNCIL
for Alaska, Inc.

Becky Gay
Executive Director

Resource Development Council
for Alaska, Inc.

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January 20, 1997

To: Representative Mark Hodgins, Chair
Representative Norm Rokeberg and Pete Kelly, Co-Sponsors
Members of the House Oil and Gas Special Committee
Alaska State House

From: Becky Gay, Executive Director, RDC

RE: HB 51 "An Act relating to the Department of Environmental Conservation"

Thank you, Chairman Hodgins and members of the Committee, for the opportunity to comment in support of HB 51, "an Act relating to the Department of Environmental Conservation." The State must work together actively and honestly to advance economically-feasible, technologically-achievable and enforceable water quality standards for Alaska. This bill is a good step in that direction.

Over the interim, RDC has worked closely with the agencies and the regulated public to address perceived shortcomings in the water quality bill which passed by a huge margin last session, but was then vetoed. Changes are reflected in HB 51 where appropriate, to make it an even better bill.

Especially in light of declining budgets, RDC believes the Legislature is ideally positioned to help DEC make tough choices in the use and protection of water. For instance, the Legislature is the appropriate body to debate and define intent. Final choices between programs for DEC implementation can find "fiscal backing" and should -- with adequate funding.

Congruence between the Legislature and the Administration on certain critical choices will provide Alaska with a springboard from which to regulate efficiently and fairly. Such congruence should also reduce or curtail costs from litigation which arises from ambiguities, vagueness and delay. Statutory authority will minimize wasted efforts and will strengthen agency resolve in areas of concern, like mixing zones.

Currently, there is no state "adjustment policy" on regulations. States are required to change only when federal regulations become more restrictive. This is a one-way street. RDC believes the State needs to legislate a requirement to automatically adjust state standards when federal changes result in less strict standards, or when federal mandates are deleted from law. HB 51 charges DEC to do this.

Foremost, HB 51 requires DEC to set standards and criteria which are scientifically supportable, consistent with existing federal standards and realistic for Alaska.

Where possible, it gives statutory backing for DEC efforts already underway. For instance, HB 51 clarifies the issue (and hopefully strengthens DEC's discretionary resolve) to use natural "background" conditions as the standard when natural levels exceed the State standard. DEC already utilizes this approach, as in the case of arsenic, but is unnerved occasionally by threatened lawsuits. Statutory backing will help.

HB 51 specifically allows for the State to have a stricter standard than federally required. It also allows for DEC to have a standard not in federal law.

HB 51 additionally provides for the following:

- An efficient "change mechanism" for DEC to respond to changes in federal regulations.

- A professional and definitive process (similar to, but not as rigorous as the air program) for evaluating agency conclusions which result in state standards being set stricter than federal requirements.

- An allowance for discharge waters to match the quality of the receiving waters.

- A statutory mandate that mixing zones will be provided for by regulation.

One change RDC recommends is replacing Section 4 (a)(4) with language which reads, "may not require discharged water to be of a higher quality than the natural condition (or existing quality) of the receiving water." This language was debated last year in HB 342 and was found more correct than that which is drafted in HB 51. This change should address concerns that polluted or impaired waterbodies might become more degraded under the current language.

Thank you for giving RDC the opportunity to comment on this legislation. I look forward to working with you in advancing this bill.

Resource Development Council for Alaska, Inc.

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January 13, 1997

Mr. Paul Bateman
Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, AK 99709-3642

Dear Mr. Bateman:

Thank you for the opportunity to comment on the Water Quality Standards in 18 AAC 70, removal of the one-third above background limit for Total Dissolved Solids (TDS) in Red Dog and Ikalukrok Creeks down to the confluence with the Wulik River near the Red Dog Mine.

The Resource Development Council (RDC) supports the Alaska Department of Environmental Conservation's (ADEC) proposed action to amend 18 AAC 70 to establish site-specific criteria for TDS for Red Dog and Ikalukrok Creeks.

Cominco Alaska Incorporated recently conducted a study on the eggs and fry of rainbow trout, and on larval chironomids which tested the effects of varying concentrations of TDS and changes in TDS concentrations. The study concluded that TDS concentrations up to 1500 milligrams per liter have no adverse effect on the biota of Red Dog or Ikalukrok Creeks.

ADEC's proposed action to remove the one-third above background limit for TDS in Red Dog and Ikalukrok Creeks is a positive action in refining water quality standards to be realistic with Alaska conditions.

Sincerely,

RESOURCE DEVELOPMENT COUNCIL
for Alaska, Inc.

Becky L. Gay
Executive Director

cc: RDC Board & Mining Members
AK Legislature

Organization Update:

A plea for Governor, legislature to work together on water quality issues

By Becky Gay
For The Journal of Commerce

In an era facing fiscal gaps and decreased budgets, a scrutiny of statutes and regulations is warranted. Both regulators and the regulated will benefit to see what truly works for Alaska. Where socioeconomic costs are large and benefits are small, a public policy debate is a likely outcome.

It should come as no surprise that this is happening as state water quality regulations undergo revision. The state is now on the brink of clearly defining the use and protection of water in Alaska. Following is a discussion of the many reasons the Legislature and the Knowles administration should work in concert on the subject of water quality.

Becky Gay

First, the Legislature is ideally positioned to help the Department of Environmental Conservation (DEC) achieve technologically defensible and economically achievable water quality standards.

On topics ranging from mixing zones to reclassification, statutory guidance can increase clarity, certainty and fiscal resources for permitting and enforcement.

Legislatively, intent can be debated and defined. Many regulatory areas allow for interpretation and agency discretion. Statutory backing for administration efforts will be helpful, and perhaps necessary in some cases.

On one hand, the DEC is considering programs to relinquish to federal control. The Legislature might want to have a say in those decisions and perhaps fund those programs instead. On the other hand, if the state plans to "take over" NPDES permitting, the DEC will need legislative backing and, more importantly, appropriation. Both branches of government and the regulated have a stake in finding a way to provide legal and commensurate funding for permitting.

Having the administration and the Legislature saying the same thing will strengthen personnel resolve within the agencies. At the least, it will provide clear direction and a congruency which might help curtail lawsuits which have been spawned on the vague and confusing. Such unity will help the Environmental Protection Agency (EPA), which is being sued now by Trustees for Alaska, for waiting while the state finalizes mixing zones. Other EPA issues awaiting state initiative which might be moved along by legislative resolve are reclassification petitions, 401 certifications for NPDES permits and Total Maximum Daily Loads (TMDLs).

Without some unity of purpose and an honest dialogue, the cost of environmental conservation may be missing its mark. The state can be more effective, more fair and realistic in assisting economic development while providing good protection for basic resources like water if the Legislature and the administration can agree on going forward with some issues.

It continues to make no sense to regulate discharges to be cleaner than drinking water, as in the case of arsenic. Regulators like to blame the two federal laws (Safe Drinking Water Act vs. Clean Water Act) which allow this conundrum to exist as a federal mandate, but Alaska has expended plenty enough time and money to argue this ridiculous no-win case. The Legislature should immediately adopt the DEC's recommended criteria for arsenic by statute, wasting no more time on the subject. Delegate to the EPA Region X the worry about scientifically explaining their impossible mandate to headquarters.

If the EPA invokes the National Toxic Rule (NTR) argument, the state can just say "No." A recent study shows other states have successfully asserted themselves, refusing to acknowledge this particular EPA punishment. States far less stringent than Alaska don't even encounter such a list in their region. Together with the Legislature in agreement, the administration can demand instead that the EPA get its own house in order on NTR. This will enable the DEC to get on with other work, helping Alaska be open for business by example.

There is no doubt that regulation requiring below detection limits and arguments over testing methods have interjected great uncertainty into the regulated community permit system. Uncertainty costs society. It costs money and it costs opportunity. Costs will be borne by the taxpayer (for upgrades to public sewage systems to meet such limits) or by the consumer (for costly upgrades to industrial systems) who will see little, if any, commensurate benefit from unrealistic and unworkable regulations.

Unnecessary costs are an excellent win-win dragon to slay. This is the easiest kind of economic abuse to attend to — no one will miss it when it is gone. ■

Becky Gay is Executive Director of the Resource Development Council for Alaska, Inc.

ALASKA RESOURCES KIT: MINERALS & ENERGY

AMEREF

121 W. Fireweed Lane, Suite 250
Anchorage, AK 99503
Phone: (907) 276-0700 Fax 276-3887

Alaska Mineral and Energy Resource Education Fund

AMEREF
Alaska Mineral and Energy Resource Education Fund

February 1997

The Alaska Mineral and Energy Resource Education Fund (AMEREF) is a non-profit organization that provides funding to support the Alaska Mineral and Energy Education Program. AMEREF has worked through a vital public/private partnership with the Department of Education to deliver materials and services to students in Alaska for more than 15 years. AMEREF receives financial support from various businesses, organizations and individuals who support the mission of "providing students with the knowledge, skills and attitudes necessary to make informed decisions regarding the mineral resources of the state of Alaska."

1997 Program Focus

- Complete the draft revision of Module C, Minerals and Mining, for the Alaska Resources Kit
- Produce new Alaska Resources kits to meet teacher demand
- Statewide teacher training
- Primary adaptation of kit materials for grades K-3

Current Status of State Funding

FY98 funding for the state's portion of the AMEREF program is included in the Department of Education's budget under the Education Special Projects component.

Requested State Funding: $50,000
FY98 General Fund Appropriation for DOE/ AMEREF Program

DOE Program Director	$40,152
Travel, Promotion (AMA Convention)	$500
Training of trainers	$4,548
METAB meeting/training	$1,300
State of AK charges (phone/audios)	$1,200
(office supplies)	$2,300

Expenses for all other AMEREF activities, including new kit production, primary adaptation of kit materials for grades K-3 and administrative functions, will continue to be provided for by private sector contributions.

What do all these Alaska schools have in common?

Airport Heights Elementary
AKIACHAK SCHOOL
Akula Elitnaurvik School
Aleknagik School
ALPENGLOW SCHOOL
ALYESKA CENTRAL SCHOOL
ANDERSON SCHOOL
ANNE HOPKINS WIEN SCHOOL
BARANOF ELEMENTARY SCHOOL
Barnette Elementary School
Bartlett High School
Beluga School
BETTLES FIELD SCHOOL
BIG LAKE ELEMENTARY
BUTTE ELEMENTARY SCHOOL
CHEFORNAK SCHOOLS
CHIGNIK LAGOON SCHOOL
CHINOOK ELEMENTARY SCHOOL
CHUGACH EXTENSION
CHUGACH OPTIONAL SCHOOL
Chugiak Elementary School Library
COLONY MIDDLE SCHOOL
COTTONWOOD CREEK
CRAIG HIGH SCHOOL
CRAIK LOGGING SCHOOL
DELTA SCHOOL
DENA'INA SCHOOL
DILLINGHAM ELEMENTARY
DIMOND HIGH SCHOOL
Diomede School
Dot Lake School
EAGLE COMMUNITY SCHOOL
EAST ELEMENTARY SCHOOL
EEK SCHOOL
Elfin Cove School
Evergreen Elementary
FINGER LAKE SCHOOL LIBRARY
Fire Lake Elementary School
FLOYD DRYDEN MIDDLE SCHOOL
Gambell Elementary
Gastineau School
George Gilson Jr. High
GEORGE MORGAN HIGH SCHOOL
GLACIER VALLEY ELEMENTARY
Glennallen Elementary School
Goose Bay Elementary School Library
GUSTAVUS SCHOOL
HAINES ELEMENTARY
Hobart Bay School
HOLY CROSS SCHOOL
Homer Intermediate School
Hoonah Elementary School
Houghtaling Elementary School
HUTCHISON CAREER CENTER
Iditarod Elementary
Innoko River School
J.R. GILDERSLEEVE SCHOOL
JAMES C. ISABELL SCHOOL
John F. Kennedy Elementary
John Fredson School
JOY ELEMENTARY SCHOOL
Juneau Christian School
Kachemak-Selo School
KENAI MIDDLE SCHOOL
KING COVE SCHOOL
KODIAK COLLEGE
KODIAK HIGH SCHOOL
Kotlik School
KOTZEBUE MIDDLE/HIGH SCHOOL
Koyuk Malemute School
Lighthouse Christian School
LOWER KUSKOKWIM - MEDIA CENTER
MAIN ELEMENTARY
MARTIN L. OLSON SCHOOL
MAT-SU ALTERNATIVE SCHOOL
Merreline A. Kangas School
METLAKATLA HIGH SCHOOL
MINCHUMINA COMMUNITY SCHOOL
MOOSE PASS SCHOOL
Mountain Village School
MT. EDGECUMBE HIGH
MT. VIEW ELEMENTARY
Naknek Elementary School
NAPAAGTUGMIUT SCHOOL
NENANA CITY PUBLIC
Newhalen School
NIKOLAEVSK SCHOOL
Noatak School
Nome Public Schools
NOME-BELTZ HIGH SCHOOL
NONDALTON SCHOOL
North Pole Elementary School
North Pole Middle School
NORTH SLOPE SCHOOL DISTRICT
NORTH STAR ELEMENTARY SCHOOL
NORTHWEST ARCTIC SCHOOL DISTRICT
NORTHWIND SCHOOL
Northwood Elementary School
Nunaka Valley
O'MALLEY ELEMENTARY SCHOOL
Ocean View Elementary School
PALMER MIDDLE SCHOOL
Paul Banks Elementary School
PEARL CREEK ELEMENTARY SCHOOL
PERRYVILLE SCHOOL
PETERSON ELEMENTARY SCHOOL
PILOT POINT SCHOOL
Pilot Station School
Pioneer Peak School Library
Pitkas Point Schools
POLARIS K-12
Port Alexander School
Port Lions School
Rabbit Creek School
Rampart School
REDOUBT ELEMENTARY SCHOOL
Rogers Park Elementary
RUSSIAN MISSION SCHOOL
RYAN MIDDLE SCHOOL
SAINT MARY'S SCHOOL
SALCHA ELEMENTARY
Sand Lake Elementary
Savoonga School
Scenic Park Elementary
SCHOENBAR MIDDLE SCHOOL
Sears Elementary School
SERVICE HIGH SCHOOL
SEVENTH DAY ADVENTIST SCHOOL
SEWARD ELEMENTARY SCHOOL
Shaktoolik School
Shishmaref School
SHUNGNAK SCHOOL
SITKA ALTERNATIVE SCHOOL
SITKA HIGH SCHOOL
Skagway City Schools
SLANA SCHOOL
SOLDOTNA HIGH
SOUTHEAST ISLAND SCHOOL DISTRICT
ST. JOHN'S COMMUNITY SCHOOL
STERLING ELEMENTARY SCHOOL
Stikine Middle School
Swanson Elementary School
TANAINA ELEMENTARY SCHOOL
TATITLEK COMMUNITY SCHOOL
TRAPPER CREEK ELEMENTARY SCHOOL
TUKURNGAILNGUQ
TULUKSAK HIGH SCHOOL
UNALAKLEET SCHOOLS
Unalaska Schools
University of Alaska-Fairbanks
University of Alaska-Southeast SITKA
UNIVERSITY PARK ELEMENTARY
Valdez City Schools
VALDEZ HIGH SCHOOL
Venetie School
VOZNESENKA SCHOOL
Wales-Kingikmiut School
WASILLA MIDDLE SCHOOL
WELLER ELEMENTARY SCHOOL
Wendler Junior High
Whaley Center
WHITE CLIFF SCHOOL
WHITE MOUNTAIN SCHOOL
Whittier Community School
Willard Bowman Elementary

.....these schools have an AMEREF Alaska Resources Kit !

(this is not a complete listing of schools)

Resource Development Council's Board of Directors Delegation

Juneau Board Trip

February 19 - 20, 1997

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Special Assistant
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Mr. Carl Portman
Communications Director
Resource Development Council

ALASKA STATE LEGISLATURE
House of Representatives

COMMITTEE ASSIGNMENTS

OIL & GAS, CHAIRMAN
LABOR & COMMERCE, VICE CHAIRMAN
ADMINISTRATIVE REGULATION REVIEW, VICE CHAIRMAN
HEALTH, EDUCATION & SOCIAL SERVICES, MEMBER
ECONOMIC DEVELOPMENT, MEMBER

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Representative Norman Rokeberg

SPONSOR BILL ANALYSIS

CSHB 51 (O&G)- "An Act relating to DEC and water quality regulations."

HB 51 is an important piece of economic development legislation and regulatory reform that is long overdue. This bill replaces a bill, HB 342, which was vetoed by Governor Knowles last year. *HB 342 passed the House 31 yeas and 8 nays - passed the Senate 14 yeas and 6 nays.* ***Only minor changes have been made to the version that passed the legislature last year.***

The primary thrust of this bill is to make state regulations consistent with federal regulations. In addition as federal criteria changes the bill requires Department of Environmental (DEC) to incorporate a reduction in, or a repeal of each federal regulation effecting water quality. HB 51 is supported by the Resource Development Council (RDC), 18-member Alaska Oil and Gas Association (AOGA), and small independent placer miners.

Currently, Alaska has no mandate or process expressed in state statute that ***requires any of our departments*** to review, evaluate or repeal regulations when the federal government repeals a state requirement or eases compliance criteria.

HB 51 will foster resource development within the State of Alaska while simplifying the regulatory process. Adoption of federal changes in water quality take a considerable length of time under DEC's current regulatory system unless federal regulations are adopted in mass. For example this method was used by DEC to adopt the federal toxics criteria in mass by reference.

HB 51 will help DEC manage its regulatory responsibilities. HB 51 provides a process for the department to follow when the department begins the process of proposing regulations.

Standardizing state regulations with federal regulations and criteria will provide certainty to members of the public and industry as to the nature of the water quality standards that users requesting water permits will be required to meet..

We must not lose focus of the role regulations in government oversight. The legislature sets policy through statute. Proposed agency regulations must implement the statutes enacted by the legislature. It is not the purview nor the responsibility of departments to interpret or stretch the plain meaning of words contained in statutes. The attorneys that draft bills for us take great pride in capturing the essence of the of legislation proposed and enacted by members of the legislature.

[redacted]

Sponsor Statement

Section 1. The bill contains an intent section that provides DEC the view of the legislature.

Section 2. (NEW SECTION from HB 342) The powers of the department have been amended to require that all DEC regulations be based on science. The definition of background condition will be contained in a new water quality definition section.

Section 3. (NEW SECTION from HB 342) This section was added as a result of concern expressed by DEC last year that HB 342 would prevent DEC ***from continuing their efforts to take over from EPA "primacy for administration and permitting" of the national pollutant discharge elimination system (NPDES)***. DEC has used addition of this section to advance a $3.2 million fiscal note rather than include their continuing NPDES efforts in their annual operating budget.

Section 4. Adds new sections.

(a) Contains a list of water quality standards and measurements that must be taken into account when proposing, adopting and applying water quality standards.

(b) ***Allows an exception*** for DEC to adopt a stricter state regulation than federal standards for shellfish growing areas without additional justification.

(c) Provides a procedure that allows a permit applicant to petition DEC to amend the state's water quality standards to match the federal criteria within 90 days or another mutually agreed upon date after ***federal compliance criteria has been reduced or eliminated*** (the administrative procedures act only allows 30 days). At this point ***DEC must either 1. proceed to adopt the federal change and propose a new state regulation or; 2. follow the process outlined in the bill to justify a more restrictive a water quality standard***. If DEC needs to keep a stricter **existing** state standard then DEC must make a written justification stating why this situation is unique to Alaska.

(d) Allows DEC to adopt measurement methods substantially equivalent to EPA methods in order to accommodate special Alaskan circumstances. The measurement of sediment is not included and listed below.

(e) Establishes the volumetric Imhoff cone method for measurement or settleable solids. However, the bill *does not prevent DEC from adopting a criteria for total suspended solids* (underlined words are a DEC amendment by Sen Duncan last year on the Senate floor)..

(f) Establishes definition of background condition contained on Page 1, Lines 13-15, Page 2, Lines 1-5.

(g) Adds a new section of law 46-03.087 which establishes the evaluation procedures for:

1. Adoption of **stricter regulations** than federal criteria
2. Adopting **a regulation where there is no federal criteria.**
3. Adopting **measurement methods substantially equivalent to** EPA measurements.
4. Provide process for preparing written findings to justify deviations from federal compliance criteria.

(h) Allows DEC to review current regulations during their normal triennial review process that is ***already required by the Clean Water Act*** to determine if there are state regulations stricter than federal compliance criteria.

HB 51 is needed to assure that the state's water quality standards remain consistent and not more restrictive than applicable federal water quality standards unless ***there are good scientific reasons*** to do so.

I urge your support of this important development tool.

ALASKA STATE LEGISLATURE
House of Representatives

COMMITTEE ASSIGNMENTS

OIL & GAS, CHAIRMAN
LABOR & COMMERCE, VICE CHAIRMAN
ADMINISTRATIVE REGULATION REVIEW, VICE CHAIRMAN
HEALTH, EDUCATION & SOCIAL SERVICES, MEMBER
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Representative Norman Rokeberg

MEMORANDUM

TO: Representative Gene Therriault
Co-Chairman, House Finance Committee

FROM: Representative Norman Rokeberg

DATE: February 12, 1997

SUBJECT: Request for Finance Hearing on CSHB 51(O&G) - water quality regulations

---

I would like to request a finance hearing for CSHB 51(O&G) for Tuesday, February 18, 1997. The Resource Development Council, (RDC), has been a prime supporter of last year's HB 342 and now on HB 51. Ms. Becky Gay, Executive Director, and the Board of the RDC will be in Juneau next week. We would very much appreciate having a finance hearing so that interested members of the council can testify on the bill.

My office is working on a committee substitute that will address some of the issues raised by DEC during the two public hearings before the House Special Committee on Oil and Gas. We plan to delete the sections that were included in the bill this year at the request of RDC and AOGA. However, it is not possible to accommodate all of the criticisms levied by DEC. Most of their comments and criticisms have no basis in fact. My office, the speaker, and all of last year's bill supporters tried without success to answer and deflect phantom problems to prevent a veto by the Governor. The bill articulates a different point of view. Unfortunately, this point of view is not shared by DEC.

HB 51 is a common sense approach to proposing regulations. The analysis required in the bill for proposed regulations by DEC should already be in place. The legislature should not have to get involved in this type of legislation. But the problems that have surfaced for the industries that need water quality permits have brought those industries to their knees.

In addition the review process outlined in the bill is already required of DEC by the federal Clean Water Act and EPA. DEC has chosen to characterize the review process as an insurmountable task. For over a year DEC has been unable or unwilling to identify DEC regulations that are more strict than the federal regulation they are based upon.

Lastly, the DEC fiscal note attached to the bill deserves special attention by the Finance Committee members. Most of the items contained in the bill do not require additional manpower.

In addition we should have the packet of information to your office no later than tomorrow afternoon. Again, thank you for your consideration.

FISCAL NOTE

No. 1

STATE OF ALASKA
1997 LEGISLATIVE SESSION

BILL NO

Bill Version: CSHB 51 (O&G)
(H) Publish Date: 1/31/97

Revision Date: 1/22/97 5:00 P.M.
Department Affected: Environmental Conservation
Title: An Act relating to the Department of Environmental Conservation
BRU: Department-wide
Sponsor: Reps Rokeberg and Kelly
Component: All
Requestor: House Special Committee on Oil and Gas
COMPONENT SERIAL NO. 633

Expenditures/Revenues: (Thousands of Dollars)

OPERATING EXPENDITURES	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03
PERSONAL SERVICES	2,597.0	2,597.0	2,597.0	2,597.0	2,597.0	2,597.0
TRAVEL	208.0	208.0	208.0	208.0	208.0	208.0
CONTRACTUAL	681.0	681.0	681.0	681.0	681.0	543.0
SUPPLIES	204.0	204.0	204.0	204.0	204.0	204.0
EQUIPMENT	212.0	212.0	212.0	212.0	212.0	212.0
LAND&STRUCTURES	0.0	0.0	0.0	0.0	0.0	0.0
GRANTS,CLAIMS	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	3902.0	3902.0	3902.0	3902.0	3902.0	3764.0
CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0
CHANGE IN REVENUES ( )	0.0	0.0	0.0	0.0	0.0	0.0
FUND SOURCE						
1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	3,902.0	3,902.0	3,902.0	3,902.0	3,902.0	3,902.0
1005 GF/Program Receipt	0.0	0.0	0.0	0.0	0.0	0.0
1006 GF/MHTIA	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	3,902.0	3,902.0	3,902.0	3,902.0	3,902.0	3,902.0

Estimate of any current year (FY97) cost: $ 0.0

POSITIONS:						
FULL-TIME	29	29	29	29	29	29
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary.)

See attached.

Prepared by: Susan Braley SB
Phone: 907-465-5308
Division: Air & Water Quality
Date: 1/22/97

Approved by Commissioner: Fred Tutle Acting Comm.
Agency: Department of Environmental Conservation
Date: 1-22-97

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Attachment to Fiscal Note, HB 51 -- 1/22/97

The break out of the fiscal note for HB 51 is shown by pertinent sections of the bill.

All Sections.

There will be significant legal issues associated with several sections of this bill, including obtaining delegation of the NPDES program from EPA as directed by Section 3. Per the Department of Law, they anticipate a full time attorney will be required.

Line 300 (Department of Law RSA) **$138,000**

Section 2.

This section prohibits the adoption of any environmental regulation by DEC unless the requirements are economically feasible for the persons governed by the regulations without any consideration of the public health impacts. The department administers 29 sets of regulations through Title 18 (Environmental Conservation). In a given year, approximately 15 regulatory packages are developed, revised, or amended by the department, some of which are complex and comprehensive amendments to existing law or are mandated by recent changes to federal law. The requirement to determine the economic feasibility of compliance with all DEC regulations cannot be met solely by DEC technical and scientific staff whose training is in areas other than economics.

Based on the level of regulatory activity in the department, funding for three Economists would be required:

Line 100	2 FTE (Economist II)	$190,000
	1 FTE (Economist III)	$107,600
	Total Line 100	**$297,600**
Line 200	Travel	$5,000
Line 300	Contractual	$3,000
Line 400	Supplies	$3,000
Line 500	Equipment	$9,000

TOTAL COSTS SECTION 2 PER YEAR ..... = $317,600

Section 3.

This section requires the department to seek and maintain primacy of the federal National Pollutant Discharge Elimination System (NPDES) program from the USEPA. The major components of the NPDES program include permitting, compliance monitoring, and enforcement. This section represents the most substantive part of the proposed legislation from a fiscal perspective. In 1987 the department analyzed the viability of gaining primacy for the NPDES program and estimated at that time it would cost approximately $2.3 million to administer the minimum effort required by EPA to

maintain the NPDES program.

The Division of Air and Water Quality is currently in the process of awarding a $25,000 contract to conduct a new feasibility study on state primacy of the NPDES program. Unfortunately, the results of that study will not be available until June 1997. Therefore, for purposes of this fiscal note, the 1987 analysis has been used as the basis for determining the costs of assuming the NPDES program, taking into account current costs estimates.

Line 100	21 FTE professional staff (Envir. Specialists/Engineers)	$1,994,700
	4 FTE clerical staff (Admin. Clerk II)	$209,800
	(to implement NPDES related functions in permitting, monitoring, compliance monitoring, and enforcement)	
	Total Line 100	**$2,204,500**
Line 200	Travel (compliance monitoring, enforcement)	$200,000
Line 300	Contractual	$400,000
Line 400	Supplies	$200,000
Line 500	Equipment	$200,000
	**TOTAL COSTS SECTION 3	**$3,204,500**

Section 4 & 5.

To achieve the requirements under these sections, one additional full time staff position would be required to handle the requests to change a State water quality standard allowed in Sec. 46.03.085© and Section 36.03.087(b), as well as a full review of the regulations required in Section 5 of the bill. The timelines required in 46.03.085(c) would mean a staff person would have to give immediate and full time attention to the requested change.

Because of the contentious nature of making changes to the state water quality standards, it is vital that we seek, and have available for the public, third party expertise on the water quality standard in question. Past experience with contractual funding for third party expertise shows that costs run from $20,000 to $75,000 depending on the complexity of the issue. For example, an initial review done just on settling velocities of sediment for the A-J Mine's tailing impoundment cost the Department $20,000 in 1994. Given the estimate of four changes requested per year, it is estimated that $100,000 in contractual expenses will be incurred per year to gather third party expertise on the issues. Public notice and hearing costs run approximately $10,000 per regulatory change. Therefore, the fiscal note includes:

Line 100	1 FTE professional staff(Envir. Specialist III)	**$95,100**
Line 200	Travel (hearings, research)	$3000

Line 300	Contractual Costs for 3rd party expertise	$100,000
	Public Notice costs	$40,000
Line 400	Supplies	$1000
Line 500	Equipment	$3000

TOTAL SECTION 4 & 5 PER YEAR ..... = $242,100

TOTAL COSTS OF HB 51 FOR ALL SECTIONS:

Line 100 (personal services)	$2,597,200
Line 200 (travel)	$208,000
Line 300 (contractual)	$681,000
Line 400 (supplies)	$204,000
Line 500 (equipment)	$212,000
TOTAL GF	**$3,902,200**

FISCAL NOTE

No. 2
Bill Version: CSHB 51 (O&G)
(H) Publish Date: 01/31/97

STATE OF ALASKA
1997 LEGISLATIVE SESSION

Revision Date:
Title: An Act Relating to the Department of Environmental Conservation
Sponsor: Rokeberg and Kelly
Requester: House Oil and Gas Committee

Dept. Affected: Fish and Game
BRU: Habitat and Restoration
Component: Habitat
COMPONENT SERIAL NO. 486

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 98	FY 99	FY 100	FY 01	FY 02	FY 03
PERSONAL SERVICES	150.0	150.0	112.5	112.5	112.5	112.5
TRAVEL	18.0	18.0	13.0	13.0	13.0	13.0
CONTRACTUAL	12.0	12.0	9.0	9.0	9.0	9.0
SUPPLIES	8.0	8.0	6.0	6.0	6.0	6.0
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	188.0	188.0	140.5	140.5	140.5	140.5
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	188.0	188.0	140.5	140.5	140.5	140.5
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other						
TOTAL	188.0	188.0	140.5	140.5	140.5	140.5

Estimate of any current year (FY97) cost: $

POSITIONS

FULL-TIME	2	2	1	1	1	
PART-TIME			1	1	1	
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

Additional expenditures stem from the increased workload that will occur as the department is required to increase the scope, substance, and specificity of its AS 16.05.870, 16.05.870, and 16.20 permit application reviews and significantly increase field inspections and site-specific water quality data collection (background conditions) in lieu of complete reliance on the Department of Environmental Conservation's water quality standards and wastewater discharge permitting program. Additional expenditures will occur assisting ADEC in developing a NPDES program that will be approved by EPA. Estimate that five reviews requiring ADF&G participation will be conducted annually to adopt regulations under AS 46.03.087(b).

Prepared by: [signature]
Division: Habitat and Restoration
Phone: 465-4105
Date: 1/29/97

Approved by Commissioner: Frank Rue [signature] for
Agency: Fish and Game
Date: 1/29/97

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One additional permitting position will be needed to increase the scope of AS 16.05.870 and AS 16.20 permit reviews for activities previously afforded full protection under ADEC's wastewater permit program. This is largely due to the significantly increased field presence that will be required to collect and evaluate background conditions under AS 46.03.085(a)(4) and concerns that AS 46.03.085(e) will preempt retention of the Aquatic Life Standard's numerical turbidity and stream substrate sediment accumultation criteria. The corresponding federal narrative sediment criteria lumps settleable solids, turbidity, and total suspended solids together and does not include numeric limitations. Under a best case scenario, it would still require readoption of these criteria under AS 46.03.087, potentially on a site-specific basis. Greater statutory assurance that ADEC could retain it's Aquatic Life turbidity and sediment accumulation criteria would significantly reduce this cost estimate.

Estimate five reviews will be conducted annually under AS 46.03.087(b) to adopt water quality regulations for which there is no corresponding federal criteria, a more restrictive criteria is proposed, or for methods that are not substantially similar to methods approved by EPA. Difficult to estimate cost because it is highly dependent on availability of site-specific water quality and hydrologic data; however, estimate it may range a low of $10,000 per review to a maximum of $62,000 each (this is the actual annual cost recently incurred assisting ADEC in development of site-specific criteria for Ikalukruk Creek (Red Dog Mine).

Estimate 0.5 FTE Habitat Biologist will be needed in Years 1 and 2 to assist in developing a state-run NPDES program that will be approved by the EPA.

Increased AS 16.05.870 and AS 16.20 Permit Review and Compliance Inspections

	Annually	
Line 100	75.0	1 - Habitat Biologist
Line 200	7.0	
Line 300	5.0	
Line 400	3.0	
TOTAL	90.0	

AS 46.03.087(b) Evaluations (5 annually) (Assume low-range estimate of $10,000 each)

	Annually	
Line 100	37.5	0.5 - Habitat Biologist
Line 200	6.0	
Line 300	4.0	
Line 400	3.0	
TOTAL	50.5	

NPDES Program Assumption (Years 1 and 2 Only)

	Year 1 and 2	
Line 100	37.5	0.5 - Habitat Biologist
Line 200	5.0	
Line 300	3.0	
Line 400	2.0	
TOTAL	47.5	

ALASKA OIL AND GAS ASSOCIATION
POSITION ON
WATER QUALITY STANDARDS LEGISLATION
January, 1997

The Alaska Oil and Gas Association (AOGA) is a trade association whose 18 member companies account for the majority of oil and gas exploration, production, transportation, refining and marketing activities in Alaska.

AOGA supports the goal of legislation which would establish reasonable, economically achievable, and scientifically based State water quality standards that are no more stringent than federal standards unless, on a case by case basis, scientific evidence justifies more stringent state regulation.

Specifically, AOGA supports legislation that provides for the following:

State regulations and standards to be consistent with federal requirements;

If circumstances warrant state standards which are more restrictive than federal requirements, a definitive process for evaluating the need for a more stringent standard which considers science and economics;

Efficient amendment of state regulations to match changing federal regulations;

Regulations that specify only EPA-approved measurement methods;

Allowance for discharge waters to match the quality of receiving waters

Presently the state is required to amend its regulations only when changes to federal regulations result in standards which are *more* restrictive than those of the state. To ensure consistency with federal regulations, the state also should be required to amend state standards when changes occur to federal regulations which result in *less* restrictive standards, or when provisions are deleted from federal regulations. There should be an efficient means for agencies to modify existing state regulations to effect this requirement.

Federal regulations should be the basis as well as the boundary for state regulations. In the event that there is a legitimate need for more stringent state regulations, there should be established review criteria, which considers science and economics, for evaluating the merit of the argument for having state regulations that would be more stringent than federal requirements.

Finally, an appeal process should be provided that allows the regulated community to challenge state regulations on the basis that a state regulation is more stringent than federal requirements.

Alaska Oil and Gas Association

AOGA

121 W. Fireweed Lane, Suite 207
Anchorage, Alaska 99503-2035
Phone: (907)272-1481 Fax: (907)279-8114
Judith M. Brady, Executive Director

February 25, 1997

The Honorable Norman Rokeberg
Alaska State House of Representatives
State Capitol
Juneau, Alaska 99801

AOGA Position Statement on Improving State Water Quality Standards

Dear Representative Rokeberg:

As sponsor of HB 51, we wanted to send you the attached AOGA position statement on improving water quality standards which was approved by the our Board of Directors today.

AOGA supports legislative and administrative efforts which would establish reasonable, economically achievable and scientifically based state water quality regulations that are consistent with the Clean Water Act, recognizing that the Clean Water Act allows states to have more restrictive criteria.

As you know, it is AOGA's policy to work toward consensus legislation. AOGA stands ready to continue to work with members of the Legislature and the Administration to provide technical assistance on water quality legislation to ensure consistency with Clean Water Act requirements and to ensure concerns about NPDES primacy are addressed.

We look forward to working with you in the future.

Sincerely,

JUDY BRADY
Executive Director

Attachment

ALASKA OIL AND GAS ASSOCIATION
POSITION ON
IMPROVING WATER QUALITY STANDARDS
February 25, 1997

The Alaska Oil and Gas Association (AOGA) is a trade association whose 18 member companies account for the majority of oil and gas exploration, production, transportation, refining and marketing activities in Alaska.

AOGA supports legislative and administrative efforts which would establish reasonable, economically achievable, and scientifically based State water quality regulations that are consistent with the Clean Water Act, recognizing that the Clean Water Act allows states to have more restrictive criteria.

Specifically, AOGA supports the following:

State regulations and standards to be consistent with federal requirements;

If circumstances warrant state standards which are more restrictive than federal requirements, a definitive process for evaluating the need for a more stringent standard which considers science and economics;

Efficient amendment of state regulations to match changing federal regulations;

Regulations that specify only EPA-approved measurement methods;

Allowance for discharge waters to match the quality of receiving waters

Presently the state is required to amend its regulations only when changes to federal regulations result in standards which are *more* restrictive than those of the state. To ensure consistency with federal regulations, the state also should be required to amend state standards when changes occur to federal regulations which result in *less* restrictive standards, or when provisions are deleted from federal regulations. There should be an efficient means for agencies to modify existing state regulations to effect this requirement.

Federal regulations should be the basis as well as the boundary for state regulations. In the event that there is a legitimate need for more stringent state regulations, there should be established review criteria, which considers science and economics, for evaluating the merit of the argument for having state regulations that would be more stringent than federal requirements.

An appeal process should be provided that allows the regulated community to challenge state regulations on the basis that a state regulation is more stringent than federal requirements.

Finally, AOGA urges the legislature and the administration to work with EPA to resolve EPA's technical concerns associated with NPDES primacy.

Miners bitter over new permit guidelines

By PATRICIA JONES
Staff Writer

Claudine Nordeen shook her head in disbelief after learning Tuesday that she and her husband are now required to add nitric acid to placer mining water samples to preserve them for arsenic testing.

"You guys are all worried about cancer but you make us play around with acid," she said in disgust to a permit writer from the U.S. Environmental Protection Agency, who was outlining new federal guidelines for Alaska gold miners using placer- and suction-dredging methods.

The guidelines are included in a new general permit that many, but not all, Alaska miners will work under beginning this summer. The new general permit replaces regulations set in 1994, and the new rules expire in June 1999.

About 30 miners, as well as some local state regulatory employees, gathered Tuesday at the Noel Wien Public Library to go over changes in the operating rules. Much of the discussion about detecting arsenic remained quite acidic, including Nordeen's comment.

She was referring to a discussion earlier in the afternoon workshop, when Carla Fisher, the EPA permit writer in the Seattle office, told the group of miners about the dangers of arsenic.

"Based on a previous study in Taiwan, where there were high concentrations of high arsenic levels, we found high incidents of skin cancer," Fisher said.

Yet to preserve one liter water samples taken from discharged water to test for arsenic, EPA regulations require that Alaska miners use nitric acid. Another miner said he couldn't buy nitric acid because local stores had discontinued carrying that product, due to safety mandates from EPA.

The only way to get around

Sam Harrel/News Miner

PERMIT TALK—John Cook, right, of Cook's Mining asks Cindi Godsey, left, of the Environmental Protection Agency about monitoring requirements for new general permits Tuesday during a break in the EPA's workshops for placer miners. Listening in is Larry Peterson, middle, an environmental consultant who helps miners file their permits. Godsey is a national pollutant discharge elimination system permit writer for the EPA.

water sample to a testing lab within 48 hours, Fisher told the group Tuesday.

That's not a realistic option for Nordeen and her husband, since the couple runs a small placer mine near Wiseman, in the Brooks Range. That's more than 200 miles from Fairbanks, where the closest testing lab that can

water is located.

Even more contentious to many miners is that the federal requirement included in the general permit keeps discharged water at less than .18 parts per billion of arsenic. That compares with the state Department of Environmental Conservation's drinking water standard of 50

And the lowest level that laboratory tests can accurately detect arsenic is one part per billion, said Jim Johnson, vice president of Northern Testing Laboratories, Inc. of Fairbanks.

"Many regulations have very little concern about any real health problems," he said, pointing out that municipal water systems can provide water with more arsenic in it than mines can release into the environment.

Through the commissioner's office, DEC officials have asked regional EPA administrators to relax their regulations in Alaska and let the state's water quality standards be the limit for arsenic in mining operations.

See MINERS, Page B-2

MINERS

Continued from Page B-1

While that request was not included in the new general permit, EPA will allow each miner to request that the discharge arsenic level be based on the background measure of arsenic in water flowing into the mining operation.

That means that miners will likely need to gather background data to apply for that modification, which must go through a public comment period before approval from DEC and EPA.

"At this point, this year we know we have very limited background samples," said Pete McGee, a Fairbanks manager of a watershed development program for DEC.

NYSE volume totaled 554.12 million shares vs. 556.57 million in the previous session.

The NYSE's composite index rose 3.33 to 398.58. The Nasdaq composite index rose 5.95 to 1,326.30. Page 7

members authorized a strike during contract negotiations. The union reached a contract agreement just before a planned strike, but not before travelers canceled reservations, causing a drop in revenues, Hayden said.

bled notes in the margins as DeLong lectured.

Patrick Pennoyer attended each of the seminars after receiving a mailing promoting them.

tions are the right ones, but he's intrigued.

"I've heard what's been said previously," Pennoyer said. "It seems different hearing it first hand. It's a lot to

INSIDE

Is Juneau's drinking water in jeopardy?

■ *Debate swirls around request to use Gold Creek to discharge water from A-J mine*

By LORI THOMSON
THE JUNEAU EMPIRE

First Gold Creek gave Juneau's founders chunks of gold to build an industry on. Then it gave the city drinking water.

Now people are debating another use for the creek near downtown – as a place to discharge water from the Alaska-Juneau gold mine.

Echo Bay Alaska Inc., working to develop the mine, wants permission from the state to release wastewater into the creek at levels above federal water-quality standards.

But will a mine discharge threaten Juneau's drinking water?

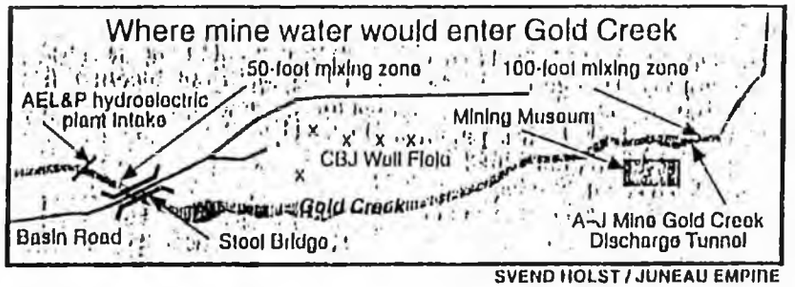
State officials say it won't, while some mine critics say it could.

Earl Hubbard of the Alaska Department of Environmental Conservation believes Juneau's drinking water from Gold Creek is protected.

People are most concerned about water from underground areas where drilling or other mining activity may have left contaminants. This water – about 406 million gallons of it – is filling up a large set of caverns 1,000 feet below sea level, known as the Deep North.

"The discharge from the Deep North doesn't have a path to get to

Please see Gold, Page 8



SVEND HOLST / JUNEAU EMPIRE

Proposed path: Mine wastewater would be released below the Steel Bridge and from the Gold Creek discharge tunnel. Map information courtesy of the Alaska Department of Environmental Conservation.

Businesse likely winn

■ *Legislative agend makes interests dependent on governmen prograi probable losers*

This is the fifth part of a pire series on the legislativ sion that opens Monday.

●●●●●

By MARK SABBATINI
THE JUNEAU EMPIRE

The winners of this year's lative session, according to ol ers, will generally be interes dependent on state money.

Those include businesses developers who may see

Juneau Empire 9 Jan 1997

Gold Creek . . .

Continued from Page 1

Juneau's drinking water supply," Hubbard said.

Mine wastewater would come into Gold Creek at two points.

Water from Deep North would be filtered and tested before being released just below the steel bridge on Gold Creek, Hubbard said. The discharge pipe is downstream from wells that serve as Juneau's primary source of drinking water.

The other discharge is of rain water that flows through the historic mine, but never touches mining activity, Hubbard said. Since 1939, that discharge has come out the Gold Creek drainage tunnel, upstream from the city's water wells and about 300 feet above a bridge near the former Gold Creek Salmon Bake.

Some people question whether mine water has no way to reach drinking-water wells.

"In the ideal world, that's how it works. In reality, I think there's a far greater threat," said Laurie Ferguson Craig of Alaskans for Juneau, a group of mine critics.

Craig said she's concerned about a possible break in a pipe or an emergency overflow.

After a 1994 fish kill in Gold Creek, Echo Bay put in an elaborate piping system so water from mine activities was diverted to Deep North caverns, said Chris Kennedy from Anchorage. Kennedy investigated that fish kill in the state attorney general's office. The state believed the kill was due to low water levels in the creek.

The piping system has built-in safeguards and as long as Echo Bay and government officials closely monitor it, wastewater wouldn't be able to get into the city's water supply, said Marie Sansone, an assistant attorney general, who handles A-J mine issues.

"If any of those were to become lax, there could be a problem," Sansone said.

Pivotal to the whole issue is a national debate about whether federal standards for arsenic and some other substances are too strict.

Alaska is one of several states asking to use its own water-quality standards rather than the federal ones, which state officials believe are too stringent – especially since maximum levels of arsenic are below detection.

Natural levels of arsenic in many Alaska waterways are well above the federal standard, Hubbard said.

"Nearly half of Alaska's drinking water supply would be out of compliance," he said.

The proposed Deep North discharge has arsenic levels that average 1.7 parts per billion, which exceeds the federal standard of 0.18 parts per billion, but is well below the state standard of 50 parts per billion, according to Hubbard.

The arsenic in the mine discharge comes from natural levels in water running through the mine, not from mine activity, Echo Bay spokesman David Stone said.

While the state is trying to appeal federal regulations, that process could take another year, he said.

That's a problem because in the meantime, the caverns of Deep North continue to fill up with rain water from other parts of the mine.

Deep North is expected to start overflowing by this time next year, unless Echo Bay begins pumping it out this spring, Hubbard said.

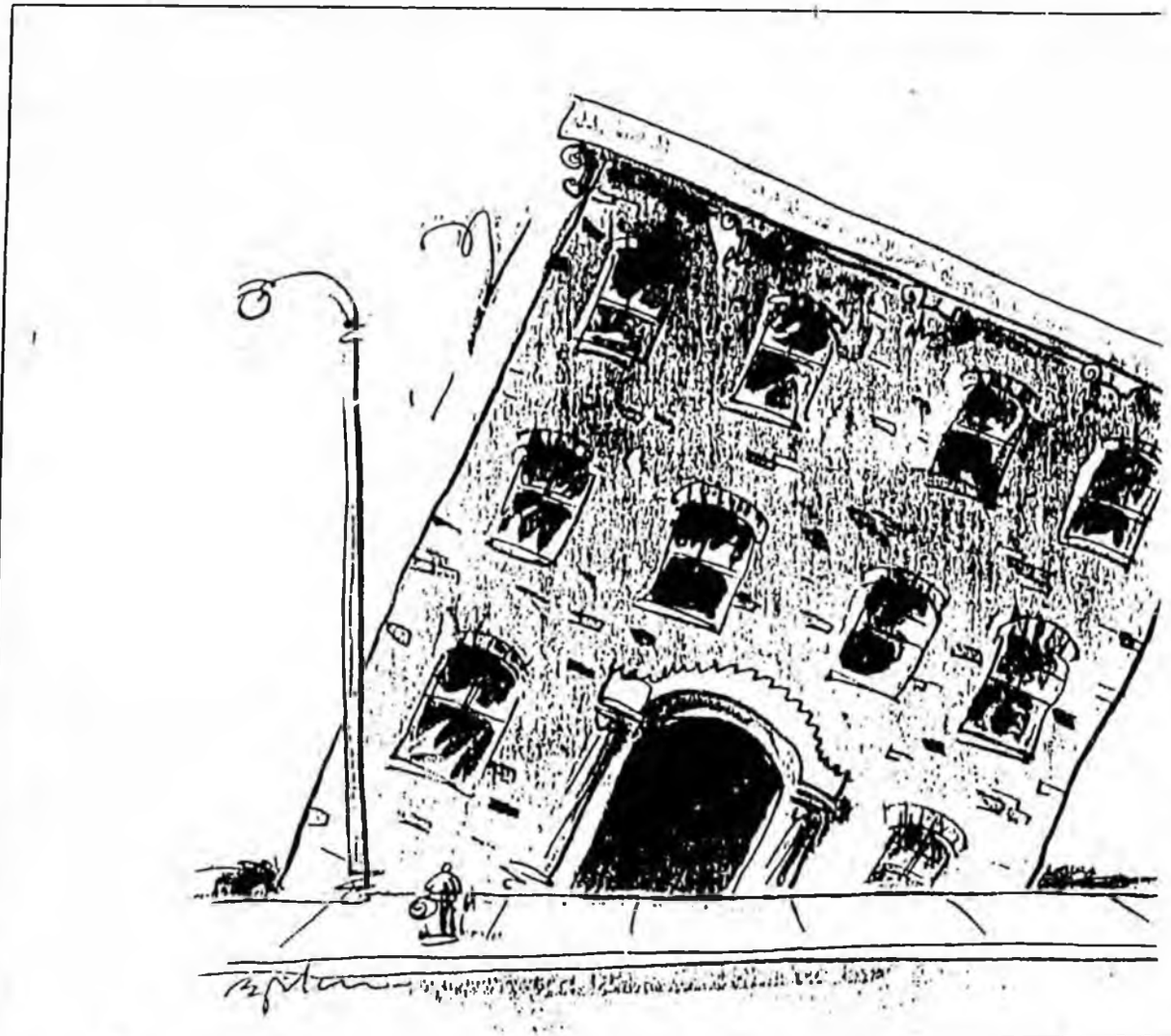
That could cause two problems: Echo Bay does not want the mine to be releasing an unpermitted discharge, Stone said.

Also, an overflow would mean there would be less control over the water, which could pick up mine sediments, Hubbard said.

To prevent that, the state is leaning toward approving two mixing zones in Gold Creek, areas where the mine discharge would exceed water-quality standards, Hubbard said.

One mixing zone would be the Gold Creek drainage tun about 100 feet downstream other one would be about 50 long downstream from the bridge near the Alaska Ele Light & Power Co. flume. But bard said the actual areas w discharges would exceed standards would usually be smaller.

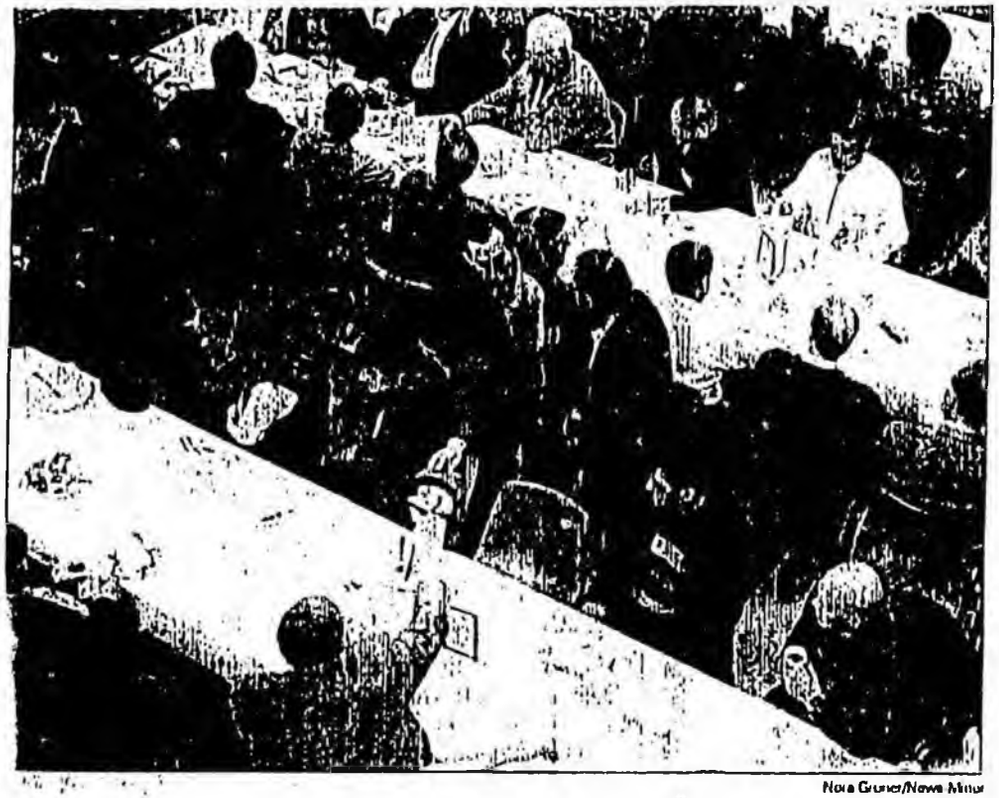
Craig, of Alaskans for Ju said she doesn't believe w quality standards should be and thinks reviews of the



Miners unite to fight EPA

Funds to help battle new placer proposals

By HEATHER ROBERTSON
Staff Writer



Nora Gruner/News Miner

ASSING THE HAT—Dick Swainback passes the hat during a luncheon at the Alaska Miners Association onference Friday afternoon. The association was trying to raise funds for legal fees to fight proposed Environmental Protection Agency rules concerning water quality. The group raised $6,101 within minutes.

Bernie Karl meant business.

He dipped into his wallet, produced two crisply folded $100 bills, and waved them in the air, ceremoniously depositing them in a black hat.

Passing the hat through a congregation of miners assembled for a luncheon presentation during the Alaska Miners Association conference on Friday, Karl urged miners to bolster his donation with their own reserves to divert a current of legislation facing the industry.

An agreement between the federal Environmental Protection Agency and the Sierra Club Legal Defense Fund regarding regulation of placer mining in Alaska has miners up in arms. The agreement concerns the general permits issued annually for placer operations in Alaska, embroiling miners in a tightly knotted legal snare.

The association is taking a stand against the EPA's proposed changes, claiming that the newly formulated regulations within the permit are too stiff, citing "no scientific basis" in changes regarding water quality regulations.

The Sierra Club sued EPA, arguing that the current allowable arsenic levels do not guarantee protection from metals in placer mining discharge water. In turn, EPA acquiesced in an out-of-court settlement, rewriting permit stipulations.

"At of Tuesday's public hearing, the Alaska Miners Asso-

See MINERS, Page B-2

Nora Gruner/News Miner

MINING SPEAKER—Marguerite Reiss discusses the history of mining in Alaska during a luncheon at the Alaska Mining Conference Friday afternoon at Alaskaland.

Continued from Page B-1

ciation was not hopeful that a legal means was available to stop EPA from taking final action on the placer mining draft permit," said Karl Hanneman, Fairbanks branch director of the association.

"Yet there is a legal process available that has to be utilized by next Friday. We can request that EPA grant a non-adversary hearing. We have a legal means of delaying imposition of the EPA settlement," he said.

Stating at the luncheon that $10,000 in legal fees needed to be raised, Hanneman urged miners to donate money, pointing out that the miners association would not proceed "'til money was in the hat."

By passing the hat, the administrative appeal process could begin, said Hanneman. Urging miners to look in the mirror and critically assess whether the placer permit regulations affects them, he said for those who feel the impact, donating was an alternative to "beating their chests" over current inflammatory issues.

Following Karl's lead, other miners dipped into their pockets, raising $6,101 within minutes.

"The willingness to donate money on a short notice was an indication that it's a serious matter that affects a lot of people. It points to the real issue, not just a superficial issue," said James Johnson, vice president of Northern Testing Laboratories, a water testing lab.

Key speaker at the noontime luncheon, Marguerite Reiss, commented on the miners' generous donations, proclaiming that "they were holding a fortress against invasion."

Reiss, who has a master's degree in library science, spoke on the role Alaska women played in mining.

Dredging back in history, Reiss recounted tales of women miners ensconced in mining partnerships. Reiss questioned women's levels of endurance, wondering "how many women had enough of those partnerships."

Declaring that there are priceless stories in mining that need to be told now, Reiss recounted a series of tales that bore obvious points of contention.

"There are barbs in these stories. When women went through these situations, I am sure it wasn't funny to them," she said.

Reiss spoke of the resourcefulness of Alaska women in mining.

"Women kept accounts of their stories that are used now for historical purposes. Also by writing their stories down, it gave them courage to go on," said Reiss.

Obituaries

like a grandmother to me. Helen really came into my life 15 years ago after being abused and losing both her

Cheryl Welsh of Des Moines and Gaynel Welsh of Pasco; and numerous great-great nieces and

married July 8, 1995; father, Gene Murray; mother, Marilyn Murray; and maternal grandmother, Alice Gorrell, both for-

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Mine rules better but still flawed

The latest agreement between placer miners, government agencies and environmental groups brings water quality regulations, if not down to Earth, then at least into a low-level orbit.

This agreement was about a year in the making. It grew from a proposed out-of-court settlement between the federal Environmental Protection Agency and environmental groups. That settlement, announced in February of 1996, was so foul that Alaska's Department of Environmental Conservation publicly challenged the EPA.

The resulting compromise, discussed at a workshop Tuesday in Fairbanks, brought some reason to the rules, but left plenty to criticize. Environmental groups, represented primarily by the Sierra Club Legal Defense Fund, have agreed not to challenge the EPA's general permits for placer mining if the state finds those permits acceptable. That removes some uncertainty for miners. The environmental groups also agreed to drop a demand that the EPA enforce stream discharge limits for most metals until EPA finishes a 2-year study of whether such limits are even needed in Alaska. That makes sense as well.

But the most bizarre aspect of the EPA's permit—the arsenic standard—still remains. The standard says no one may dump water into "freshwater" rivers and lakes if the dumped water contains more than .18 parts per billion of arsenic. This number has little basis in science; it was developed through a highly questionable extrapolation process. In fact, the EPA, Alaska's DEC, and other state agencies in the United States allow "drinking water" from a well to contain up to 50 ppb of arsenic.

50 ppb freshwater

36 ppb saltwater

The EPA did make one concession with regard to arsenic rules. The original general permits did not allow consideration of natural arsenic levels in the water that placer miners use. If it came out of a placer mine, the standard applied. In the compromise, background levels can be considered. Also, since arsenic can't be reliably detected below 3 ppb, the EPA won't go after any miners unless the arsenic added to discharge water exceeds that figure.

Unfortunately, the EPA's general permits won't be available to anyone operating in federal conservation areas and on the "wild" parts of wild and scenic rivers. Miners with legitimate claims in these areas need individual permits requiring more expensive data and detail.

That's overkill. Placer miners today do not muck up the Interior's clearwater streams like they did during the early 1980s. Strict regulations have forced virtually all operations to recycle 100 percent of their water. Only during heavy rainfall do their muddy ponds overflow. So, for all intents and purposes, such intermittent overflows are the only discharge to which these regulations will apply. And if those overflows conform to the general permit rules, they will still threaten our wild rivers no more than the average eroding mud bank.

ADN 8/24/83

Water rules will go

Knowles wants new standards

Daily News staff and wire reports

JUNEAU — The Knowles administration said Wednesday it will change some controversial rules environmentalists say allow too much pollution in Alaska's relatively clean waters. The rules were approved the last day of the Hickel administration and were supported by industry and pro-development groups.

Environmentalists had hoped for a complete reversal. But clean-water activists said they were satisfied Gov. Tony Knowles agreed to revise at least some rules and to study others to see if changes are

[illegible] room for industries to operate in Alaska with strong water standards and still make a profit," said Gershon Cohen, who heads the Alaska Clean Water Alliance. "We're not interested in stopping industry and stop-

[illegible] resources."

[illegible] the revisions will be a policy identical to federal standards for protecting high-quality waters such as those in national parks or wildlife refuges. The state previously had no such policy.

Rules on mixing zones also will be clarified. Mixing zones are parts of bays

Please see Page B-2, WATER

WATER: Pollution rules in for a change

Continued from Page B-1

and other waters where a fixed amount of pollutants can be discharged without penalty. The idea is to use the water to dilute potentially harmful compounds so they won't hurt fish or other wildlife, or people, outside the mixing zone. Cohen and others felt Hickel's mixing zone rules were too lax.

The state also will set up rules to determine acceptable levels of cancer-causing chemicals that might be absorbed by fish that people eat, said Gene Burden, environmental conservation commissioner.

The compromise was reached Tuesday, when the governor's staff met with business and conservation leaders.

Hickel's top environmental officials devised the new rules mainly to help wood-pulp mills and to speed the development of new mines, including the planned A-J mine near Juneau. Many pro-business groups had said the state's previous water-pollution standards were too harsh and hurt businesses. On Wednesday, one business supporter appeared satisfied with Knowles' compromise, which retains some of Hickel's rules.

"Certainly, there are areas in which we would have preferred a different outcome," said Becky Gay, who heads the Resource Development Council, a trade group. "Nevertheless, we believe the Knowles administration has made a good faith effort to address the concerns of both sides."

State officials plan to begin meetings with interested parties next month with business and conservation leaders to work out details of the new water-quality standards, which could be in place within six months, Burden said.

State leaders said working out a compromise will benefit the business climate and the environment. Knowles told reporters, "This is a very positive step forward from the gridlock and confrontation and hard feelings that were there before."

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A Brief History of the Classification of Alaskan Waters

From a Review of Water Quality Objectives/Standards Since 1949

1949 The Alaska Water Pollution Control Board was established by the territorial legislature under the authority of Chapter 117, titled simply "An Act". The Alaska Water Pollution Control Board was responsible for administration of the Alaska Water Pollution Control "Act" to safeguard Alaskan waters from pollution and establish standards of water purity which affect public health, fish and wildlife, recreation and industrial development.

According to Amos Alter (Person. comm., 1992), Director of the Division of Sanitation and Engineering for the Alaska Department of Health in 1949, there was only one person assigned to actively administer the water pollution control program. It wasn't possible for this one person to classify all Alaskan waters for different uses. It was also generally believed by the Board that Alaska had a unique chance to protect it's pristine waters, unlike states that already had many polluted waterbodies. Therefore, it was determined that Alaskan waters should be generally protected for the highest water use. This was "water supply and their sources." Initial limits were provided by the US Public Health Service (USPHS) and included federal Drinking Water Standards.

1952 The first Water Quality Objectives table of standards was produced. This is found in a paper titled, "Pollution Control Council, Pacific Northwest Area". It was developed through the coordination of the engineering representatives from pollution control agencies in Alaska, British Columbia, Idaho, Montana, Oregon, and Washington. These standards were applicable to those regions and the Territory of Alaska.

It is in this table, "applicable to the receiving waters for salt and fresh surface waters and underground waters," that the first employment of protecting waters for the highest water use is evident. For example, for the parameter "toxic, colored or other deleterious substances", the USPHS standards applied to four of the five listed water uses.

1959 The Territory of Alaska became the State of Alaska. Concurrently, the Alaska Administrative Procedure Act became effective. Water Quality Objectives were published in the Administrative Code, Title 7, under Health and Welfare. The Water Pollution Control Board was disbanded. The Water Quality Objectives were under the broad authority of A.S. Title 46, (Water) and A.S. Title 16, (Fish and Game). The Commissioner of Health and Welfare after conducting public hearings, could establish standards and/or group the designated waters of the state into classes.

The Water Quality Objectives adopted by the State of Alaska were the same table established in 1952 by the Territory.

1952 - 1979 For 27 years the original work and intent of the Alaska Water Pollution Control Board and the Pacific Northwest Council were repeated in succeeding Water Quality Standard (WQS) revisions. Clarifications in language and some modifications were made but these did not change the character of the original work. Key elements in the classification of state waters follow:

1. It was possible through public hearings to reclassify waters for specific uses. If waters were not reclassified, the "highest water use" superceded the other uses for a given waterbody.

2. The burden of justifying a reclassification was placed on those wishing to reclassify a waterbody.

3. In 1970, Ward Cove in Ketchikan, Ship Creek in Anchorage, Chena River, Fairbanks, and Silver Bay in Sitka were classified for specific uses as were all coastal waters. In 1971, both Ward Cove and Silver Bay were deleted from the reclassification list.

4. In 1973 the following significant clarification was made: "If waters have more than one use, the most stringent water quality criterion of the the uses shall apply." Up until 1979, numeric limits were primarily found in the USPHS Drinking Water Standards because other criteria had not been developed. It became more evident with this wording clarification that criteria and designated uses were integral parts of a water quality standard.

The Department of Environmental Conservation was created in July of 1971 as a split off from the Division of Environmental Health in the Department of Health and Welfare. DEC made few changes in the 1971 Water Quality Standards from previous Department of Health and Welfare standards. Reclassification required public hearings, the approval of the Commissioner of DEC and concurrence by the Administrator of the EPA for interstate waters.

1979 In 1979 significant changes were made in style, format and content of the WQS. Water quality criteria applicable to each use were significantly broadened in scope and detail. It was in this revision that aquatic life criteria made their first appearance with the adoption of federal criteria from the 1976 Red Book for the parameter of 'toxic and other deleterious organic and inorganic substances.' The USPHS Drinking Water Standards were also replaced by the Alaska Drinking Water Standards. It was now stated that between the Drinking Water Standards and the aquatic life criteria, the more stringent should be chosen as the applicable criterion. This practice continues today and in most cases, EPA's aquatic life criteria are more stringent than the Drinking Water Standards.

In general, the WQS took a more restrictive turn in 1979. There were many more stipulations that had to be met before a waterbody could be reclassified. For the first time, there was a section that included waterbodies ineligible for reclassification (parks, refuges, etc.). Another section spelled out what conditions defined the designated uses. To eliminate a use for a given waterbody it would have to be proven that these conditions did not exist. Ship Creek and marine waters were deleted from the reclassified list in this revision.

Key points are that although significant alterations were made in 1979, it was still quite possible to reclassify a waterbody after public hearings and the approval of the Commissioner. The burden of proof was on the applicant and the applicant only had to address 'existing uses' of the waterbody in the reclassification procedures.

1979 - 1987 During this period, amendments were proposed and adopted through the public process, but no comprehensive Water Quality Standard document was published with the incurred changes. No significant amendments were made concerning reclassification of waterbodies during this time.

In 1982 one important amendment was the adoption by reference of federal aquatic life criteria for 64 compounds or classes of compounds listed in the 1980 EPA Ambient Water Quality Criteria documents. This adoption by reference includes the bulk of the numeric criteria in effect today. Human health criteria for non-carcinogens also were adopted at that time.

In 1984 Nolan Creek and five tributaries near Wiseman were reclassified for the industrial use.

1987 - Today In 1987, revised Water Quality Standards were published. It was in this revision that aquatic life criteria for nine compounds, published by EPA in 1985, were adopted by reference. The procedures for reclassifying state waters were extensively modified to make them consistent with 1983 EPA regulations. The Clean Water Act does not address procedures for reclassifying state waters. At the time of this revision, two waterbodies remained on the reclassified list, Nolan Creek and Chena River. Although not referred to specifically in the WQS, the department now had to comply with EPA regulations in order to reclassify waterbodies of the state. Significant federal requirements follow:

A) To exclude a designated use through reclassification, it was no longer enough to show that the designated use was not an 'existing use' of the waterbody. One also had to prove that the designated use was not 'attainable.' This provision added a new and more difficult element in the formula for reclassification of state waters. It has proven to be onerous and costly to show that some designated uses might not be attained at some place in time, by some method.

B) EPA's regulations also require that a structured scientific study called a 'use attainability analysis' (UAA) must be conducted to prove that a use cannot be attained. Therefore, the decision to reclassify a waterbody is made after conducting a use attainability analysis. The State's request to reclassify must be approved by the Regional Administrator of EPA. High costs of analysis and strict EPA guidelines were prohibitive for considering all suggested reclassifications proposed. Based on these factors, a provision was added in the WQS that the decision on whether to proceed with a reclassification was at the department's discretion.

In November, 1989 an amendment to the WQS included a revision of the section on Classification of Waters. As a result of the Tolovana Use Attainability Analysis, the Department removed some protected use classes from 14 streams or segments of streams in the Tolovana River Basin. The cost to the state was extensive and it proved to be very difficult to eliminate significant 'attainable' uses that would satisfy the original intent of the applicant. In the final analysis, the department's cost and efforts to reclassify or not to reclassify rested solely on EPA's final approval. Therefore, even if the department wished to reclassify a waterbody, the department decisions can be vetoed by EPA according to the 1983 EPA regulations still in effect today.

The 1989 WQS revision retained the same procedures for reclassification adopted in 1987, and they remain the same today.

Water quality standards and the arsenic cancer risk

Editor's Note: The Montana Legislature passed several bills revising the state's water quality standards and requiring that treatment standards be economically, environmentally and technologically feasible. Legislation passed by the Montana Legislature and supported by Governor Racicot revised the human health risk level from 1 in 1 million to 1 in 100,000 and adjusted the standard for arsenic from 1 in 1 million to 1 in 1,000 risk. The revisions were made after local communities and businesses throughout Montana were unable to obtain waivers from stricter standards which were economically and technologically infeasible.

By Senator Lorents Grosfield
Chairman, Montana Senate
Natural Resources Committee

Second of two-part series
(Edited for space)

One of the troubling policy questions that we must continually weigh is, how "clean" does "clean" need to be? If we are discharging water into a stream, should "clean" mean as close as we can get to totally pure? Should it mean cleaner than the water naturally occurring in the stream? Should it mean as clean as the water we're discharging into? Should it mean clean enough to meet all the water quality standards that have been set to protect our health and environment?

Take Anchorage, Alaska, a city of about 250,000 people. Recently it was discovered the discharge into Cook Inlet from the municipal sewage treatment facility contained too much arsenic to meet the standard. An analysis of the problem revealed that it would cost the city $970 million to upgrade its system in order to eliminate enough arsenic to meet the standard. That's over $12,000 for every family! The amount of arsenic to be eliminated was about one pound. But further investigation revealed that literally hundreds of pounds of arsenic already arrives naturally from the various rivers that flow into Cook Inlet and from the tide coming in from the ocean. Given that hundreds of pounds are already arriving naturally, what possible sense would it make for the city to tax its citizens enough to pay the $970 million to eliminate one pound from the city's discharge? Could it be perhaps that the standard is flawed, or at least needed an exemption to deal with the specific Anchorage situation?

It's important to remember that water quality standards have not been cast in stone by some supreme being. Environmental science is not an exact science and none of these standards are "infallible."

Take Senate Bill 331 and the issue of Montana's water quality standard for arsenic. Arsenic is a known cancer causing agent. But there are at least four major points that need to be understood.

First, SB 331 changed the standard for arsenic from being based on a one-in-a-million increased lifetime cancer risk to a one-in-a-thousand increased risk. Does this mean that the Legislature has increased the cancer risk 1,000 times? Absolutely not.

At a one-in-a-million increased risk, the Montana water quality standard for arsenic in Montana streams and rivers before SB 331 was 0.018 parts per billion (18 parts per trillion). But the EPA drinking water standard is 50 parts per billion (50,000 parts per trillion). This means that our old standard for streams and rivers was 2,778 times more restrictive than the federal drinking water standard!

The new one-in-a-thousand cancer risk standard in SB 331, for discharges to our rivers, streams and groundwater, figures out at 18 parts per billion, which is still almost three times stricter than the federal drinking water standard of 50. But what is even more telling are the relatively high levels of arsenic that occur in most Montana streams naturally. For example, the average arsenic in the Missouri River at Toston from natural sources is about 24 parts per billion. With this level of arsenic naturally occurring in the river, there is no increased cancer risk in the upper Missouri River by moving the standard from 0.018 to 18. Why? Because the standard is still less than what's there naturally.

Granted, not all Montana streams have as much naturally occurring arsenic as the Upper Missouri. The average natural arsenic in the Yellowstone River at Livingston is about 21 parts per billion. By the time the Yellowstone reaches the North Dakota border, it is down to about 7. But in the Madison River at West Yellowstone, the natural arsenic level is about 260 parts per billion!

Remember, with our standard now at 18, we are still nearly three times stricter than the federal standard of 50, which like all federal drinking water standards, already has a significant safety margin built into it.

The second point is that fish are not as sensitive to arsenic as humans. Changing the standard to 18 will have absolutely no effect on fish. The arsenic standard set for healthy fish is 190 parts per billion; that is, below this level, fish will not be affected at all, and it's not until continual exposure for a week or more at a level of 360 parts per billion that fish will actually die.

The third major point is that we

(Continued to page 5)

The Resource Development Council (RDC) is Alaska's largest privately funded nonprofit economic development organization working to develop Alaska's natural resources in an orderly manner and to create a broad-based, diversified economy while protecting and enhancing the environment.

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GCIU

Congressman Don Young, Chairman of the House Resources Committee, enjoys a warm welcome before the large luncheon crowd at the RDC Annual Meeting. Young addressed new opportunities for Alaska in the new Congress.

Outgoing President Dave Parish receives a "First Barrel of Oil" plaque from President Elizabeth Rensch for his outstanding service to RDC. Parish first came to RDC ten years ago as a student intern during summer break from college.

RDC board member John Forceskie, President of Teamsters Local 959, receives special recognition and a plaque from RDC's outgoing President Dave Parish. Forceskie, who retires from the Teamsters this month, served as Vice President of RDC for eight years, longer than any other board member in that office.

At upper right, members of RDC's new Executive Committee pose for the camera. At bottom right, Gail Phillips, Speaker of the Alaska House, presents Eielson Junior High School student Katrina Balash with a certificate for her winning essay in the RDC Statewide Essay Contest. Katrina's essay addressed "The Role of Resource Development in Alaska's Economy." The winner in the high school category was Skagway's Lisa See who focused on "Opening ANWR."

Montana strives for reasonable water quality standards

Continued from page 2)

cannot, even given present technologies, reliably measure arsenic at less than 3 parts per billion. Now, if 0.018 parts per billion is not measurable, it's not detectable, and if it's not detectable it's certainly not enforceable.

The fourth point pertains to the creation of the old standard at 0.018 parts per billion. It was based on a Taiwan study showing that a person living in Taiwan had a one-in-a-million increased chance of getting cancer IF that person drank 2 liters of water per day from that same "contaminated" source of supply each consecutive day for 70 years and ate an average of 6.5 grams of fish caught from that same source of supply each day for 70 years.

If a person were to do these things, that person would have a one-in-a-million increased chance of getting cancer.

Given all this, was it reasonable to have a standard set at 0.018 parts per billion in the first place? Is it reasonable to have a water quality standard for discharges to streams and groundwater set at a level 2,778 times stricter than the federal drinking water standard? It reasonable to have standards we cannot even measure? Is it reasonable to have standards set at a level substantially below the condition that nature provides naturally?

Don't forget who pays for the implementation of these standards.

ALASKA WATER QUALITY REGULATIONS

Summary of Actions

	Issue	*Discussion*	*Action*
1. **ANTI-DEGRADATION**	Adding a requirement to protect Outstanding National Resource Waters ("ONWR") to existing law that 1.) protects current water uses, and 2.) maintains existing water quality that exceeds minimum standards	The absence of a section on ONRW is a deficiency in current regulations. Federal law requires protection of high quality waters such as a water of a national or state park or wildlife refuge or a water of exceptional recreational or ecological significance	Adopt additional antidegradation provisions identical to current federal law that protects ONRW
2. **TREATMENT WORKS**	These are facilities or bodies of water used to treat and/or dispose of sewage or industrial waste, such as municipal treatment plants, sewage lagoons or constructed drainage ditches.	Current regulation authorizes treatment works in natural water bodies. DEC is repealing this section because it is redundant with existing permitting laws administered in DEC's Solid Waste and Domestic Waste Water programs. The repealed section also confuses treatment methodologies with water quality standards.	Repealed
3. **PETROLEUM HYDRO-CARBONS**	These are found in oil or diesel and are limited in wastewater discharges to protect water quality.	Current law prohibits surface oil sheens and film, but does not measure particulate hydrocarbons or nonaromatics; however, neither did the former regulations. The current regulations more accurately measure the most toxic dissolved hydrocarbons available to aquatic organisms and thus are superior to the former regulations. However, DEC will investigate the need for a particulate standard. DEC concluded that the present "Note 8" describing methodology and analysis for petroleum hydrocarbon testing is confusing and deficient. DEC is amending the regulation to clarify required analytical measurements.	Repeal Note 8 regarding analytical standards and adopt Note 8 from August 1993 version. Conduct research of need for a numerical particulate standard by July 1996.
4. **SEDIMENT**	"Sediment" can be interpreted as settleable solids or as total suspended solids which includes both settleable and nonsettleable solids.	Before the December 1994 changes, the water quality standards defined "sediment" as total suspended solids which includes both settleable and nonsettleable solids, but established a numerical criterion only for settleable solids. DEC's change clarified that settleable solids is the regulated parameter. There is no criteria established for TSS. Neither EPA nor the Region 10 states have a TSS criteria.	Retain existing section. Complete study of the need for TSS standard and report by July 1996.
5. **MIXING ZONES**	These are designated areas of a waterbody where wastewater enters and mixes with the receiving water. The water quality standards can be exceeded within a MZ to dilute the wastewater discharge, but standards must be met at and beyond the zone boundaries.	The current regulations provide better MZ management controls by setting stricter standards for human health exposures in the vicinity of a proposed MZ; establishing previously lacking criteria for mixing zones in fresh water rivers and streams; and establishing control technology prerequisites. DEC retains the authority to grant or deny a MZ based on the factual data presented. Despite the improvements, there is a need to revisit the regulations to clarify a number of issues, such as size limits for rivers and streams, toxics and lethality.	Initiate rule making in September 1995. Prepare interim guidance for MZ evaluation ASAP and complete guidance by April 1, 1996.
6. **RISK LEVEL**	The adoption of a risk level was in response to federal law; however, the state has not developed the human health criteria necessary to effectuate the standard	EPA devised a mathematical equation composed of factors such as risk level, contaminated fish consumption rates, body weights and contaminated water consumption. When presented with three choices DEC adopted the middle risk factor of 1 in 100,000 or (10^{-5}). No other parameters necessary to this equation have been defined so national default standards apply. There are 54 carcinogens for which human health criteria could be established; however, DEC can limit the discharge of a toxic as appropriate to protect public health.	Recommend no change and initiate rulemaking to determine Alaska-specific values.

Industry and Environmental Representatives Hail Cooperative Process

GOVERNOR TONY KNOWLES ANNOUNCES RESOLUTION ON WATER QUALITY STANDARDS

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OFFICE OF THE GOVERNOR
TONY KNOWLES
JUNEAU, ALASKA

Calling it one of the major achievements of his Administration to date, Governor Tony Knowles has announced the resolution of a long-standing dispute over water quality standards for Alaska designed to be user-friendly to industry but tough enough to protect the state's environment. The regulations are the result of months of intensive work by the Knowles Administration and represent a broad acceptance by state, industry, and environmental representatives.

"This decision is very important for Alaska jobs and families," Knowles said. "Industry benefits from having clear standards to work with and from knowing that the Administration is willing to work with them to resolve regulatory disputes. And all of Alaska's family benefits from having high standards for the protection of our precious liquid assets."

"Governor Knowles and Commissioner Burden were successful in bringing the parties together to discuss the state's decision," said Judy Brady, Executive Director of the Alaska Oil & Gas Association. "While differences of opinion remain on individual components of the package, today's decision brings this phase on water quality to closure and sets the stage for further coordinated efforts on the standards."

"Governor Knowles and ADEC have charted a course that we hope will lead to correction of the major weaknesses in the recently adopted water quality standards," said Eric Jorgensen, managing attorney for the Sierra Club Legal Defense Fund. "In particular, we are pleased that ADEC has decided to re-examine fully the mixing zone regulation and expect that the Governor's proposal will reflect the high priority Alaskans place on clean water."

"Certainly there are areas in which we would have preferred a different outcome in these regulations, nevertheless we believe the Knowles Administration has made a good faith effort to address the concerns of both sides," said Becky Gay, Executive Director of the Resource Development Council. "This agreement allows us to move on and resolve other important water quality regulatory issues."

"The Governor has re-stated his commitment to the protection of Alaskans by taking a conservative approach for discharges containing carcinogens, repealing the new regulation on treatment works, and initiating a rulemaking that will establish standards that address Alaska specific human health criteria," said Gershon Cohen, director of the Alaska Clean Water Alliance.

See Page 2

Chamberline

Greater Fairbanks Chamber of Commerce
709 2nd Ave., Fairbanks, AK 99701
(907) 452-1105

Issue No. 5
March 10, 1995

Fairbanks Spared in Base Cutting

Fairbanks' wide open spaces are a rare and highly desirable commodity from the military point of view, Maj. Gen. Thomas Needham told the Fairbanks chamber at their General Membership Luncheon Feb. 28.

Needham spoke to the Fairbanks chamber the same day that the latest round of base closures and realignments was announced by the Department of Defense, but the news for Fairbanks was mostly good.

"It's not easy talking to a chamber of commerce on the day the secretary (of the Department of Defense) announces base cutbacks and closures," Needham said.

Fort Wainwright, Needham said, would be spared further cuts for the foreseeable future and may actually gain some military and civilian personnel due to the transfer of responsibilities and personnel from Fort Greely near Delta Junction.

"According to the announcement made by the secretary, Fort Greely will become a sub-post of Fort Wainwright," Needham said.

The Department of the Army has decided to transfer Fort Greely's Northern Warfare Training Center and Cold Region Testing Center to Fort Wainwright. Along with the new responsibilities, Fort Wainwright will gain approximately 205 military and 56 civilian positions, according to the Department of Defense.

According to a Department of the Army report, the move will cost Delta Junction, the town closest to Fort Greely, 969 jobs or 36 percent of the area's employment base between 1996 and 2001. Direct employment by the military accounts for 724 of those jobs and the other 245 are "indirect" employment created as a collateral effect of military activity.

"It's too early to tell how many," Needham said. "Cooks can be moved pretty easily, but it is harder to move a power plant."

Needham said it is still too early to say whether the move will mean more civilian jobs for Fairbanksans working on construction of new facilities. He did, however, point out that while defense contracts are down an average of 23 percent nationwide this year, the level remained virtually unchanged in Alaska.

Needham said Alaska will wind up with about 6,500 soldiers, approximately 5,000 at Fort Wainwright and most of the balance at Fort Richardson. The Army will also hang on to its 1.6 million acres of land in Alaska, he said.

Availability of space, Needham said, is part of what makes the Interior a desirable home for the military. As Anchorage grows, the military is running out of room for "live-fire" exercises.

"The trouble with live-fires at Fort Richardson is that, because of environmental constraints, we can only do it in the winter when there is 8-inches of ice," Needham said. "We're running out of room down there."

The Army has 916,000 acres available for training at Fort Wainwright, 62,000 acres at Fort Richardson and 662,000 acres that they will retain at Fort Greely, according to Linda Douglass of the Fort Wainwright Public Affairs Department.

According to the Department of the Army report, the realignment between Fort Greely and Fort Wainwright will result in a $23 million implementation investment that will yield a net savings of $43 million during the implementation period and $19 million a year thereafter.

Needham said the army plans to spend $2 million to upgrade Bassett Army Hospital at Fort Wainwright and another $5 million on barracks renovation.

"'Family housing is adequate, but we have let barracks slide," Needham said. "In the barracks, we

(see **Needham**, next page)

(Needham continued from page 1)
have soldiers sitting on furniture older than they are."

The Army also plans to fix up the post swimming pool and spend another $12 million on roads and other projects.

"The good news is that we have money to train," Needham said, adding that he expects Alaska's military to be called to a global hot spot some day.

Needham thanked Fairbanks for its support of Fort Wainwright during the army post of excellence evaluation that recently went on in Fairbanks.

"Both Fairbanks and the post had a good day when the evaluation team was here," Needham said. "We sincerely appreciate the support we get from the community."

Needham said he doesn't expect the results of the evaluation until some time in June.

"We won't know until they call us and tell us to come to Washington (D.C.)," Needham said.

Board Hears Report on Water Quality Standards

The Sierra Club is mounting a new challenge to Alaska's Water Quality Standards which could cost Alaskans billions of dollars and stifle future development the chamber board was told at their March 6 meeting.

Mary Nordale, President of the Alaska Miner's Association, and Bill Jeffress, of Fairbanks Gold, gave the board a briefing on the Department of Environmental Conservation water quality standards review currently underway. The Sierra Club Legal Defense Fund has petitioned the DEC to revoke the water quality standard signed into law by Gov. Hickel on Dec. 5, 1994.

If the new standard being sought by the Sierra Club goes into effect, it could kill the mining, fishing and timber industries, Jeffress said. The Fort Knox project near Fairbanks, due to begin construction this summer, could be jeopardized by new, more stringent standards, Jeffress said.

Alaska's current standard allows a human health risk of 1 in 100,000. That means a person would have a 1 in 100,000 chance of contracting cancer if they were to drink two liters of treated water a day for 70 years, Jeffress said. The Sierra Club wants the risk factor changed to 1 in 1 million.

To put it into perspective, he said, your chances of being hit by an airplane falling from the sky involve about half the risk of the state's 1 in 100,000 standard. According to Jeffress' figures, Americans have a 1 in 4 chance of dying from cancer with or without the 1 in 1 million standard.

The Sierra Club's standards are unattainable, Jeffress said. Under the 1 in 1 million standard, drinking water would not be an acceptable discharge, he said. The technology doesn't exist, Jeffress said, to remove natural levels of arsenic from Alaska's water to the 1 in 1 million standard.

Nordale said the 1 in 1 million standard, if applied, would apply across the board and cost state and local government in Alaska $2 billion to upgrade waste water systems. She estimated the cost to owners of residential septic systems at $50,000 per lot.

Jeffress said the effect on the Alaskan economy would be catastrophic. He said venture capital for development would likely be scared off by the 1 in 1 million standard. The higher standards have proven fiscally and technologically unattainable in other states, he said. If we ignore the public process, he said, the regulations will go into effect virtually unopposed.

There will be a public hearing on the proposed water quality standards at 7 p.m., March 17 in the Noel Wein Library. Jeffress urged all interested parties to attend the meeting.

March Luncheon Speakers

March 14 **British Petroleum Alaska President John Morgan** will address the membership on development opportunities on the North Slope and what needs to be done to make those opportunities a reality. There will also be a Parka Parade preview.

March 21 **MarkAir Director of Marketing Craig Johnson** will speak on MarkAir's economic impact in the state of Alaska.

March 28 **American Red Cross** will give a Koyukuk River flood update.

Business After Hours

5-7 p.m., Thursday March 23

at

Frontier Business Machines

hosted by

Margherita Gilbertson

See insert for details

ADN 8/25/95

The Anchorage Times

Publisher: BILL J. ALLEN
"Believing in Alaskans, putting Alaska first"
Editors: DENNIS FRADLEY, PAUL JENKINS, WILLIAM J. TOBIN
The Anchorage Times Commentary in this segment of the *Anchorage Daily News* does not represent the views of the *Daily News*. It is written and published under an agreement with former owners of *The Times*, in the interests of preserving a diversity of viewpoints in the community.

Water quality

THE KNOWLES administration has good reason to celebrate this week's general accord reached with environmentalists and industry over revised water quality regulations for the state. From all accounts, the process followed by the administration in developing a consensus was fair and the final result appears balanced.

Neither side got all that it wanted, but each is signaling it can accept the compromise.

Count us among the skeptics who doubted such a result was possible. We voiced our concern earlier this year when Gov. Tony Knowles ordered the Department of Environmental Conservation to review the state's water quality regulations that were signed by the previous administration on its last day in office.

The Sierra Club Legal Defense Fund petitioned for the repeal of those regulations and although the new administration did not grant the request, it agreed to reopen the process to more public discussion. That sent shudders through the mining, timber and oil industries — and throughout state communities that treat, process and discharge wastewater. There was much apprehension that any changes to the water quality regulations would result in extraordinary expense for all concerned.

That kind of worst-case scenario, as it turns out, did not occur. Instead, the Knowles administration appears to have achieved that oft-sought middle ground that protects the most important objectives of both sides in the debate.

In announcing resolution of the issue Wednesday, Gov. Knowles said, "Industry benefits from having clear standards to work with and from knowing that the administration is willing to work with them to resolve regulatory disputes. And all of Alaska's family benefits from having high standards for the protection of our precious liquid assets."

It's understandable that the governor should feel good about his accomplishment. But as he knows, the debate is by no means over regarding this particular issue.

The compromise itself ensures there will be more give and take to come. For instance, adding a new set of regulations requiring protection of "outstanding national resource waters" is sure to generate legal challenges down the road. Yet-to-come standards for regulating hydrocarbon particulates and total suspended solids, and a further review of mixing zone restrictions all promise more controversy and debate.

That's how it should be. Ongoing review, debate and revision of state water regulations are anticipated in the federal law that provides states the authority to regulate water quality.

An open public process that allows all sides to be represented at the table, as has happened up to this point, is the best way to address these complex issues and serve the state's best interest.

ADN 4/24/95 Voi

The Anchorage Times

Publisher: BILL J. ALLEN
"Believing in Alaskans, putting Alaska first"
Editors: DENNIS FRADLEY. PAUL JENKINS. WILLIAM J. TOBIN
The Anchorage Times Commentary in this segment of the *Anchorage Daily News* does not represent the views of the *Daily News*. It is written and published under an agreement with former owners of *The Times*, in the interests of preserving a diversity of viewpoints in the community.

Expensive flush

IT'S UNLIKELY that many residents are giving serious thought to the state's water quality standards now under review by the Alaska Department of Environmental Conservation.

But if local sewer bills increase by more than 400 percent as a result of new water discharge regulations requested by environmental activists, the residents will not only take an interest, they probably will be up in arms.

The state's water quality regulations were signed into law by Gov. Walter J. Hickel on Dec. 5, 1994 — the day he left office. The Hickel administration had worked on developing those regulations for about three years, during which there were numerous opportunities for public comment.

The Sierra Club Legal Defense Fund, however, challenged the process. It petitioned the new administration to suspend or repeal the water quality standards that had just been enacted. Gov. Tony Knowles responded by ordering an additional public review period for the regulations.

It is important to note that Knowles did not signal an intention to make any changes in the new water quality law. Neither did he suspend or repeal the regulations as requested. He only provided an additional comment period, which ended last week.

THE MERE POSSIBILITY, though, that Sierra Club lawyers might prevail in persuading the new administration to rewrite the law got the attention of Anchorage's elected officials, as well as numerous other local government and business leaders across the state.

According to written testimony from Mayor Rick Mystrom, for instance, the state's water quality standards already "are highly protective of the environment and in some cases are more restrictive than federal standards."

It would cost Anchorage hundreds of millions of dollars, he said, if the state were to adopt the changes requested by the environmentalists — "and unfortunately result in little or no measurable improvement to the environment."

Among changes requested by the Sierra Club is one that would require municipal wastewater dumped into the Inlet to be 10 times purer than the ocean water into which it is discharged.

Complying with such a bizarre standard would require construction of new water treatment facilities. Mystrom says sewer bills for single family dwellings in Anchorage would increase to $109.70 a month, from an existing rate of $21.65. The mayor endorsed a resolution that the Anchorage Assembly passed unanimously earlier this month. It requests simply that DEC retain the current water quality standards as enacted last December.

We trust that Anchorage's former mayor, now the governor, will take the city's concern to heart.

ADN 01Feb95

State agrees to review rules on water quality

The Associated Press

JUNEAU — The Knowles administration has agreed to reopen for public review key sections of water-quality standards adopted on the final day of Gov. Wally Hickel's term.

Department of Environmental Conservation Commissioner Gene Burden has decided to accept additional public comment between Feb. 13 and April 19 on some sections of the new regulations.

Burden made the decision in response to a Jan. 12 petition from the Sierra Club Legal Defense Fund, which represents several groups that have criticized the rules as too lax.

The Alaska Clean Water Alliance, United Fishermen of Alaska and Alaska Wilderness Recreation

Please see Page D-4, WATER

WATER: New standards to get review

Continued from Page D-1

and Tourism Association have alleged that the rules actually weaken water-protection standards and threaten public health.

The Hickel administration had defended the rules and said they would protect the state's water bodies from pollution.

Industry generally supported the rules. A mining association official said reopening the regulations would bring uncertainty to the mining and oil and gas industries.

Sections reopened to public review are those dealing with mixing zones and treatment works, sediment, petroleum hydrocarbons and human health-risk levels.

Mixing zones are areas where water-quality standards can be exceeded as pollutants are released into, and diluted with, public waters. Such zones have been proposed by developers of the Kensington and Alaska-Juneau gold mines.

Critics of the new rules had wanted several sections of the rules suspended, but the rules will remain in effect during the new public review period, DEC special assistant Ernie Piper said.

"We're not overturning the regulations ... we're not slowing down any permit reviews," Piper said. "At the same time, we're going to be as responsive as possible to public concerns."

Changes could be made to the rules after the comment period, Piper said.

7.

Water-quality rule changes draw criticism on all sides

The Associated Press

JUNEAU — Proposed changes in the state's water-quality regulations are being panned by industry and environmental representatives alike.

But their complaints differ. Citizen groups say the regulations didn't change enough, while a mining representative says the changes are a major break from the past and could cause problems.

The state revised the regulations in response to a January 1995 petition by the Sierra Club Legal Defense Fund, representing United Fishermen of Alaska, the Alaska Clean Water Alliance and the Alaska Wilderness Recreation and Tourism Association.

The groups petitioned the state after Gov. Walter Hickel signed new water-quality regulations just hours before he left office in December 1994. Those regulations followed a three-year battle over water-quality standards.

The proposed changes focus on mixing-zone regulations with potential effects on mining, oil and pulp companies. Mixing zones are areas near discharge where state water-quality standards are exceeded.

Mixing zones were designed as a temporary exemption to Clean Water Act principles," said Gershon Cohen, who heads the Alaska Clean Water Alliance. "But mixing zones have become the rule, not the exception."

Pamela Grefsrud of the state Department of Environmental Conservation said the revisions are largely minor language changes intended to clarify the regulations. But the Alaska Miners Association disagrees. "It's very disturbing. DEC has presented this as minor changes when they've broken with the past. It's a very, very different document than anything we've had in the state," said Paul Rusanowski, Juneau branch chairman of the association.

One of the changes is a new definition of mixing zones, which Rusanowski said is likely to confuse people because it differs from what has been described as a mixing zone for years.

Another revised section could be interpreted to require the state to review a previously approved discharge into water if any circumstances change, he said. That could pose problems for companies when changes occur, such as a drop in water flow in a dry year.

But Sierra Club Legal Defense Fund representatives are disappointed the revisions don't do more to narrow the situations in which a mixing zone for toxins or carcinogens are allowed, said Kelly Nolen, associate attorney for the organization.

A hearing on the proposed changes was held Friday night in Juneau.

Alaska State Legislature

Official Business

Speaker of the House of Representatives

State Capitol
Juneau, Alaska 99801-1182
(907) 465-3720

September 25, 1996

The Honorable Tony Knowles
Governor, State of Alaska
P.O. Box 110001
Juneau, AK 99811-0001

Dear Governor Knowles:

I was surprised by the tone of your letter to me dated September 19, 1996. You claim that I have violated the spirit and letter of the Alaska Constitution by not transmitting HB 342, Water Quality. Not so! On the contrary, the legislature and regulated community have made an extraordinary effort to root-out and dispel misconceptions, identify and answer technical questions and try to mitigate phantom problems the Commissioner of the Department of Environmental Conservation (DEC) has with the bill.

The very nature of the water quality subject made it imperative that the legislature and industry make every effort to convince you and your staff of the merits and feasibility of implementing the provisions of HB 342. The time, telephone calls, correspondence and legal opinions on the part of all the supporters of HB 342 provided to your staff, the Commissioner of the Department of Environmental Conservation and lower level personnel of DEC made it impossible for us to let the bill be mischaracterized and maligned. The compromise legislation before you is a new approach. The bill was worth our extra effort.

As far as the issue of bill transmittal, your Attorney General will verify that our state constitution contains no provision setting a time limit by which a bill must be transmitted to the Governor. Since this bill was important to me, the sponsor and the regulated community, it was necessary to pursue a course of action that would help you understand the importance of this bill.

In addition, I sincerely hope you reconsider your decision not to allow the Water Quality Task Force to review HB 342. I am disappointed you chose not to appoint Legislators as members of the task force as we had asked.

The Legislature produced an excellent bill. If you decide to veto this bill, you are doing a great disservice to the public. You will be revisiting all the issues concerning water quality that have been addressed by the Legislature, the Department of Environmental

Conservation and the regulated community, which were all involved in the creation and evolution of HB 342.

The Legislature passed HB 342 to bring certainty to water quality standards in Alaska. Many of the controversies surrounding the use of Alaska water bodies have created problems for economic development in Alaska and this bill seeks to remedy that.

With this transmittal of HB 342, I strongly urge you allow it to become law, preferably with your signature.

Sincerely,

Gail

Gail Phillips
SPEAKER OF THE HOUSE

GP:kf

cc. Representative Norman Rokeberg
Becky Gay, Executive Director, Resource Development Council
Judith Bracy, Executive Director, Alaska Oil and Gas Association
Steve Borell, Executive Director, Alaska Miners Association
Michele Brown, Commissioner, Department of Environmental Conservation

ALASKA MINERS ASSOCIATION, INC.

501 W. Northern Lights Blvd., Suite 203, Anchorage, Alaska 99503 FAX: (907) 278-7997 Telephone: (907) 276-0347

June 24, 1995

Honorable Tony Knowles
Governor of Alaska
Capitol Building
Juneau, AK 99801

RE: HB-342, Relating to Water Quality

Dear Governor Knowles,

The Alaska Miners Association urges you to sign House Bill 342, relating to water quality.

This bill will clarify several items in State law regarding water quality. The bill is needed to insure that when changes to federal laws make them less restrictive, State regulations are also changed in a timely manner. Changes to federal law typically mandate strict time frames for the states to adopt changes that become more stringent but not if the requirements become less stringent. This bill addresses this latter case.

The bill also includes provision where the State can be more stringent than federal law or can write regulations to address items not covered in federal law. HB-342 specifies how this will be done and the standards that must be followed in this process. This is an important improvement to the existing state water quality law.

The Department of Environmental Conservation was deeply involved in the development of this bill and provided numerous important recommendations that were incorporated into the final version. This involvement was essential and insured that the changes made by this bill complemented existing state law without unduly burdening DEC's administration of the provisions.

This is a good bill that makes positive changes to help simplify the State's very complex water quality statutes and we urge you to sign it.

Sincerely,

Steven C. Borell, P.E.
Executive Director

2173 University Ave. S., #101
Fairbanks, AK 99709
907-474-2080
Fax 907-474-2082

FAX TRANSMITTAL

TO:	Representative Norman Rokeberg	DATE:	4/24/96
ORG.:	State House of Representatives		
CITY:	Juneau, AK	NO.:	907-465-2040

MESSAGE

As Chairman of the Fairbanks Branch of the Alaska Miners Association and Project Manager for Ryan Lode Mines, I wish to express support for CSHB343 " An Act relating to water quality" with the changes suggested by Steve Borell, Executive Director of the Alaska Miners Association on this date. Your efforts in addressing the water quality issue is greatly appreciated.

Yours truly,

Richard A. Hughes, P. E.
Project Manager

Alaska Oil and Gas Association

AOGA

121 W. Fireweed Lane, Suite 207
Anchorage, Alaska 99503-2035
Phone: (907)272-1481 Fax: (907)279-8114
Judith Brady, Executive Director

June 28, 1996

The Honorable Tony Knowles
Governor
State of Alaska
P. O. Box 110001
Juneau, Alaska 99811-0001

HB342 - An Act Relating to Water Quality

Dear Governor Knowles:

The Alaska Oil and Gas Association encourages you to sign HB342 into law.

Throughout legislative consideration of this bill, AOGA spent many hours working with DEC staff to identify mechanisms which would improve the bill's effectiveness and to develop alternatives to provisions in earlier drafts on which DEC had concerns. As outlined in the attached letter to DEC Commissioner Michele Brown, the bill was substantially amended throughout this process. The end result is statutory authority for DEC to manage the state's water quality standards to ensure they are (1) consistent with federal requirements, (2) based on sound science and (3) take into consideration Alaska conditions.

Many of the provisions in this bill mirror those of the statute governing DEC administration of the EPA Title V Air program. That statute was developed by consensus by a work group composed of representatives from industry, municipalities, environmental groups, utilities and DEC. Like HB342, the Title V statute requires state standards to be consistent with federal standards, but also provides a mechanism for adoption of more restrictive standards if Alaska conditions warrant. Given the broad support for this approach by DEC and other Title V work group members, it is entirely appropriate to carry over these provisions to the water program.

You are well aware of AOGA's interest and dedication to ensuring Alaska's water quality regulations appropriately protect the environment and allow for needed development of Alaska's resources. HB342 accomplishes both of these objectives, and we encourage you to sign it into law.

We would appreciate the opportunity to discuss this legislation with you.

Sincerely,

Judy Brady

JUDITH M. BRADY
Executive Director

Attachment

Alaska Oil and Gas Association

AOGA

121 W. Fireweed Lane, Suite 207
Anchorage, Alaska 99503-2035
Phone: (907)272-1481 Direct: (907)272-9497 Fax: (907)279-8114
Marilyn Crockett, Assistant Executive Director

June 28, 1996

The Honorable Michele Brown, Commissioner
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

HB342 - An Act Relating to Water Quality

Dear Commissioner:

Attached is a copy of our letter to Governor Knowles encouraging him to sign HB342 into law.

As you know, we worked very closely with your staff on this legislation. As a result, the final version of this bill is *very* different from the version which was introduced. Virtually all of the changes made to the bill were agreed to in order to address concerns raised by the Department. Following are several examples:

Consistency with federal regulations--the ability for an individual to petition the department for a change in the regulations was offered by AOGA as a compromise to address DEC concerns over a provision which required the department to amend the regulations when the federal regulations changed. The initial provision required DEC action within 12 months of each change, which would have required constant monitoring of EPA's regulations. A second proposal would have required rulemaking by August 1 of each year to bring State regulations in line with federal requirements in effect on January 1 of that same year—a one-time, but nonetheless, annual review.

Janice Adair and I reached agreement on the petition alternative in mid-April, and Janice transmitted the language to Representative Rokeberg in a memo dated April 18. The provision in the final bill allows individuals to petition the department to amend the State's standards to incorporate a reduction in, or elimination of, federal standards. The department is given 90 days (or longer if agreed to by the applicant) to take action—*60 days* longer than the response time required under the APA for petitions.

We also agreed to a "transitional review" provision which, instead of requiring a review of State regulations within one year of the effective date of the legislation as earlier proposed, DEC will conduct its review as part of the EPA-required triennial review (despite AOGA's reservations that actual experience indicates the triennial review takes five to six years to complete—not three years!).

Ability to adopt more restrictive standards--Initially the bill prohibited the State from having or adopting water quality standards more restrictive than federal requirements. The concept of consistency with federal requirements is one of the basic premises of another DEC statute--the Alaska's Title V statute (AS 46.14). As you know, that statute was developed and agreed to by a work group of industry, environmental, municipal and utility representatives and DEC.

Recognizing that there may be situations in Alaska which warrant a more restrictive standard, the Title V group included language outlining a process under which the State may adopt standards which are more restrictive than those of EPA, or provisions that EPA does not have. Because that language was acceptable to DEC, we proposed that process be included in HB342. While slight modifications were made to the language to reflect its use for water quality standards and methods, the process is essentially the same as in the Title V statute—with one major difference. The Title V statute requires peer review of proposals for more restrictive standards. We agreed not to include that requirement due to concerns expressed by DEC over costs. We also agreed to DEC's request for deletion of the requirement for a public hearing.

Consideration of Actual Conditions--Early versions of the bill contained provisions addressing the quality of discharges and the waterbodies into which discharges occur. At the suggestion of DEC, the bill was amended to incorporate concepts already embodied in the State water quality standards for site-specific criteria.

These examples are but a few of the numerous concessions we agreed to make to address concerns and issues raised by DEC. (Some of these were rather hotly debated internally here at AOGA before agreement was reached!) I encourage your support of this legislation and would welcome the opportunity to visit with you in this regard.

Sincerely,

Marilyn Crockett

MARILYN CROCKETT
Assistant Executive Director

AOGA 1996

ALASKA OIL AND GAS ASSOCIATION
POSITION ON
HB 342, WATER QUALITY STANDARDS

The Alaska Oil and Gas Association (AOGA) is a trade association whose 19 member companies account for the majority of oil and gas exploration, production, transportation, refining and marketing activities in Alaska.

AOGA supports the goal of HB 342 to establish reasonable, economically achievable, and scientifically based State water quality standards that are no more stringent than federal standards unless, on a case by case basis, scientific evidence justifies more stringent state regulation.

Specifically, AOGA supports legislation that provides for the following:

State regulations and standards to be consistent with federal requirements;

If circumstances warrant state standards which are more restrictive than federal requirements, a definitive process for evaluating the need for a more stringent standard which considers science and economics;

Efficient amendment of state regulations to match changing federal regulations;

Regulations that specify only EPA-approved measurement methods;

Allowance for discharge waters to match the quality of receiving waters

Presently the state is required to amend its regulations only when changes to federal regulations result in standards which are *more* restrictive than those of the state. To ensure consistency with federal regulations, the state also should be required to amend state standards when changes occur to federal regulations which result in *less* restrictive standards, or when provisions are deleted from federal regulations. There should be an efficient means for agencies to modify existing state regulations to effect this requirement.

Federal regulations should be the basis as well as the boundary for state regulations. In the event that there is a legitimate need for more stringent state regulations, an impartial scientific peer review should be established. In addition, there should be established review criteria, which considers science and economics, for evaluating the merit of the argument for having state regulations that would be more stringent than federal requirements.

Finally, an appeal process should be provided that allows the regulated community to challenge state regulations on the basis that a state regulation is more stringent than federal requirements. That process should involve a review panel comprised of representatives other than the agency issuing the regulations in question.

ALASKA MINERALS COMMISSION

1997 REPORT TO THE GOVERNOR AND ALASKA STATE LEGISLATURE

TABLE OF CONTENTS

WATER QUALITY: MIXING ZONES

5 The water quality regulations promulgated by the Department of Environmental Conservation on October 31, 1986, should not be implemented and should be withdrawn until they are modified to be workable and no more stringent than required by federal law. Specific standards such as TDS should be revoked with reasonable standards implemented or, at the very least, the process for development and approval of site-specific standards need streamlining and simplifying.

WATER QUALITY: NATURAL CONDITIONS

6 The Legislature should adopt a Statute to supplant the regulation at 18 AAC 70.025 to the effect: "If available evidence reasonably demonstrates that the natural condition of a waterbody is of lower quality than a water quality criterion for the use classes in 18 AAC 70.020(b), and that the natural condition will maintain and protect those uses that are attained in the waterbody, the natural condition constitutes the applicable water quality criterion."

WATER QUALITY: BASELINE DATA

7 The Legislature should appropriate funds to begin baseline water quality data gathering and development of appropriate aquatic life criteria for acute and chronic toxicity on Alaskan species under Alaskan conditions.

ACCESS

8 The Legislature should make funding available to the Division of Land and the Attorney General's Office for ongoing research and litigation of the RS2477 rights-of-way. The Governor should aggressively assert "quiet title" to the routes with the best documentation. Further, the State should assert an access route pursuant to Title XI of the Alaska National Interest Lands Conservation Act to test the process and set precedent.

NAVIGABILITY

9a The Legislature should make funding available to continue a centralized, systematic navigability program within the Department of Natural Resources. Additionally, funding should be made available to the Department of Law to support any "quiet title" actions necessary to secure ownership of submerged lands.

9b The Legislature should not adopt a Statute that treats the beds of disputed waterways as "State-selected lands."

USER FEES AND ASSESSMENTS

10a The Legislature should amend AS 44.46.025, which allows the Department of Environmental Conservation to prescribe fees for services, and require public review and Legislative approval of all fees affecting the mining industry.

10b The Legislature should amend AS 44.46.025 to require that all regulations that prescribe fees shall include a detailed schedule justifying the applicable direct costs of inspections, permit preparation and administration, plan review and approval, and other services provided by the department that are to be paid for by the proposed fee. In no event should the proposed fee exceed those costs reasonably necessary to cover the direct costs of the above.

10c The Legislature should restrict the fee-prescribing authority of other agencies in a similar manner and require that fee schedules shall be submitted annually as part of the budget process.

Port Houghton and Cape Fanshaw Timber Sale, DEIS December 1995.

Introduction

In a recent lecture, Dr. Fred Everest, of Forest Science Laboratory in Juneau, praised the superlative salmon environment of world class proportions containing all five species of the Pacific salmon centered in southeast Alaska. The Alexander Archipelago, a narrow band of land and temperate rainforest one hundred miles in breadth to four hundred miles, north to south, nestled between high mountains rising on the east and bathed by an extension of the Japanese current of the Pacific Ocean to the west, contains over two thousand salmon producing streams and forms a cradle for the extant racial diversification of the species. Recent and rapid extinction of salmon races in the Pacific Northwest, and elsewhere, summons special attention: southeast Alaska is a resource of biological distinction, singularily remarkable and found no where else in the world. It has not been given a respectful position and status by American forestry nor recognized appropriately by the U. S. Forest Service in the past for its exceptional position in the world.[1]

A reading of the draft EIS-Port Houghton and Cape Fanshaw Timber sale Project, December 1995 (HODEIS) suggests the potential for serious environmental degradation of fishery resources in the sale area by logging. But after discussing the potential effects no attempt is made to evaluate it, even crudely so. This is very disappointing. Does the Forest Service believe that it can now sell timber and violate the requirement of NEPA in not identifying effects of the proposed actions as imperfect as such identification and analysis might be? Is the Forest Service going to carry this mode of action to the extreme and not be able to say anything certain or quantitatively until after a two or more 100 year-rotations? It has already, since the 1950s, and large scale logging, have had a period nearly one half of a century to make observations!

Has the Forest Service recognized the sale area in which no logging has yet taken place is bordering and near heavily logged private lands for which certain environmental changes are certain to adversely affect fish habitat and that comparisons of the unlogged land of the proposed sale area with the logged lands could yield needed and extensive insights into logging effects upon the fish resources affected by logging?

Background

Understanding effects of logging have a long history and it should not have to be reviewed here. Why should you be reminded of what I know you know and understand. Effects of logging on salmon have been studied in Alaska since the early 1950s. Biological studies of southeast Alaska salmon have gone back

into the 1930s and before. There is much data on salmon, and though some of the interpretation of it is suspect (Enclosure #1)[2] in some studies at Hollis, there are other studies, including Hollis studies and data which are reliable. Further studies in British Columbia and in the Pacific Northwest and California add to the wealth of knowledge. Several compendiums of studies show extensive studies over the years. In addition to studies themselves there is hard evidence of effects emerging, such as we are now witnessing in the collapse of the salmon fisheries in the contiguous United States, from the east and to the west coast (Enclosure #2),[3] all of it. So when I pick up a draft-EIS such as the present one I become highly disturbed and somewhat suspicious and wonder if history is again repeating itself. The integrity of the Jack Ward Thomas's Forest Service is above reproach, but I feel that HODEIS is not confronting the issues nor maintaining the high standards of the Thomas Administration, indeed, it might violate NEPA.

The recent documentation of the need for leave-strips and the studies showing the potential loss of rearing and spawning habitat of streams without proper organic inputs and bank protection as stream systems readjust was a subject of a lecture last winter by Dr. Fred Everest of the Forest Service Science Laboratory. A similar description of this problem was sent to Governor Knowles in March 1995 (Enclosure # 3). I call your attention in the Enclosure #3 (pages 1-3) of disasters waiting to happen. We can do something about it.

The National Forest Management Act of 1976 created a committee of scientists which were to study leave strips and report to Congress. They did in 1979 and their recommendation published in the Federal Register (Vol. 44, No. 88, p. 26625),

> . . . . we concur with the Task Forces's recommendation that the width of this strip be 30 meters, but emphasize that this is a wholly arbitrary value, proposed solely for administrative value."

This arbitrary recommendation of width without substantive studies became law in Alaska in the Tongass Timber Reform Act of 1991, and it was easy to see why. The U.S. Forest Service in Alaska didn't want it. John Sandor, the Regional Forest at the time of passage of NMFA went to Washington D.C. with draft of the first Forest Service Area Guide[4] which told Congress that the Forest Service was doing every thing right assuring them fish productivity would be maintained even increased (Enclosure # 3, page 11). Testifying to Congress,[5]

> . . a point has been made that we should have mandatory leave strips on the salmon streams of southeastern Alaska. Research has

> shown that this would be unwise. Salmon runs have declined on both streams that have been logged, and those that have not been logged. Research has shown that the trees left in leave strips particularly Sitka spruce and western hemlock, are shallow rooted and would likely windthrow . . "

And the opposition continued into the 1980s. In 1983 Regional Forester Barton, who replaced Sandor, cited[6] (1) the Forest Service continued to measure the effect of logging on single streams by the size of the regional commercial catch and (2) argued the Forest Service was protecting fish resources and enhancing them. That, though seeming to mark a significant change in the Forest Service position, was a deception. No specific reference to leave strips was made. Barton stated,

> [Riparian vegetation is important but] . . it makes little difference whether this vegetation is <u>old-growth</u>, second-growth or planted . ." (Text in brackets and underlining added for explanation and emphasis inserted.)

Protection of fish habitat did not recognize leave strips because cutting to the stream bank in fact was allowed of all trees greater than one foot in diameter![7]

And the myth that the forest was being protected by the Forest Service continued to be perpetrated. A "New Perspectives" and a new ecology approach came from the Forest Service pens, while even drawing famous Dr. James Burke of British TV acclaim and science historian to give a dialogue in film *Schedadxu*[8]--an interestingly down-grading and subtly omitting the a major role logging played in the demise of the PNW salmon of how things were going too well in the PNW with a heavy emphasis on effects of dams of course, going to the very edge of credibility of not offending forestry, that is not properly planning forestry also as a partner in the destruction--there are no dams on coastal rivers and they too have declining salmon stock, a subject Dr. Burke was probably unaware of as he read his script. Then appears David Gibbons, of the U. S. Forest Service in Alaska at the base of the ramp to the Juneau boat harbor stating,

> . . . when the commercial harvest declined in the mid 70s people got worried. There were two problems. *First they were simply catching too many salmon. And secondly, there was a problem with the habitat that the salmon were using*. . . the Forest Service attacked the habitat problems. And . . commercial fishermen . . helped build hatcheries and also work on habitat problems. Through these . . efforts it <u>appears</u> we have solved our salmon management

> problems in Alaska. Three out of the last five years have been a record harvest, with a record harvest of 140 million in 1985. We are lucky we caught this problem in time since we were going down the same path as the Pacific North West."[9] (Italics and underlining added for emphasis.)

Exactly what has the FS accomplished, is it the hatcheries or the work on habitat or both. Well it is neither, and there is no evidence things are any better then as they were in the last 100 years or today relative to assuring a stable salmon production. Since Gibbons none are so brazen as to make such a idiotic, scientifically unsound statement measuring logging effects upon salmon production. The runs were in fact better off before any forestry ever appeared in southeast Alaska.

A proposal with considerable biological standing of PACFISH, namely a minimum width of 250 feet is not to be disregarded in view of the past intentions of the Forest Service.

But even the 30 meter "arbitrary" recommendation was probably biased downward to increase the adverse effect upon salmon. One of the committee of scientists was a Dr. William Webb who had written a paper for the 1973 Nixon Commission Report.[10] The Nixon Commission upped cutting the remaining old-growth forest using solely for Alaska the information from Alaska provided through the three paper troika of Sheridan and McNeil (1968) and the Meehan et a., (1969) publications, with the deletion of Salo (1967), discussed and discredited (See enclosure # 1, pages 1-4) and elsewhere. The Webb paper,

> . . . There is a temptation to interpret all obvious signs of habitat destruction as deleterious to fish populations However, all habitat changes do not result in declining populations. In several recent studies it has been shown that salmon populations increased in streams flowing through logged watersheds over a several year period following completion of the logging. Sheridan and McNeil (1968) found an increase in salmon spawners and salmon fry during a 7-year period after logging in two streams in southern Alaska. They believed some of these increases may have been due to changes in the streams not related to the logging operations. However, populations were not drastically reduced in spite of the fact that there was temporary increase in turbidity and sedimentation."

But Dr. Webb was helpful in establishing what both Sheridan and McNeil were so busy attempting to deny and that was the Forest Service tie between how

logging effects looked as measured by escapement populations by citing a earlier paper[11] appearing before Sheridan and McNeil (1968). With the senor author, Bill Sheridan, it reported with excruciating truth that visual estimates of escapements before and after logging were believed sufficient and used to detect logging effects, sufficient even to write a paper about it. So to speak such methods, which had been employed since the beginning of time--so to speak,

> . . . Sheridan, Weisberger and Wilson (1965) studied 12 salmon streams in Alaska that had been visited immediately after completion of logging operations 14 years earlier,[12] and concluded that none of the 12 streams was producing fewer fish than before the logging took place. In one stream logging had apparently increased stability and productivity by channeling the water and making bottom materials more stable."

Dr. Webb and the Commission had received and knew about the abundance of information that protection of the fishery from logging was not adequate in southeast Alaska, yet he produced such a uncritical statement of effects!

So from the beginning adequate leave-strips were not being given a fair treatment in the U.S. Forest Service.

When we back off from our attracting attention to ourselves and power, such as the present proposal which goes or match only the awesome forces of natural disasters of Nature in terms of permanent alteration of the environment, in fact we are not doing much better than our ancestors, and perhaps worse. In the case of some species man co-evolved with them and they became a prey which could sustain and evolve as the predator, man, evolved. In the case of fish and forestry, as well as fishing technology, there is no co-evolution, the predator is evolving while the prey remains static, indeed, is becoming weakened through destruction of the gene pool in hatchery technology. We are actually little ahead of the Maori when they arrived on New Zealand and plundered and eventually exterminated the dodo birds and other megafauna. Our automobiles, and boats, electronic gear are just as lethal if not more so than the spears of the Maori. We fool ourselves as being civilized. We are an arrogant and ignorant species self-centered beyond any respectable animal in the animal kingdom. The antics and foolery of high paid bureaucrats, before high equally paid politicians listening to them is a recipe for disaster. If there is any sense in all of this it has got to be found before it is too late.

The facts are, and were, that the Forest Service did not care about the fishery resources and, in addition to its public relations campaign telling

the public the opposite, it went into the scientific literature and corrupted that where it could (Enclosure # 1).

With this background then what is one to make of proposals to cut into previously uncut and roaded watersheds described in the proposal?

Criticism of HODEIS

P. 3-45, last paragraph, hydrology. (Will there be 160 inches a year, what is it during the summer months?)

p. 3-49. The effects of corporate logging downstream with Forest Service helicopter logging upstream will confound effects and a bad idea to log above corporate lands. That is to say, if stream damage and deterioration occurs due to logging it cannot be attributed to another party. Sources of effects should be kept simple, and two kinds of logging, under two different systems just complicates understanding effects which are difficult enough to determine initially, without complications.

p. 3-54

The largest and most important fish producer of the sale area watershed 341 of 17,291 acres (p. 3-53) does not receive the discussion of the sediment and erosion problems discussed for the other watersheds, but with embeddedness (p. 3-54, 2nd para. in which the term is not defined in the glossary) of 60% it sounds to me that there is a very serious problem of sedimentation facing the Forest Service on the largest fish producing watershed of the sale area!

In summary of the pages. 3-42 to 3-56 Fish and Water Quality it is amazing that logging is proposed when stream stability and/or embeddedness is so openly discussed (For example, p 3-50, WS #321; p.3-51, WS #331; p. 3-52,WS #332; p. 3-53, WS #333;) and then when we get to Lower Sandborn River (p. 3-54) the "most productive stream in the project area" there is no discussion of sediment, embeddedness and erosion! I return to what the initial Area plan stated, productivity would be protected. I will remind you that promise was made when there were not leave strips. Now that you have 100 foot leave strips are you going to tell us that they are adequate and the problem is solved when in fact there is much evidence they should be wider.

It appears therefore by omission of existing sound evidence, data and techniques a case is made that HODEIS has not able to evaluate potential adverse logging effects in the sale area! This is clear because it has not attempted to evaluate such effects, employing, for example, Habitat Capability Effect models (see Upper Carroll Timber Sale, draft-EIS, January 1986, or more

subjective appraisals, which at least prioritize the most damaging effects. What has happened between the writing of the recent Upper Carroll Timber Sale draft-EIS and HODEIS? After omitting the use of models HODEIS apparently wants the reader to believe:

> . . No method has yet been developed that can universally quantify effects of hydrology and water quality changes in freshwater streams on the number of salmon successfully hatched and reared." (p. 4-78)

Because there may be no method that can universally quantify effects does that mean the EIS process is exempt from attempting to quantify those effects that are known, certainly imperfectly, and for which some information is available? The Forest Service has simply failed in its mandate, while pointing out serious potential sediment problems to its credit (Table 4-20, pgs 4-56, 4-78), I might add, but failing to evaluate the evidence they present, and have gone ahead with the timber sale anyway. This is like looking at a red stop light, ignoring it, and proceeding recklessly through the intersection betting there will be no pedestrians or vehicles in the way!

Much of the public, in my opinion, for the past two decades since the first TLUMP of the U.S. Forest Service has been left with the impression that logging would not adversely affect salmon production. In fact, the original TLUMP suggested salmon production could be increased (Enclosure # 4)![13] At the time many of us knew that the Forest Service could not honestly make such statements.[14] Then we learn it is possible to quantify the effects in the Upper Carroll Timber Sale DEIS, then we learn in HODEIS that there still is no way of knowing what the quantitative effects of logging upon fish resources are! Indeed, in those two decades when we knew there was no basis of the TLUMP statement and the Forest Service still, in fact, *can't quantify effects of logging on the number of salmon hatched and reared in freshwater* and the original promise apparently still remains broken, and after two decades in which study was supposed to follow that promise. It is clear the effect of logging upon the survival of salmon and trout will be skirted again. Will we be told again what the above quotation states? When is the Forest Service going to face up to the issue? If it is true that effects of logging can not be satisfactorily quantified, then it is certainly time, indeed, past time, that they do.

Page 4-50, Hydrology

There is a new study to be published in Water Resource Journal about flood effects following cutting by Julia Jones at Corvallis, Oregon. The reference to Meehan's work is suspect because of the problems which editor of Forest Service literature has with the truth. (I have several times over the past

two decades discredited the Meehan et al., (1969) publication.[13] (Myren, 1972[16]; Myren, 1974[17]; Pella and Myren, 1974[18,19]; Myren, 1975[20]; Myren, 1976[21]). Meehan et al., admit one of the few places in their highly edited publications where they did tell the truth that their equipment was not refined enough to detect small changes in streamflow (see Discussion in Meehan et al., p. 37.

The reference to Bartos on the same page should be checked out with Bartos, though he is retired. I did not agree before his retirement with the way the Forest Service had interpreted his statements, as I recall.

Recommendation

There is only one answer to the apparent void in responsibility particularly shown in the HODEIS, and that is, believe it or not, and after all of these years and *if the premise of HODEIS is right* then there is still an absence of critical information. Obviously more hard biological information of the response of fish to the environment is needed. So gather it. And we suggest the solution of gathering such information and to solving the problem of quantifying of logging effects: make comparisons between two, relatively contingent, sufficient large areas each with many watersheds but one subjected to extensive clearcutting, and the other uncut. These two proposed comparison areas must contain similar estuarine and upland microclimate, contain the same kinds of geology and stream systems. Such a plan would remove the common quantitative problem of intractable measurement insensitivity of many statistical designs for fish stream comparisons where within stream population variability hides the effects between the experimental and control streams because the relatively large sample sizes of the experimental and control comparison areas contain many watersheds and streams.

This approach is different from the Hollis studies, the only definitive study in southeast Alaska which initially attempted to get at the evidence of stream sedimentation and its effects upon eggs and larvae in a comparison of a before and after logging setting. Those studies only partially lived up to the initial proposals and the interpretations were in some cases wrong, and from which their effect is still adversely impacting our perception of logging effects upon pink and chum salmon. The Hollis studies studied in three streams (Harris River, Twelvemile Creek and Indian Creek) in detail and erroneously "measured" supposed effects against a background of population changes subject to effects outside the study area, i.e., the variation due to the ocean environment upon "local" population sizes.

The proposed study takes a different tact by eliminating the population sampling problem through using many streams and comparisons of the output of those streams to the output from corporate lands. "Macro" or emergent property comparisons are used to judge effects, e.g., an overflight and

comparison of stream sedimentation as judged aerially between the logging areas and the control area (proposed sale area). The contrasts would lead to more reductive comparisons. Such an approach is uniquely appropriate for the study area where extensive clearcut logging will be complete by 1977. It is a made to order set of circumstances which bears much consideration before its potential value is discarded, if it is.

The sale area under federal control just happened, of course, to be adjoining and near to a privately owned area extensively clearcut and monitored by the State of Alaska, and is nevertheless ideally suited for the comparisons. Indeed, the private industry could provide the U. S. Forest Service a perfect study area at no cost assuming they would permit federal monitoring on their lands! Possible comparisons may be tailored to certain meteorological events, such as floods, periods of high population abundances, or to other detailed questions which may be asked such as sediment regimes. In addition to studies designed for specific objectives other uses come to immediately to mind. For example, when major rainstorms and rain-on-snow events of major floods occur (p.4-50 of HODEIS) the two sample areas may be immediately compared. I have predicted in enclosure # 3 pages 1 and 2 the dire consequences. We must know about such events and how they will impact the future for fish, as well as humans. Damage to stream channels following large floods on cut over lands is expected (See Enclosure #3, the Prediction).

Further Information and Justification

It is clear that State of Alaska funding as well as Federal funds may decrease over the future according to recent trends and currently demonstrated with reduced funding proposed for both the Department of Fish and Game and Natural Resources an impairment of monitoring existing logging effects on State, private as well as Federal lands. It would be unwise to permanently close this avenue to potential vital information for the health of southeast Alaska salmon and trout resources by a premature ill conceived logging in one of the few locations in southeast Alaska were such comparisons may be made.

To HODEIS credit the potential change in ocean currents and the multiple-decadal cycle related to fish abundance (p. 4-77) suggests reduction in fish production may be expected in southeast Alaska soon. The mistakes in management are likely to appear through the background variation during this period. The information obtained from the control and experimental watersheds of the recommendation may reveal important information about the sources of variation in commercial catches, efficacy of hatchery production and the effect of cutting policies.

References

1. This sentiment in the last sentence is mine and are not expressed by Dr. Everest during his December 11, 1995 presentation.

2. Myren, R. T. 1995. Did the U. S. Forest Service care about fish resources on the Tongass National Forest? Juneau, Ak. 13p.

3. Anon. 1995. Salmon: Myths versus knowledge. The Center for the study of the environment. Santa Barbara, CA. Vol. 1, No. 1, Summer. 2p.

4. Also see enclosure #4.

5. The fall hearings in Juneau, Alaska, John Sandor stated (p. 47 of the hearing record).

6. Barton, M.A. 1985. *Old-Growth forests and fish*. *In* Fish and Wildlife relationships in Old-Growth Forests, ed. Meehan, W.R., Merrell, W.R. Jr., Hanley, T. Proceedings of a symposium sponsored by Alaska District , American Institute of Fishery Research Biologist, Northwest Section, the Wildlife Society, and Alaska Council on Science and Technology held in Juneau, Alaska August 12-15, 1982. p. 188-189.

7. Anon. 1988. *Aquatic habitat management handbook*. (Revised). U.S. Forest Service, Region 10. Juneau, Alaska. see p. 64.16a.1a.

. . a. retain all coniferous trees 12 inches d.b.h. or less."

8. Anon, 1987. U.S. Forest Service, Region 5. A VCR tape. *Schedadxw* (Cha-Da-Duch) we are told in the brochure (See enclosure # 5) is an Salish indian name given to the pacific salmon. Also note in the brochure begins by citing Kennel Creek, Alaska.

9. Ibid.

10. _____, *Report of the President's Advisory Panel on Timber and the Environment*. U. S. Government Printing Office, April 1973, 541p.

11. Sheridan, W.L., Weisberger, J.E., and C.N. Wilson. 1965. *The effects of logging on twelve salmon streams in southeast Alaska*. Dept. of Agr., Forest Service, Alaska region. 59p. Mimeo.

12. Zach, L.W., 1951. *Past logging affects little of watersheds.* Tech. Note. 8. USDA For Serv., Alaska Forest Research Center, Juneau, AK. 2p.

13. A draft copy of this EIS was taken to Washington, D. C. by the then Regional Forester, John Sandor and shown around the Capitol. One could conclude after the legislator read all of these promises, why in Alaska, the National Forest Act of 1976 wasn't really needed.

14. Pella, J.J., R. T. Myren. 1974. Caveats concerning evaluation of effects of logging on salmon production in southeastern Alaska from biological information. Northwest Science. Vol 48, No. 2, 1974. 132-144.

15. Meehan, W.R., Farr, W.A., Bishop, D.M., and J.H. Patric. 1969. Some effects of clearcutting on salmon habitat on salmon habitat of two southeast Alaska streams. USDA For. Ser. Res. Pap. PNW-82. Pac. Northwest For. and Range Exp. Stn., Portland OR. 45 p.

16. My testimony, the "Findings of Fact # 24" at the 1970 Civil No. A-16-70 Statement presented in Sierra Club *et al. vs.* Clifford Hardin, *et al.* U.S. District Court, District of Alaska, Juneau, Ak. 1p. The Sierra Club 1972 statement on logging effects on salmon and trout sent to Dave Gibbons, Fishery Research Institute, University of Washington, November 28, 1972 contained similar criticism.

17. Correspondence to R.M Wilson, from R.T. Myren February 24, 1974. 2p. (I was writing as Chairman of the local group of the Sierra Club.)

18. Pella, J.J., R. T. Myren. 1974. Caveats concerning evaluation of effects of logging on salmon production in southeastern Alaska from biological information. Northwest Science, Vol 48, No. 2, 1974. 132-144.

19. Pella and Myren (1974) cited the Sheridan Affidavit Civil No. A-16-70 Statement presented in Sierra Club *et al. vs.* Clifford Hardin, *et al.* U.S. District Court, District of Alaska, Juneau, Ak. 15 p. Sheridan and McNeil (1968)* initially employed and published the same argument that Meehan et al.,(1969) used.

*_____. Some effects of logging on two salmon streams in Alaska. J. For. 66:128-133.

20. Myren, R.T. 1976. A statement charging inadequate protection of the salmon fishery resource by the U. S. Forest Service in southeast Alaska. National Forest Problems in Alaska. Hearings before the Subcommittee on Environment, Soil Conservation, and Forestry of the Committee on Agriculture and Forestry, United States Senate, the Congress, second session. August 18, 1976, Juneau, Alaska, August 21, 1976, Sitka and Ketchikan, Alaska, August 21, 1976. p. 175-185.

21. Myren, R.T. 1976. The evidence of damage to the salmon and trout resources of southeast Alaska. National Forest Problems in Alaska. Hearings before the Subcommittee on Environment, Soil Conservation, and Forestry of the Committee on Agriculture and Forestry of the Committee on Agriculture and Forestry, United States Senate, 94th Congress, second session. August 18, 1976, Juneau, Alaska, August 21, 1976, Sitka and Ketchikan, Alaska, August 21, 1976. p. 123-161.

Sincerely,

Richard T. Myren, Ph. D.
Chairman of the Juneau Group of the Sierra Club
March 25, 1996 (Further edited after submission; endnotes # 8 & #9 added.)

four enclosures

file__Hodeis2 (formerly file--sierra5)

45 y Encl. #3

17 December 1979

USDA
Tongass National Forest
Chatham Area
P.O. Box 1980
Sitka, Alaska 99835

Gentlemen:

The Forest Service has repeatedly stated in the Tongass Land Management Plan and the Southeast Alaska Area Guide that it will:

(1) assure that the management and protection of natural stocks and habitat will remain the primary means of increasing or maintaining fish production (SAAG, p. 78);

(2) protect and/or enhance fish resources and their habitat (SAAG, p. 79);

(3) prevent man-induced habitat impairment and repair naturally-occurring habitat damage (SAAG, p. 79);

(4) maintain the capability of the land and water to produce and sustain levels of fish populations mutually desired by the Forest Service and Alaska Department of Fish and Game (SAAG, p. 79);

(5) provide for a sustained yield of fish populations through a substantial increase in habitat management (SAAG, p. 78);

(6) assure that the interdisciplinary team will specify appropriate Fish Habitat Units and prescriptions necessary to meet the fish habitat goals set forth in the SAAG, (SAAG, p. 81);

(7) implement SAAG policies to adequately protect the present level of natural productivity regardless of other uses and TLMP, p. 128);

(8) assure that even under LUD IV the biological productivity of fish streams will be protected in all allocation and management decisions (TLMP, p. 54);

(9) maintain a policy that the biological productivity of fish streams will be protected in all allocation and management decisions (TLMP, p. 54);

(10) regard stream productivity as a value which must be protected, and therefore allocation decisions will in no way harm fisheries (TLMP, p. 50);

(11) continue to view the biological productivity of fish streams as a value which cannot be compromised (TLMP, p. 49);

(12) strive to preserve the biological productivity of every fish stream on the Tongass .. (TLMP, p. 92);

(13) implement SAAG policies designed to protect existing salmon spawning and rearing areas (TLMP, p. 174).

The foregoing goals and policies of the Forest Service state clearly that there will be no significant damage to fish resources on the Tongass National Forest through logging activities. Natural rearing is stressed as the primary basis of production which will be protected.

Enclosure #3.

Proposal to Assess Long Term Effects on Logging: Attention on Native Lands.[1]

The rapidity of the Native logging in the Port Houghton area provides an excellent opportunity and starting point for potentially disturbed logged watersheds to be compared to a baseline. With the adjacent native logging occurring approximately within the past 20 year period the effects of forest succession on a large amount of regenerating timber of approximately the same age could be followed and compared with the baseline. (Perhaps by fifty years the streams in the native area would look drastically different from those in the baseline, perhaps they would not. Southeast Alaska may not have many discrete large scale logged units where such comparisons to a adjacent similar uncut area in pristine state may be carried out.)

The baseline would also be employed for comparisons between other disturbed lands, not necessary from logging. It would also be employed as calibration forests for expert field review methods and training. With different stream systems and natural variations necessary for the expert review process of the Forest Service that these forest comparisons would also be part of an excellent training facility for all district foresters involved with effects of logging.

The research in these study areas would use the new concepts, such as the expert field review in conjunction with more conventional older methods to increase understanding of logging effects on fish resources. The comparison units may be expected to contain similar estuarine and upland microclimates and the same kinds of geology and stream system attributes. Possibily "macro" or emergent properties, which according to modern theories, may result from the complex integration in which the "sum appears to be more than the parts" which will provide new challenges and possibly leading to new avenues in research. Expert field review methods releives dependence always on costly large sample sizes of many sampling designs to control variability, the bane of early day comparisons and the common quantitative problem of intractable measurement insensitivity where within stream population variability hides the effects between the experimental and control streams. Assuming both populations from each study area migrate to the same areas in the sea, the spatial and temporal contingency of the study areas remove the effect of differences in fishing morality affecting escapements. Differences in effects may be reducted from interannual variations between the populations from the two

comparison areas in sharing the estuarine environment and similar oceanic conditions. The populations from the comparison areas occupying the same locations (similar ocean survival and feeding conditions) after leaving the steams may reduce differences in variation within the two populations. The comparative observations of the experts to calibrate differences between baseline and the experimental samples could also be used as research tools. For example, the in-depth Wood-Smith et al.,[2] type analysis would be applied. In comparison with Hollis studies no longer would the studies be limited to commitment of large resources to one or two unlogged streams in the proposed plan. The greater flexibility of the experimental designs would no longer require rigid commitment to long-term budgets either. Comparisons could be made when circumstances may require it, though long-term budgets are better, of course.

The formation of the comparison units would help maintain a focus on the broader region wide monitoring program of effects of logging. Rather than addressing complex sampling as suggested previously these comparisons units could also include quick but vital observations of sudden events such as massive flooding, or rain on snow events (p. 4-50 of draft Port Houghton Forest Service EIS), or such as occurred at Sashin Creek , Little Port Walter in the fall of 1941 (described previously). These comparisons could be accomplished, for example, by overflights and comparisons of obvious indicator variables of disturbance, such as suspended sediment as judged aerially ! real time between the logging areas and the control area (proposed sale area). Such data and contrasts could lead either way to more reductive comparisons on smaller micro-scales following certain effects in detail or to perhaps macro, holistic comparisons and impressions and to new access or to present, but seldom employed more "subjective" avenues to possible improved understanding. The monitoring program may be designed to include different stream types targeted in advance to respond to certain types of meteorological events of special interest, such as effects of major rainstorms, freezing, periods of high population abundances, or to other detailed questions about differences between the comparison units.

This research and monitoring approach is of course very different from previous studies. The Hollis studies--the only definitive study in southeast Alaska, or the more extensive longer termed Carnation Creek study in British Columbia were the most significant studies in terms of costs and manpower. These studies employed quantitative procedures which were basically reductive by nature. While the Hollis studies, lasting five years, from a quantitative perspective failed (but not completely), the more complex studies over twenty years at Carnation Creek in British Columbia contributed much more to the understanding of logging effects. By initially attempting to get at the evidence of stream sedimentation and its effects upon eggs and larvae in a comparison of before and after

logging comparisons the Hollis sample sizes had to be small (only on three streams) resulting in insufficient measurment of between stream variability for good comparisons (there were other reasons also for the problems). The scales of the comparison areas proposed here, for example, must be large enough and including many streams so chances of single major events such as a landslide could be expected to occur within the comparison units. The Hollis studies which made great contributions to life history studies only partially lived up to the initial proposals of measuring such quantitative effects of logging. (The results of the Hollis studies purported to be quantitative are still adversely impacting our perception of logging effects upon pink and chum salmon. The Hollis studies in fact also failed, because not all the variables were measured, e.g., habitat, and coho production.)

The proposed study plan therefore takes a different tact from the Hollis studies and the Carnation Creek studies in British Columbia, both extremely expensive because of the micro-quantification of the comparisons. The present proposal eliminates much sampling problem through using many streams for quick, low cost comparisons between the public and corporate lands. Of course more expensive studies are also possible, and more desirable.

The Port Houghton sale area as study area therefore provides a unique opportunity which will not return. The sale area under federal control just happened, of course, to be adjoining and near to a privately owned area extensively clearcut and monitored by the State of Alaska, and to date has remained unlogged. The commerically accessible timber on all Native lands have now been almost completely clearcut and the early stages of forest succession already begun thus precluding access of studies to the past succesional stages. The single simplest contribution could be simply allowing the comparison units to remain undisturbed over the next century and watch the differences which could develop between the comparison units. Private industry could, in effect, provide the U. S. Forest Service a perfect study area at no cost assuming they would permit federal monitoring on their lands. The people of Alaska and their fisheries would all benefit and be richer for it with the knowledge of how logging has affected the private corporation lands as compared to the unlogged baseline comparison area.

Impairment of monitoring of existing logging effects on State, private as well as Federal lands may occur due to recent trends and currently demonstrated with reduced funding proposed for both the Department of Fish and Game and Natural Resources. Furthermore, logging in one of the few locations adjacent to extensive logging, the Port Houghton sale area, would permanently close the avenue to potential vital information to the health of southeast Alaska salmon and trout resources. It could be ill conceived and unwise.

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file hough1

Honorable Tony Knowles
Governor
State of Alaska
Juneau, Alaska 99801

Dear Governor Knowles:

Thank you for the reply to my letter (Enclosure #1a & 1b) about Senate Bill 2539 and that I send it to Senator Murkowski.

My correspondence with Senator Murkowski has always been minimal and since the Republican reckless attack on regulations I have decided finally to excise myself from further contact with the Alaskan delegation. They have allowed, with the aid of the U.S. Forest Service, the timber resources of the Tongass National Forest to take precedence over the extremely valuable, and for most National Forests, unique salmon resources. The delegation is a living example of why campaign reform is sorely needed (Please note that campaign reform isn't in the Republican Contract for America).

I am sorry I have to mail it to the Senator. It is addressed to you *pro forma*. The original and present letter will be made available to anyone. I welcome anyone to disprove or correct the arguments of the prediction on its merits.[1] I will not debate my personal statements on policy and politics.

The Prediction.
I have written this letter in order to make a prediction about the health and productivity of southeast Alaska salmon on that portion of the National Forest and private lands subject to past logging. The Forest Service has through logging practices jeopardized the salmon spawning and rearing resource and placed it in a position from which it is not likely to recover. I predict in time we will see the marked decline, already underway, of populations of salmon returning to streams from logged watersheds.

The Problem.
Biological integrity of a natural stream ecosystem depends upon steady-state inputs of terrestrial input of solid organic material[2] and inorganic material and dissipation through biological decay and downstream movement under the action of streamflow. The removal of trees on one or both sides of the stream changes the solid organic inputs and sets into motion new changes in streambed configuration, width, depth, slope, composition of streambed materials, and pools and riffles. These changes are presently occurring because past logging

practices have removed large old trees from the sides of hundreds of miles of southeast Alaska prime salmon producing streams.[3]

Southeast Alaska lies in a very variable climatic zone in which major rainstorms and floods occur. On unlogged watersheds major floods caused severe damage to salmon spawning and rearing habitat. I base my prediction on observations of occurrences of past flood events in southeast Alaska and northern British Columbia, a few of which are listed:

> (1) A rain on snow "event" occurred on Sashin Creek at Little Port Walter, Alaska on 9 January 1942 and caused major streambed damage, bank erosion and restructuring of the stream system. It occurred on a pristine watershed, unlogged and with no roads, which is in one of the wettest precipitation belts in southeast Alaska (227.8 inches precipitation per year) and a stream adapted the frequent floods. The biologists at the stations reported,
>
> . . The melting of 4 to 7 feet of accumulated show in the watershed together with heavy rains produced a freshet that not only thoroughly scoured the stream bed but also moved large logs along the banks that had not been dislodged for many years.
>
> . . . Millions of developing eggs and young were washed out of the gravel . . . . Thousands were caught in the grass and debris but most of them drifted out of the stream."[4]
>
> The biologists at the Little Port Walter station at Sashin Creek predicted from the weather data and an immense counted spawning in 1941 of 84,304 pink salmon a return of 28,000. The actual counted return was 14,783 and down 56,305 pinks or a 5.7 fold decrease compared to the parent year 1941!
>
> (2) During the 1930s a major flood in Staney Creek, Prince of Wales Island, Alaska transported complete trees one of which destroyed a Federally maintained fish counting weir located on the stream.
>
> (3) Major floods were observed in 1917 removing eggs and larvae from spawning beds of the Skeena River, British Columbia, Canada (Neave, 1953).[5] The Nass River also in British Columbia overflowed in 1917 and drove natives from their village (though reoccupied later, see Shotridge, 1919).[6]

The knowledge of cutting to the stream banks and such events similar to those as listed here has alarmed people concerned with salmon all along the Pacific Coast.

Some Characteristics of the Effects on Streams.
The direct quantitative relation between large organic debris and rearing fish abundance dictates the need for protection and future production of large organic debris around fish producing streams. Cutting streamside trees robs the streams of the basic stream structuring element for stabilizing sediment movement and creation of fish habitat.[7] Large anchored stable debris on appropriate upstream reaches also dissipates flood energy through massive trees one hundred or more years old and reduces destructive effects downstream. I refer the reader to the Koski paper, enclosure #2, for further details applicable to southeast Alaska and to Rosgen for additional details.[8] Where cutting has left streamside timber in inadequate amounts such leave strips risk becoming premature blowdown and hence rob future sources of recruitment of new organic debris as stream habitat debris deteriorates and disappears.[9] (Such cutting also preempts future restoration of use of large trees, such as uprooting them, to form the stable habitat structure.)

The selective removal of streamside trees is unique and historic. The severity and wide extent of these changes have not been present southeast Alaska since the last ice age. Also major salmon producing streams are poor in large organic debris because of stream clearance activities occurring since the very beginning of concern for protecting salmon production. These ill conceived attempts imagined to correct deleterious blowdown effects may, in fact, have created the unwanted effect. Blowdown[10] from logging activities has in the past appeared unsightly and clearing (the effects of blocking salmon migration were the exception rather than the rule) of streams became popular without studies to determine the effect on fish habitat nor studies show blowdowns create poor habitat for the fish. For example, on Survey Creek, Kosciusko Island, on Sea Otter Sound near Prince of Wales Island logging to near the stream bank occurred in 1941 and stream cleaning occurred even though the pink run was large at the time of cleaning.[11] Perhaps there are no major fish producing watersheds in Alaska which have not already experienced some "stream improvement" along lower reaches near tide water and this question has already escaped finding an answer.[12] Upstream, in less accessible reaches, pristine conditions are present and the streams appear well adjusted to the inputs of debris and cleaning appears unnecessary.[13] Recent studies in Washington and Oregon also show stream cleaning of large debris reduced the species richness and numbers of fish present compared to debris collections which were uncleared.[14]

The chronic degradation of fish habitat through cutting to the streambank, and well documented throughout the United States, not only the Pacific Northwest, can only be reversed by stopping such cutting and allow the repairing process to begin. The slow growth of spruce and hemlock and the necessary blowdown and senescence proceeds on scales of centuries. For the present, one therefore may only watch continual

degradation and ecological backlash while streambank and near streambank trees achieve sufficient age and mass to become large sized stable and senescent members of the community, let us say the massive *centurions* and *post-centurion* guards, keystone species of the ecotone,[15] which bring and maintain stream structure as they fall--sometimes the rooted end remaining on the land, sometimes the whole tree partially buried in the streambed--and recreate the necessary forest-stream ecosystem and fish habitat. In the style of David Attenborough's *The Private Life of Plants*, one could imagine in the minds-eye a time-lapse speed-up of the march of living young trees into the riperian zones after cutting and the growing to the towering centurion giants once gracing the stream banks and as occassionaly one falls to add stream debris.

The present situation is therefore of degradation enhanced by sudden flood disturbances and certain predictability over the long term. A local example of effects of cutting on stream morphology and habitat showing the adverse effect of such "blow-outs" and "unraveling" on channel morphology and fish habitat may be found at Harris River, near Hollis, a drainage which was logged and roaded (1956-1962). The effect of such degradation due to logging was clearly evident in the summer of 1993 (photographed at that time) more than 30 years after logging. Additional effects may be seen on Harris River of further fish habitat destabiliz-ation, bank erosion and disturbance of existing streamside trees following an intense rain storm of fall 1993 and flood particularly below the bridge to Hydaburg. (What if the "floods of the century" of the week of March 12 in California had occurred in southeast Alaska?)

We may with confidence, therefore, and in time and, at least, for some of us, see sudden major "blow-outs" following floods at levels perhaps similar to the one observed at Sashin Creek in 1942 but with even more damage because of a previous history of logging. Otherwise, the cumulative persistent effects of ever present slow "unraveling" through organic decay and deterioration of stream structure and fish habitat will be observed.

Why Current Salmon Production Shows No Evidence of Damage.
You may be told at this point after reading my prediction, (especially should you relay this letter to Murkowski to determine an answer that his friends in the timber industry will use), that you merely have to look at the large sizes of recent commercial catches of salmon in southeast Alaska to feel that all is well on the logged watersheds. But the argument which they have used to establish that claim is patiently unfounded and has been thoroughly discredited.[16]

The resource was in good shape as the Forest Service would once say. But how would it know. To detect even a large effect of logging on a single stream using escapement is improbable unless prohibitively expensive sampling designs are employed or only extreme catastrophic sized changes are of concern. For example, let us assume we have a stream in which

we have observed the natural escapement of pinks salmon for 5 years before logging, the watershed is cut, and then we make the observations again for 5 years after logging. If a judgment is made on the known variability of the escapement the error in judgement is horrendous. For example,

> If one chooses the probability of making a mistake (there is an effect of logging when, in fact, there is none) to occur 10 times in 100 trials (alpha = α = 0.10), and using the known variability in escapement, then, for a stream observed 5 years before logging and 5 years after logging *a real decline in mean escapement of 50 % will go undetected 75 % of the time*. That is, if sets of 5 before and after logging observations could be replicated 100 times, a difference of 50 % in the mean number of spawners between the before logging and after logging comparison 25 results would indicate the decline and 75 results would indicate no decline. (see pages marked in Pella et al., of Enclosure #3). Also see footnote 9.)[17]
>
> (If the 5% significance level is used (α = 0.05) instead of the 10 % level thus when a 50% level is not detected 75% of the time the 5% level of testing would not detect it about 83% of the time!)

That is, even when the runs decreased catastrophically by 50% there is a good chance it would not be detected! You may ask if such a large change of 50% occurs in production wouldn't it be recognized? Yes, it would be but not over 5 years of before and after observations and then only 25 % of the time (I hope you observed the unsettling uncertainty here because of the 25-75 percent split between in believing an effect exists or not, when in fact there was an effect). This is because the decrease in annual productivity (measured by escapement in the present case) is lost in the natural variation or noise of the annual fluctuations in the levels of production. Over a greater period of time, if an adverse effect is present, a gradual decline would begin to appear and eventually the productivity would stabilize at the 50 % reduction. That slow, wearing, decline would be the period of uncertain economic activity. Eventually the vitality of the fishing industry would wane and so forth until it dawns upon every one that the fishery has been lost. (Doesn't this sound familiar?).

Smaller changes have less probability of being detected. A decrease, for example, of only 10% of the run is a significant economic impact. It would be extremely hard to detect, and a longer term period of observation would be required for it to be noticed and appear in the catch. When the argument that one can judge the health of a run to a stream by the escapement is extended to using commercial catch and an index to such escapement and using it as a measure of the effect over all logged streams of southeast Alaska the argument is ridiculous if it

were not so serious and the fishery would be hurt so seriously under such egregious misconceptions.

But such a toothless argument against exacting scientific logic has been an old story.[18] For example, it appeared in the first published document introduced in the spring hearing record of the Congressional debate in 1976 over the National Forest Management Act in a 1969 Forest Service publication.[19] It claimed spawner populations could detect logging effects, and finding no effects claimed logging was not damaging the fish resource.[20] The publication, complete with cover page, appeared in the esteemed position of the first published document of the fall hearing record. It had been introduced to the record by the then famous Senator from Idaho, James McClure, a well known advocate of the timber industry. But the 1969 publication had been placed in the hearing record after the staff of the Forest Service in Alaska knew the document had been discredited by Pella et al., 1974 (See last text sentence page 144 of the publication of enclosure #3). I had also personally explained to John Sandor, then the Alaska Regional Forester and before he went to Washington D.C. to testify at the hearings and for which both he and his staff had been apprised of the Pella et al., criticism. The Forest Service had been a party to a deliberate attempt to misinform Congress.

Why the Unexplainable Variation in Salmon Production?

The major decline in productivity on logged watersheds has not been obvious, as measured by adult population indices because of short and long term unexplained fluctuations in ocean productivity affecting the sizes of fish populations, survival rates and size of fish. Large long term changes in ocean populations of fish are well known.[21] The fluctuations which includes the effects of fishing overwhelm most freshwater effects upon production and their causes are often not satisfactorily understood.[22] And furthermore there is evidence that abundance may be determined in fresh water before the eggs are deposited, namely that previous conditions, including the ocean, determine size of pink salmon and that size is related to time of spawning which then becomes a main determinant of survival in fresh water because earlier spawners may be in more favorable survival conditions.[23]

The causes of variability in spawning populations of salmon arising from fluctuations in ocean productivity are complex, puzzling and large. Cycles of abundance of salmon on the east and west sides of North Pacific ocean may appear in phase[24] but asynchronus for selected populations, such as between Bristol Bay Red salmon and Frazier River Red salmon.[25] Naturally spawning coho populations and productivity off Oregon and Washington shifted from high ocean survival and production prior to 1976 to low production but after 1976 it reverses with high production in northern British Columbia and Alaska waters and low production to the south.[26] Production of pink salmon declined after early 1941 to middle century in southeast Alaska while it was high

further south.

Cycles of abundance in the ocean appear associated with the Aleutian low pressure system[27] and with El Niño phenomena. Small El Niño cycles have been identified to occur 2 to 7 years with an average of about 4 years.[28] Closely related to El Niño phenomenon are the Southern Oscillation (SO) over the tropical South Pacific Ocean with an irregular oscillation period in the range of 2 to 7 years[29] and the two phenomena are closely connected and known as ENSO.[30] Major ENSO events have occurred within a period of approximately 20 years.[31] Intrusions into the Gulf and Alaska of warm water carrying southern species of life occur. During the low and declineing pink production in the late 1940's and 1950's an exception to the decline was heralded by albacore[32] caught and sold in numbers in Ketchikan in 1948. A large pink salmon run occurred in 1949.[33,34] An apparent high fresh water survival of pink salmon migrating fry in 1950, 1951, and 1952 predicted a large return from the ocean in 1953[35,36] but the return was a disaster (the lowest return at the time) and appears to have taken place in the absence of an El Niño. However new changes also appear in store. The major 1982-1983 El Niño, for example, has had no distinct termination which historically is unprecedented. It is reported to make professional weathermen to now speculate if the Green House effect is involved (Enclosure # 4).[37] If GH is true, then the effect of increased evaporation may be more water returned to earth and an increase in flood frequency and size in such high precipitation areas such as southeast Alaska. (Since the original of this letter general consensus within the scientific community of the reality of GW has occurred.)[38]

Ocean productivity expressed in numbers of salmon can also be expressed in size of salmon further demonstrates the complexity of effects and variability in the ocean. Chum salmon have declined in size from the late 1950's in Alaskan waters and the western Pacific and the numbers have increased though it is most developed for the western Pacific stocks.[39] Some pink salmon populations when large tended to be composed of small in sized individuals and migrate late, and when large in body size then to be small in numbers and early in migration.[40] There is evidence that large pink salmon migrate from sea to spawn earlier and smaller salmon hence deposit eggs earlier in spawning gravel and develop faster because of warmer temperatures and hence survive over the winter better compared to later spawning pink salmon.[41] Perhaps even intraspecies competition occurs. From 1926 through 1937 and in 11 of the 12 consecutive years (1931 was the exception) for both odd and even year cycles when the runs of pink salmon were large the fish were small and when the runs were small the fish were large.[42]

After Ocean Residence.

The uncertainties and the complexity of ocean productivity therefore merely impresses upon the mind the importance of quality of the freshwater environment and the effect of stream degradation. When the natural populations return to spawn from the ocean, the one final and

ultimate environmental factor that awaits them is always the quality of the spawning environment, whatever the former environmental complexity of the ocean ecosystem, the size of population or size of individual and time of arrival to spawn.[43] Cushioned by the low density the widely dispersed populations in rearing and feeding areas of the ocean become focused into limited areas in fresh water requiring stringent and narrowly defined environmental constraints for survival. The entire population is invested in high density, local concentrations of eggs, totally at the mercy of a potentially hostile environment. There, resting within 6 to 10 inches of the stream bottom, the next generation, the entire population, in the form of fertilized eggs and developing embryos, must remain and experience over an entire winter the possible effects of stream dewatering, freezing, siltation and suffocation, dislodgement from gravel shifts, disease and predation.

Will the near 1800 initial eggs pink salmon female and male-female pair be sufficient to bring back another pair to maintain the population level at their parents level? And what of the determents of stream structure, perhaps the slow widening and channel changes of the stream or a black root snag plowing through the bed remorselessly, loosed out of a stream bank initiated by a mindless environmental policy concocted decades earlier and sending the seeds of a new population into the past. At the end of the oceans intransigence there is then another unforgiving hurdle in freshwater to which man has considerable responsibility and some control, and upon which the future of the populations depend, the ultimate quality of the spawning environment. But now in many major fish producing watersheds it is seriously damaged.

Some Causes of Streamside Habitat Destruction.

U. S. Forest Service.

The fact of the matter is that the U.S. Forest Service has betrayed the public and fishermen and fisherwomen.[44] It assured the public in the middle 1970's through a remarkable document, the Southeast Alaska Area Guide (SAAG) that the fish resource would not be damaged, and claimed even enhancement of the runs (Summary in enclosure #5). But leave strips were not part of that protection and enhancement. The draft SAAG also accompanied Regional Forester John Sandor to Washington D.C. to testify at the National Forest Management Act spring hearings of 1976. In the fall hearings in Juneau, Alaska, John Sandor stated (p. 47 of the hearing record),

> . . a point has been made that we should have mandatory leave strips on the salmon streams of southeastern Alaska. Research has shown that this would be unwise. Salmon runs have declined on both streams that have been logged, and those that have not been logged. Research has shown that the trees left in leave strips particularly Sitka spruce and western hemlock, are shallow rooted and would likely windthrow . . "

Nothing in the Regional Forester's statement is correct, without correcting qualifications of which none were made! And a long time and a lot of damaged occurred through Reagan and Bush Administrations until leave strips became mandatory but then only enforced seriously until after the reorganization of the Forest Service in 1992 under the new Administration. In regard to the veracity of the 1976 draft SAAG claims to Congress in 1976, and to the public in general latter, it was hogwash! They intentionally substituted the word enhancement for degradation!

The State of Alaska.
A request for protection from logging of the watersheds of thirty of the prime salmon producing watersheds of southeast Alaska was made to the Forest Service by Clarence Anderson (the first Commissioner of the Alaska Department of Fish and Game of the newly formed State) in 1961 (Enclosure #6). It was denied. The second Commissioner, Walter Kirkness, repeated the request in 1962 (Enclosure #6). It was also not granted. The Forest Service was just too powerful, arrogant and incompetent, and forestry too greedy.

The State's failure to gain adequate protection of fish stream habitat under the 1978 Udall legislation of Congress was a large mistake. The State had been faced in 1975 with the lowest runs ever recorded since the history of the fishery even below the lowest level previously recorded by the once, much maligned, Federal control. A study commissioned by the State of Kramer, Chin and Mayo, Inc.[45] concluded that the regional effect of the middle 1970 decline in salmon production was due to overfishing though other inferior environmental factors on individual streams might have also have been at work. Kramer et al., did in fact identify habitat degradation from improper logging occurred on a localized basis. Because low populations equated to the effects of overfishing could not show the effects of logging they provided the screen for Regional Forester Sandor and later by Michael A. Barton replacing Sandor to hide local logging effects--on the discredited basis the sizes of such populations could show effects. A criticism of the ADFG letter to the late Senator Jackson, lawyer Jim Clark's attempt to influence United Fisherman of Alaska with the ADFG misreporting of the problem, and my response reviews the basic problem of failure of identifi-cation of hidden deleterious effects of logging on the fishery resource is shown in enclosure #7. These letters document what has already been said. (Dams on the Columbia River may have played a similar role as the ocean in being a source of confusion, as well as a real effect upon the populations, and hiding actual effects of logging.) The discredited argument of no apparent effect of logging upon salmon production was becoming tiresome even by 1978 and it was still being applied by the Forest Service and supported by the State of Alaska, and always by the timber industry.

Federal Hearings and Recommendations on Leave Strips.
The need for leave strips was well recognized in professional fishery

circles by 1976 and presented in the testimony of the National Marine Fisheries Service for the NFMA hearings or a good 12 years before National legislation was passed mandating them. The 1976 testimony presented by Dr. Kay Koski appeared in the same hearing record as Regional Forester John Sandor's testimony against them.[46] More argument against leave strips appeared in the hearing record by James Rynearson of Alaska Pulp and Lumber Co, Sitka, Alaska (pages 69-74). Later examples of opposition continued. For example, in 1983 the Regional Forester Barton, who replaced Sandor, cited[47] (1) the Forest Service continued to measure the effect of logging on single streams by the size of the regional commercial catch and (2) argued the Forest Service was protecting fish resources and enhancing them. That, though seeming to mark a significant change in the Forest Service position, was a deception. No specific reference to leave strips was made. Barton stated,

> [Riparian vegetation is important but] . . it makes little difference whether this vegetation is <u>old-growth</u>, second-growth or planted . ." (Text in brackets and underlining added for explanation and emphasis inserted.)

Protection of fish habitat did not recognize leave strips was because cutting to the stream bank in fact was allowed of all trees greater than one foot in diameter![48]

The Forest Service had <u>not</u> abandoned its position of cutting to the stream bank and was still allowing cutting. Logging operations from the beginning of cutting through the 1980's into the 1990's was to the streambank for which the two major pulp mills[49] and several sawmills had benefited from for over thirty years or more. Part of the logs taken from the forest were from cutting to the streambanks in some of the best fish producing watersheds in southeast Alaska. And it was still allowing cutting to the streambank. Further-more, the 100 foot minimum required by law was arbitrary and by no means necessarily adequate. The Forest Service reform consisted of a few segments of the streams with leave strips in which trees less than one foot in diameter were protected. And cutting was intense. For example, by 1992, Staney Creek, one of the major fish producers of southeast Alaska, and a stream on the Commissioners list requested for protection, 88.5% of the riparian zone had been cut![50] The Forest Service could not allow even a fringe of trees to be left along much of the streambanks of this important salmon producing stream.

Native Matters.

The 1970 Claims settlement, support of native rights, and subsistence under Federal regulation until State of Alaska demonstration of a fairness doctrine all certainly deserve support but the State leave strip regulations do not. The timber industry attorney, James Clark, and others of the timber industry successfully argued against 100 foot minimum strip (and mandated in 1991 by Federal law on National Forest

lands in the Tongass Timber Reform Act) to 66 feet in State law for private lands; States lands 100 foot minimum. What kind of protection of the fishery resource is this? If one looks at native logging along streams it is a disgrace, and present practices required by the Forest Service, if TTRA is obeyed, in comparison, is like the difference between night and day, though a dark day. I am sure many of the more reticent natives must consider it a disgrace. (I presume tribal law and customs discourages public protest.) The transfer of the National Forest lands into private ownership will certainly further degrade the fish production potential of Alaskan lands, and decrease the number of naturally reared fish available to the commercial and sport fisheries. In the heart of a major private native logging country it is a fact that the largest counted run of pink salmon recorded anywhere in Alaska occurred in 1930 by weir count at Klawock Creek Federal weir, next to the village of Klawock on Prince of Wales Island, 1,407,912 million pink salmon and 13,240 chum salmon! Such large runs are no longer apparent. The three spawning streams emptying into the lake from which Kalwock Creek originates have been logged. The smallest of the three, No Name Creek experienced landslides in the fall of 1993 which damaged fish habitat.

Since the inception of the non-native fishery of the late 19th century Federal management had occurred during the times of the great runs in Klawock Creek.[31] If runs have declined the basic cause was not due necessarily to early Federal management or later State management but human greed, the canneries and the fishing industry which caused the problem in the beginning. (The mouth of Klawock Creek can be seen from the village.) The runs as well as the forests were in better shape before the presence of "white man" and his fish traps (of course). But there must have been great fluctuations in salmon numbers since the inception of knowledge of the runs. And, of course, no one from the village ever went above the "no fishing markers" (and got those fish that escaped the traps). But the problem which is brought on is not one created by the native culture but of the invaders. But this does not excuse the natives of responsiblility.

Regionally, steelhead trout and cutthroat trout both of which rear in fresh water which already appear to be at low abundance cannot be helped by stream habitat destruction through logging.

Summary.

Natural rearing and production of salmon from watersheds logged to the streambanks will decline on time scales of centuries through natural causes because of removal of streamside vegetation and will continue until the natural levels of large organic debris inputs become restored. These effects are wide spread in both the Pacific Northwest, British Columbia and timbered coastal Alaska, particularly, southeast Alaska where traditional logging had been practiced.

The physical evidence of deterioration will proceed at low levels punctuated by unexpected abrupt major change and ratchet to higher level of damage after each major flood. The quantitative biological effect of the deterioration on salmon production will continue as stream structure simplification proceeds, though hidden for a while, through natural variations and noise generated primarily by ocean productivity. It will emerge in time as new lower levels of productivity of the fishery. This process is on-going now, ". . as sure, and as clean a fact, as there ever was a fact,"[32] High runs on logged streams which would have been higher than presently occurring appear already as real but unobserved deficits in the existing catchs.

The blame for such events can be focused on political and economic pressures combined with the Forest Service and the Alaska Congressional delegation's blind, haughty, and arrogant commitment to cut to the streambank in spite of frequent public pressures and complaints (once common from native communities) about the activity occurring since logging began in Alaska. Congressional action of mandatory leave strips supported by the Federal agency, the National Marine Fisheries Service of NOAA, and not the Forest Service, resulted in the single most important act to protect the resource (though there is a question whether such strips are wide enough). The U.S. Forest Service though in opposition to adequate leave strips had been better with land protective policies than the State of Alaska and State regulations for private lands.

The British scientist, and intellect, C. P. Snow wrote,

> . . If the scientists have the future in their bones, then the traditional culture responds by wishing the future did not exist. It is the traditional culture, to an extent remarkably little diminished by the emergence of the scientific one, which manages the world." (From The Two Cultures and the Scientific Revolution (1959))

C. P. Snow was not referring to the traditional native culture, of course, but to the culture of the industrial society, if not to its origins. Therefore, it is up to you to either put your heads in the sand and let someone else manage the world or to face the problem and stand up against disastrous logging policies and do what can be done with what remains.

The legacy of long term salmon stream destruction which no amount of high Congressional pronouncements from the warm Washington D.C. offices of the Alaska delegation can now undo any more than they may make the raging, silt laden, over-bank flood waters following days of thrashing cold rainstorms retreat and clear, nor make the log like the one which once destroyed the Staney Creek weir, go back up stream.

Sincerely,

Richard T. Myren
3320 Fritz Cove Road
Juneau, Ak. 99801
March 28, 1996 (original March 11, 1995)
file_knowel21 (from knowel19)

Reference

1. A few minor corrections have been made to the original of March 11, 1995. One additional change is a more through explanation and citations of the El Niño phenomenon and the Southern Oscillation (SO) (see endnotes #28 - #31 and endnote # 38)).

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7. Koski, K.V. 1993. *Riparian zone functions and interactions with sediment*. *In* Proceedings, Technical Workshop on Sediments. Sponsored by the U.S. Environmental Protection Agency and U.S. Forest Service. 3-7 February 1992. Corvallis Oregon. p. 61-69.

8. Rosgen, D.L. 1993 (draft). *A Classification of Natural Rivers*. Wildland Hydrology, 1 Stevens Lake Road, Pagosa Springs, Colorado 81147.

9. Murphy, M. L. and K. Koski. 1989. *Input and depletion of woody debris in Alaska streams and implication for streamside management*. An Abstract. *In* Proceedings of Watershed '89: A Conference on the Stewardship of Soil, Air, and Water Resources. *Ed*. Alexander. Juneau, Alaska March 32-23. 215p. p. 99.

10. The amount of blowdown on salmon streams may be over rated. For example, Sheridan, W. L., Weisgerber, J. E. and C.N. Wilson. 1965. *The effects of logging on twelve salmon streams in southeast Alaska*. Forest Service, Alaska Region, Juneau, 59p. found the leave strips of 12 streams were all standing. Harris, A.S. 1989. *Wind in the forest of southeast Alaska and guides for reducing damage*. Gen. Tech. Rep. PNW-GTR-244. Forest Service, Pac. Northwest Res. Station, Portland OR reported (p. 52), "Windfirmness of streamside leave strips was not evaluated because so few areas were identified on aerial photos." This was a major study of windfirmness of trees in southeast Alaska.

11. Galazia, J. 1970. *Habitat improvement project on Survey Creek, Kosciusko Island*. U.S. Forest Service, Craig Ranger District, South Tongass. 5p. with photographs. He reports,

> . . In 1970, the pink salmon run amounted to between 40,000 and 50,000. The coho run was not complete at the time this report was edited (10/8/70)."

For the size of the stream the estimate of the run was very large. Also apparently, the blowdown had also created rearing habitat of an extensive coho salmon population.

12. Several streams with weir counted escapements during the large runs of the 1930's and pristine conditions could have provided a historical data base for such studies but most such streams have consistently been logged under Forest Service management without consideration of the value of such a data base.

13. Some observations in the Pacific Northwest suggest pre-settlement natives burned forests accessible to them and mature and excessive mature and senescence tree blowdown that may not have been present. In inaccessible regions it has been specutlated that the absence of such native burning activity has led to an over abundance of organic debris and poor fish habitat. However, these effects do not appear to be present in southeast Alaska rain forests where natural and man-made fires are rare.

14. Maser C. and J.R. Sedell. 1994. *From the forest to the sea: The ecology of wood in streams, rivers estuaries and oceans*. St. Lucie Press, Delray Beach, Florida. 200p. p.144-148.

15. *Ecotone*. "A narrow and fairly defined transition zone between two or more different communities. Such edge communities are typically species-rich. Ecotone arise naturally, e.g. at land-water interfaces, but elsewhere may often reflect human intervention (e.g. . . clearance of formerly forested areas.)" Concise Oxford Dictionary of Ecology. ed. M. Allaby. Oxford University Press. Oxford, New York. 1994.

16. Pella, J.J. and R.T. Myren 1974. *Caveats concerning evaluation of effects of logging on salmon production in Southeastern Alaska from biological information*. Northwest Science, 48(2):132-144.

17. The trials are theoretical, of course, and occur on paper because they cannot be conducted in the field, the variables cannot be controlled, and it is usually be too expensive. The method employed is the statistical procedure called "Power of the Test" in which methods specify two frequency distributions, one for the hypothesis that the effect is present and the other for absence of the effect. The degree the two distributions over lap provides the probabilities of detecting and not detecting an effect for a given α. Once one becomes used to thinking of an effect as being present and absent at the same time one can deal with the test more readily.

18. A short listing of published Forest Service statements of the "no evidence argument" based upon observations of escapements or the catch is given in the 1976 fall hearing record of the U.S. Senate for the NFMA of 1976. See, Myren 1976 *The evidence of damage to salmon and trout resources of southeast Alaska*. In, National Forest Problems in Alaska. Hearings before the subcommittee on environment, soil conservation, and forestry *etc.* Ninety-forth Congress, Second session. U.S. Gov. Printing Office. August 18 and 21, 1976 in Juneau, Sitka and Ketchikan, Alaska. 303p. p. 137.

19. Meehan, W.R., Farr, W.A., Bishop, D.M., and J.H. Patric. 1969. *Some effects of clearcutting on salmon habitat of two Southeast Alaska streams*. USDA For. Ser. Res. Pap. PNW-82. Pac. Northwest For. and Range Exp. Stn., Portland OR. 45 p.

20. Though the 1969 publication recognized abolishment of salmon traps following Alaska Statehood in 1959 then it states returns therefore " . . could have masked any change in production due to logging if a change occurred" (p. 40). However, the number of days for net fishing were also reduced and hence further reduced the fishing intensity and more deeply masked a change in production, if it occurred (from discussion with Stan Swanson, State management supervisor at the time). Nevertheless, the efficacy of the initial masking or the more intense masking had little effect upon the conclusion. The report stated, ". . clearcutting apparently did not adversely affect the salmon spawning habitat based upon the returns of pink and chum spawners" (p. 41)!

21. Pella, J. J. 1979. *Climate trends and fisheries*. *In*, Predator-prey systems in fisheries management. H. Clapper, (ed.). International Symposium on Predator-Prey Systems in Fish Communities and the Role in Fisheries Management. Atlanta, Georgia. 24-27 July 1978. Sport Fishing Institute, Washington, D.C. p, p. 35-46.

22. The effect of fishing is known because the catch is known and if ocean productivity was constant and no fluctuation then changes in the populations could be resolved to the quality of the freshwater environment and the number of fish allowed to be caught and to spawn .

23. Skud, B. E. 1973. *Factors regulating the production of pink Salmon*. Conseil International Pour L'Exploration De La Mer, Extrait des Rapports et Procés-verbaus, Vol. 164. p106-117. p. 112.

24. Pearcy W.G. 1992. *Ocean ecology of North Pacific salmonids*. University of Washington Press, Seattle Washington, and London United Kingdom. 179p. p. 99.

25. Ibid.

26. Cone, J. 1995. *A Common Fate: Endangered salmon and the people of the Pacific Northwest*. Henry Holt, New York. 340p. p. 282.

27. Pearcy, *Ocean ecology of salmonids*, p. 96.

28. Cane, M. A. 1983. *Oceanographic events during El Niño*. Science. Vol. 222, No.. 4629. 16 December. p. 16.

29. Mysak, L.A. *El Niño, Interannual Variability and Fisheries in the Northeast Pacific Ocean*. Can. J. Fish. Aquat. Sci., Vol 43, p. 464-496. p. 464.

30. Ibid.

31. Ibid., p. 468. Figure 6 shows a 20-year cycle from 1900 plus or minus a few years with major ENSO events (in parenthesis): 1900 (1899-1900), 1920 (1918-19), 1940 (1940-41), 1960 (1957-58), and 1980 (1982-83). Two major additional events are identified for 1911-12, and 1925-26.

32. One of the several species of fish associated with warmer water moving from the south. Other species observed in Alaskan waters in 1983 include Pomfrets, Pacific bonito, Triggerfish.

33. Thompson, S. H. 1948. *Alaska Fishing and Fur Seal Industries: 1948*. Statistical Digest No. 23, 60p.

> . . Tuna landings were reported in 1948 for the first time in the territory commercial-fishing history. Local boats operating off Dixon Entrance, south of Ketchikan, late in August landed 132,000 pounds of albacore"

34. Anon, 1949. *Fish and Wildlife Service studies tuna off coast*. Wrangell Sentinel. October 28, 1949.

> . . a good showing of tuna was found 50 miles off Cape Flattery. . . The most northerly point at which tuna were caught was the Welker Seamount area . . about 300 miles off Baranof Island."

35. Thompson, W. F. 1953. *Overfishing vs. natural causes*. Pacific Fisherman, December 1953, p. 23.

> . . Further evidence supporting the importance of natural causes came from out of observations of the abundance of young in 1950, 1951, and 1952, which indicated no particular lack of young fish reaching the sea, but was followed by the catastrophic failure of 1953.

36. M. G. Hanavan described in the Pacific Fisherman, July 1952, pg. 23, the expectations of a large pink salmon return in 1953 also,

> . . . Early indications form seven migrant counting stations in Southeast Alaska show a definite increase in the abundance of Pink salmon fry compared with the three previous years .
>
> . . . the surivial rate at Little Port Walter will exceed 5% compared with an 11-year average of less than 2%. Substantual increases in pink fry are are also noted at Katlian, Snake, and Herman Creeks and runs developed on later migrant streams are expected to show similar improvement.
>
> Adequate spawning escapements in most areas and moderate winter weather contribute to the early success of the 1951 brood."

37. Petit, C. *Signs of a changing climate: Recent rains, new El Nino renew global warming debate*. San Francisco Chronicle, Friday, February 3, 1995.

38. Darren Goetze, writes in *Nucleus* Vol 18, No,. 1 pgs. 1-3, p. 12 of the Union of Concerned Scientists reports a consensus of world weather scientists believe [who have warned against the danger in not accepting environmental problems such as population, ozone, and n\more recently] the Green house effect is present and human activity is part of the contributory cause over possible back ground natural increases. For the oceans he writes,

> . . The worlds oceans show the secondary effects of this warming trend, with a 4-10 inch rise in global seq level in the last hundred years resulting from expansion of warmed oceanic water. In addition, the warming event in the southern Pacific ocean known as El Nino has occurred more frequently and more persistently since 1976, recently lasting from 1990 to 1995--the longest duration recorded in 120 years of observation." p. 3

And, . . If global warming forces increased water evaporation at the beginning of this process, heaviest rain or snowfall would result at the end of it, and likely in a pattern of more frequent extreme

precipitation. Last year Thomas Karl, a scientist at the National Oceanic and Atmospheric Administration published a statistical analysis of weather indicating that just this kind of pattern is already starting to emerge in the United States." p. 12

39. Helle, J. H. M. S. Hoffman. 1993. *Size decline and older age at maturity of two chum salmon (Oncorhynchus keta) stocks in western North America, 1972-92.* In R. J. Beamish [ed.] Climate change and northern fish populations. Can. Spec. Publ. Fish. Aquat Sci. 121. p. 243-258.

40. Davidson, F.A. and E. Vaughn. 1941. *Relation of population size to marine growth and time of spawning migration in the pink salmon (Oncorhynchus gorbuscha) of Southeastern Alaska*. J. Mar. Res. 2 (3): 231-246. p. 244.

41. Skud, *Factors regulating pink salmon*, p. 112.

42. Davidson, F. A., and A. E. Vaughn 1939. *Cyclic changes in time of southeast Alaska Pink salmon runs*. Pacific Fisherman, Seattle, Washington. p. 22-24. See page 23, Chart II for relative abundance and size.

43. Skud, *Factors regulating pink salmon*, p. 112.

44. Fishers are four legged flesh eating north American mammals (*Martes pennanti*) valued for their fur.

45. _____, 1975. *Alaska Salmon Study--Part I, Management Study*. Consulting Report submitted November, 1975 to the Commissioner of the Alaska Department of Fish and Game. 83p.

46. Anon. 1976. *National Forest Problems in Alaska. Hearings before the Subcommittee on Environment, Soil Conservation, and Forestry of the Committee on Agriculture and Forestry United State Senate*. Ninety-fourth Congress, 2nd Session.

47. Barton, M.A. 1985. *Old-Growth forests and fish*. *In* Fish and Wildlife relationships in Old-Growth Forests, ed. Meehan, W.R., Merrell, W.R. Jr., Hanley, T. Proceedings of a symposium sponsored by Alaska District , American Institute of Fishery Research Biologist, Northwest Section, the Wildlife Society, and Alaska Council on Science and Technology held in Juneau, Alaska August 12-15, 1982. p. 188-189.

48. Anon. 1988. *Aquatic habitat management handbook*. (Revised). U.S. Forest Service, Region 10. Juneau, Alaska. see p. 64.16a.1a.

. . a. retain all coniferous trees 12 inches d.b.h. or less."

49. Ford, C. and F. Dufresne. 1956. *Lost Paradise*. Field and Stream. September. p. 41, 110-114. Greeley reported (p. 114),

> . . Ironically, . . Southeastern Alaska forests are not so good as they were first thought to be. The timber is spotty: the best trees grow along the streams where there is good drainage."

Here, while the Forest Service officials would tell us they were cutting to the stream bank to prevent blowdown, they were really cutting to the streambank to get the best trees!

The main architect of the third long term timber sale and the mill the writers had quoted was Arthur Greeley, yes, the son of William Greeley, the second Chief Forester of the United States after Gifford Pinchot, and Washington D.C. forester and planner.

The sale was first challenged by the Sierra Club by injunction on the sale if timber in 1968, the largest single long term sale of timber ever made by the Forest Service. Of all the oral testimony presented at the trial, Greeley's testimony was to make up the largest in volume of any individual testifying and saying least.

50. Anon. 1993. *Central Prince of Wales Final Environmental Impact Statement. Ketchikan Pulp Co. Long-term timber sale contract.* Forest Service. Volume 1, Chapter 3. p. 53.

51. The Federal government fish counting weirs established certain knowledge about the sizes of escapements which otherwise would have been uncertain because of errors in estimating, and that such a large run occurred in Klawock creek. Weir counts confirm sizes of populations which cannot be believed. For example, a spawner population of about 15,000 by a weir count at the relatively small salmon stream of Sashin Creek, at Little Port Walter, would appear as immense and that the stream could not hold another fish to an observer walking along the stream or from an over flight. However in 1941 a weir count of over 84,304 was made to the stream!

52. Paraphrasing Mark Twain.