SB
294

SUSITNA STATUS

Historical Background: The tremendous energy potential of the Susitna River has been known for many years. The Bureau of Reclamation and the Corps of Engineers, along with private institutions have conducted numerous studies of Susitna's potential. Both of the Federal agencies conducted reconnaissance level studies in the late 1940's and each published their findings in the early 1950's. The more specific and detailed early studies were performed by the Bureau of Reclamation. In fact, in a 1960 feasibility report, the Bureau of Reclamation outlined a plan of development in the Upper Susitna River Basin consisting of four high-head dams with a combined firm annual energy capability of roughly 6.3 billion kilowatt hours. The Bureau studies were backed up by limited foundation explorations for three of the four damsites (Devil Canyon, Vee and Denali were drilled, Watana was not drilled). However, with the discovery of Cook Inlet natural gas, the economic attractiveness of the Susitna project plummeted. With the formation of the international oil cartel and the dramatic rise in fuel costs during the 1970's, Congress requested that the Corps of Engineers re-evaluate the Bureau of Reclamation proposal for developing the Upper Susitna River and to report its recommendations and findings to Congress. Because of questionable foundation conditions at the upper two damsites (Vee and Denali), and the attendant environmental impact associated with those two projects, the Corps modified the proposed development by raising the height of the second upstream dam, Watana, and deleting the Vee and Denali dams. The two-dam Devil Canyon-Watana scheme of development would provide 6.1 billion kilowatt hours firm annual energy but at a lesser cost and environmental impact than the four dam scheme. The Corps evaluated a number of enery alternatives and concluded that coal fired generation and Susitna hydroelectric are the most feasible long range options for the railbelt energy demand. Of the two options, the economic attractivness of the Susitna project appears to be significantly greater than coal fired steam generation. In October 1977 dollars, the estimated construction cost of the two dam scheme and attendant transmission facilities is $2.1 billion. The average annual fuel rates from Susitna should be at least 30 percent less than that of its coal counterpart.

Project Description: The Upper Susitna River Basin is a 5810 square mile area bordered on the North and West by the Alaskan mountain range, and on the South by the Talkeetna Mountains. Primary wildlife within the basin consists of moose, bear, dall sheep, caribou, wolf, raptors, and resident fish. Anadromous fish do not migrate into the Upper Susitna, but they do spawn in the streams and sloughs downstream from the basin outlet. The river is glacially fed and averages 7.1 million acre feet of runoff annually. The plan of development includes an 810 foot high earthfill dam at the Watana site, a 635 foot high thin-arch dam at Devil Canyon and 365 miles of transmission line. The Watana project would inundate 43,000 acres of land and 54 miles of natural

river, and Devil Canyon would flood 7500 acres of land and 28 miles of river. In tandum, the projects would produce a total of 6.1 billion kilowatt hours of firm annual energy and an average of 0.8 billion kilowatt hours of annual secondary energy. It is estimated that Watana could be on line by 1990 and as demand dictates, presumably five years later, Devil Canyon would be brought on line. Based on the preliminary design, the two projects would be capable of withstanding the effects of an 8.5 magnitud earthquake with an epicenter of 40 miles from the project.

Present Status: The Corps of Engineers submitted their Susitna feasibility report to Congress in 1976. Pending the Chief of Engineers final report to Congress, the project was given conditional authorization to proceed to Phase I Advanced Engineering and Design as a federal project. (Section 160, Water Resources Development Act of 1976). Contained in the same Bill is Section 203 known as the Alaska Hydropower Development Fund. This section provides for a joint venture in developing hydropower projects in Alaska in which, for previously authorized hydropower projects, the Corps of Engineers would design and construct the project using state financing and the state would own and operate the project. Bradley Lake and Snettisham are the only authorized projects in the state which qualify for development under this program. Because the Office of Management and Budget (OMB) felt that there was insufficient field exploration to substantiate the project cost estimate contained in the Corps 1976 feasibility report, the Chief of Engineers did not make his final report to Congress. Thus, Susitna remains an unauthorized project, disqualifying it for particiapation under Section 203. However, in order to provide the necessary explorations the Corps has made $3.0 available for a 12 month foundation exploration program which should lead to final authorization of tne project. That 12 month effort began on January 1, 1978.

1978 Water Resources Development Act: Since Section 203, as it presently reads, makes it difficult for the State to provide the necessary financing for Phase I Studies, the Act will be amended under the 1978 Water Resources Development Act. State and federal personnel, along with their bond counsel and financial and legal advisors, have agreed upon the proper language which should be contained in Section 203. Also included in the pending bill will be direct authorization of the Susitna project thus making it eligible for Section 203 participation exclusive of the OMB desire for the $3.0 million twelve month exploration program. The bill should reach the Senate Water Resources Subcommittee in mid April. The House version of the bill will probably not contain the amending language for Section 203 nor direct authorization for Susitna. Thus, these items will have to be added in conference committee. Considering the other national issues, it is estimated that the bill will not be authorized before July, 1978. Thus the Phase I Studies could begin by the latter part of the 1978 field season.

Alaska Power Authority Action: It is the intention of the Alaska Power Authority to participate under Section 203 for the Phase I studies. Financing for the studies would come from the sale of municipal bonds; thus, the State would not be subjected to debt encumbrance. Should the $25,000,000 plus Phase I studies indicate that the project is not feasible, the Federal Government would repay the cost and interest of the bonds. At the conclusion of the Phase I studies, the State would have the option to proceed into construction with the Corps of Engineers or to use the services of a private engineering firm. Many of the studies to be conducted under Phase I would be managed by the Power Authority rather than the Corps of Engineers.

Plan of Study: The Alaska Power Authority made $100,000 available to the Alaska District Corps of Engineers in July, 1977 for the purpose of developing the Phase I Study program. The Corps submitted their first draft to the State in September, 1977. Based on the State's review comments, the Corps is now finalizing the Susitna Plan of Study.

Land Status: The Susitna project would flood roughly 50,000 acres of land of which 24,000 acres have been classified as power withdrawal lands. This land, along with most of the remainder needed for the two proposed dams and reservoirs, has been claimed by the Cook Inlet Native Corporation and four native villages. Until the land can be transferred to the Natives, the Bureau of Land Management retains custody for the Federal government. Prior to entry for Phase I studies, access permission would be necessary from either BLM or the Native Associations depending on the owners at that time. The Cook Inlet Region is presently negotiating with the four villages to trade them out of the Susitna land. Presumably, the region would then negotiate the Susitna land for possible excess military land on Fort Richardson. The State could then claim the Susitna land under the terms of the Statehood Act, if it so desired.

D-2 Classification: Although the Susitna River was included as one of twenty rivers that should be studied by the BLM for possible classification as a Wild and Scenic River in 1872, Susitna was dropped from the list during the early screening. It was suggested in the study, however, that Susitna should be studied further. The House Interior Subcommittee has drafted their version of the D-2 Land Classification Bill and has included Susitna as a river that should be studied for possible classification as a Wild and Scenic River. Despite this classification, provisions have been made to allow for Phase I studies by the Corps of Engineers. Construction, however, would not be permitted until completion of the Wild and Scenic River study. Furthermore, as long as the land belongs to the federal government, it is questionable whether Phase I studies could be conducted exclusive of the Corps of Engineers.

Funding: $5.45 million has been included in the federal appropriation for input to the Alaska Hydropower Revolving Loan Fund.

This is the estimated cost of financing the first year of the four year Phase I Study. However, since the total estimated cost is in excess of $25.0 million, it would be desirable that the entire amount be placed in the Fund. As a show of good faith, upon enactment of the 1978 Water Resources Development Act, the State, through the sale of revenue bonds, would make available the full study cost amount. This would be held in escrow and could only be used to finance the Phase I studies to the extent that matching funds are paid into the Federal Fund. This show of good faith should provide the leverage for the federal government to put up the remainder of matching funds needed for Phase I.

Agreement: A mutual agreement between the Alaska Power Authority and the Corps of Engineers would be developed and signed pursuant to passage of the 1978 Water Resources Omnibus Bill.

Official Business

Alaska State Legislature

Senate

Committee on Resources

Pouch V
State Capitol
Juneau, Alaska 99811

February 1, 1980

To: Resources Committee Members

From: Jens Zehbe, Staff Member

Regarding: Senate Bill 294

Senate Bill 294 relates to the Susitna Hydroelectric Project by providing a description and purpose of the project. It directs the Alaska Power Authority to prepare a preliminary and annual report about the project for the Governor and Legislature.

It amends the Alaska Power Authority Statutes by the addition of the following:

44.56.300 PROJECT DESCRIPTION- To generate, transmit and distribute electric power to Homer, Seward and Fairbanks which will:

1) minimize area electrical costs
2) minimize adverse environmental and social impacts
3) safeguard life and property

44.56.320 PRELIMINARY REPORT- The Authority shall prepare a report for the Governor and Legislature no later than 1/30/81. The report will list:

1) The proposed phases of construction with respective costs and completion dates of each phase.
2) Federal and state permits required before construction can begin. Expected dates they can be obtained.
3) Any other information the Authority deems necessary to inform the Governor and Legislature of the project's current status.

44.56.330 CONSTRUCTION, MAINTENANCE AND OPERATION- The Authority shall enter into a contract for construction consistent with the purpose of the project upon approval of the preliminary report.

44.56.340 ANNUAL REPORT- Commencing in 1982, the Authority shall prepare an annual report which explains in detail:

1) Status of construction
2) Completion dates of any phase in construction
3) Cost of each construction phase
4) The dates on which federal and state permits necessary for construction were obtained.

5) Federal and state permit requirements for continued construction of the project and expected dates they can be obtained.
6) Actual dates the permits described in (5) are obtained.
7) Any other information the Authority deems necessay to inform the Governor and Legislature about the current status of the project. This annual report shall be submitted no later than January 30 of each year.
8) In reference to the Annual Report sections 2-7, any deviation between the actual date and expected dates must be explained in the report.

44.56.350 PROJECT FINANCING- Shall be financed by appropriations from the general fund.

There is no fiscal impact. The report requirements can be accomplished by the existing staff of the Power Authority under present funding.

I. REQUEST

Bill/Resolution No. Senate Bill No. 294

Title An Act Relating to the Susitna River Hydroelectric Project; and providing for an effective date.

Requested by Senator Kerttula

Date 1/14/80

II. FISCAL DETAIL

Agency Affected Alaska Power Authority, Department of Commerce & Economic Development

Program Category Affected Economic Development

BRU, Program, or Subprogram(s) Affected Alaska Power Authority

(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
100 PERSONAL SERVICES	--	--				
200 TRAVEL	--	--				
300 CONTRACTUAL	--	--				
400 COMMODITIES	--	--				
500 EQUIPMENT	--	--				
600 LAND & STRUCTURES	--	--				
700 GRANTS, CLAIMS, ETC.	--	--				
TOTAL						

FUNDING (Thousands of Dollars)

GENERAL FUND	--	--				
FEDERAL FUNDS	--	--				
OTHER (Specify Fund Source)	--	--				

POSITIONS

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

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

The report requirements of SB 294 can be accomplished by the existing staff of the Power Authority under present funding. The Susitna study program was funded in FY 80. The companion legislation, SB 295, would have a fiscal impact if it were possible to obtain construction authorization at a time for earlier than presently expected.

IV. DATE January 18, 1980 PREPARED BY Terry J. McGuire

AGENCY Alaska Power Authority

PHONE 277-7641

Original: Legislative Finance

cc: Budget and Management

Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/79)

ELEVENTH LEGISLATURE

FISCAL NOTE

I. REQUEST

Bill/Resolution No. Senate Bill No. 294

Title An Act Relating to the Susitna River Hydroelectric Project; and providing for an effective date.

Requested by Senator Kerttula

Date 1/14/80

II. FISCAL DETAIL

Agency Affected Alaska Power Authority, Department of Commerce & Economic Development

Program Category Affected Economic Development

BRU, Program, or Subprogram(s) Affected Alaska Power Authority

(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
100 PERSONAL SERVICES	--	--				
200 TRAVEL	--	--				
300 CONTRACTUAL	--	--				
400 COMMODITIES	--	--				
500 EQUIPMENT	--	--				
600 LAND & STRUCTURES	--	--				
700 GRANTS, CLAIMS, ETC.	--	--				
TOTAL						

FUNDING (Thousands of Dollars)

GENERAL FUND	--	--				
FEDERAL FUNDS	--	--				
OTHER (Specify Fund Source)	--	--				

POSITIONS

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

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

The report requirements of SB 294 can be accomplished by the existing staff of the Power Authority under present funding. The Susitna study program was funded in FY 80. The companion legislation, SB 295, would have a fisca impact if it were possible to obtain construction authorization at a time for earlier than presently expected.

IV. DATE January 18, 1980 PREPARED BY Terry J. McGuire

AGENCY Alaska Power Authority

PHONE 277-7641

Original: Legislative Finance

cc: Budget and Management

Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/79)

THE LEGISLATURE OF THE STATE OF ALASKA
ELEVENTH LEGISLATURE

FISCAL NOTE

I. REQUEST

Bill/Resolution No. Senate Bill No. 295 Title: An Act making special appropriations [redacted] to the Alaska Power Authority for construction of the Susitna River hydroelectric [redacted] project; and providing for an effective date. Date 1/14/80

Requested by Senator Kerttula

II. FISCAL DETAIL

Agency Affected Alaska Power Authority, Department of Commerce & Economic Development

Program Category Affected Economic Development

BRU, Program, or Subprogram(s) Affected Alaska Power Authority

(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
100 PERSONAL SERVICES		300	300	200	200	300
200 TRAVEL						
300 CONTRACTUAL		12,700	8,700	3,800	3,800	10,700
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL		13,000	9,000	4,000	4,000	11,000

FUNDING (Thousands of Dollars)

GENERAL FUND		13,000	9,000	4,000	4,000	11,000
FEDERAL FUNDS						
OTHER (Specify Fund Source)						

POSITIONS

FULL TIME		7	7	4	4	7
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

Amounts appropriated by SB 295 do not correspond exactly with anticipated funding needs for the present program of studies underway. Construction of the Project could not begin until a Federal Energy Regulatory Commission license and other state and federal permits are approved. However, elements of the Project could be initiated in advance of the FERC license. These elements could include transmission line interconnection of Anchorage and Fairbanks, acquisition of land in the Upper Susitna, and access road construction. Otherwise impacts on the Alaska Power Authority of SB 295 would be no greater than exist today under the existing study program. Major impacts after 1985, when construction could commence, would be experienced by the Power Authority. If the Project is feasible for construction, state participation in financing would be a secure state investment, however, the Project appears capable of being financed in the revenue bond market. This may change, of course, depending on market conditions which prevail at the time of revenue bond sales.

IV. DATE 1/18/80 PREPARED BY Terry J. McGuire

AGENCY Alaska Power Authority

PHONE 277-7641

Original: Legislative Finance

cc: Budget and Management

Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/79)

Official Business

Alaska State Legislature

Senate

Committee on Resources

Agenda

Pouch V
State Capitol
Juneau, Alaska 99811

March 7, 1980
1:30 p.m.
Butrovich Room

SB 294- Susitna Hydoelectric Project

Persons Testifying

Governor Egan
Lee Wareham- Susitna Power Now, Inc.
Liz Gilbert- Susitna Power Now, Inc.
Dorothy Jones- Matanuska-Susitna Borough Assembly
Chuck Smith- Matanuska-Susitna Borough Assembly
Jim Ekstedt- MEA
Thomas Stahr- Anchorage Municipal Light and Power
Joe Geldhof- Alaska Conservation Society and Alaska Center for the Environment
Terry McGuire- form Energy and Power Development (Will be in the audience to answer any questions, does not necessarily want to testify)

Please Sign In — 3/7/80
SB-294

Name	Representing
Terry McGuire	Alaska Power Authority
EVE DISCHNER	SUSITNA POWER NOW!
Ike Waldrop	IBEW - Susitna Power Now
Harry Reimer	Fbx Borough assembly
BEN HARDING (NOT TESTIFYING)	Fbx North Star Borough
Jim Ehrhardt	Matsu Boro
Dorothy A. Jones	MAT-SU Boro - Susitna Pwr Now
Chuck Smith	Box 1385 - Wasilla
Charmaine Smith (not testifying)	Box 1385, Wasilla
Russ Meekin	326 4th Juneau
Rufus C. Hinchee	NECA ~~[illegible]~~
Al Larson	Chickaloon Village
L A Kornfeind	N.E.C.A. 1830 2nd Ave Fbk AK
Tom Cashen	IBEW LOCAL 1547
[illegible] Shelley	Mobil Oil Corp.
Reese King	King & Assoc.
Clark King	" "
Joseph [illegible] Geldhof	
Bill Egan	Alaska Conservation Society
[illegible]	2130 Arlington Anch 99503
	FBKS./NORTH STAR BOR. ASSEMBLY

SUSITNA HYDROELECTRIC PROJECT

S.B. 294- Senator Kertula

Bill amends A.S. 44.56 of the Alaska Power Authority be adding Article 6 Section 44.56.300-350

44.56.300 PROJECT DESCRIPTION- Susitna Hydroelectric Project consisting of two dams and related reservoirs, transmission lines and facilities and load centers as described in the June 1978 U.S. Army Corp of Engineers report.

44.56.310 PURPOSE OF PROJECT- To generate, transmit and distribute electric power to Homer, Seward and Fairbanks which will:

1) minimize area electrical costs
2) minimize adverse environmental and social impacts
3) safeguard life and property

44.56.320 PRELIMINARY REPORT- The Authority shall prepare a report for the governor and legislature no later than 1/30/81. The report will list:

1) The proposed phases of construction with respective costs and completion dates of each phase.
2) Federal and state permits required before construction can begin. Expected dates they can be obtained.
3) Any other information the Authority deems necessary to inform the governor and legislature of the project's current status.

44.56.330 CONSTRUCTION, MAINTENANCE AND OPERATION- The Authority shall enter into a contract for construction consistent with A.S. 44.56.310 upon approval of the preliminary report.

44.56.340 ANNUAL REPORT- Commencing in 1982 the Authority shall prepare an annual report which explains in detail:

1) Status of construction
2) Completion dates of any phase in construction
3) Cost of each construction phase
4) The dates on which federal and state permits necessary for construction were obtained.
5) Federal and state permit requirements for continued construction of the project and expected dates they can be obtained.
6) Actual dates the permits described in (5) are obtained.
7) Any other information the authority deems necessary to inform the governor and legislature about the current status of the project.

A) This annual report shall be submitted no later than January 30 of each year.

B) In reference to the Annual Report sections 2-7, any deviation between the actual date and expected dates must be explained in the report.

44.56.350 PROJECT FINANCING- Shall be financed by appropriations from the general fund.

THIS ACT TAKES EFFECT IMMEDIATELY

Fairbanks Environmental Center

218 DRIVEWAY
FAIRBANKS, ALASKA 99701
(907) 452-5021

February 15, 1980

TO: Honorable Committee Members

FROM: Jeff Weltzin

RE: S.B. 294,295, & 385

Recent debate on the energy future of Alaska's railbelt area has mainly focussed on the proposed Devil Canyon Upper Susitna Hydro-electric Project. The proponents of this project voice it's many advantages which when veiwed in retrospect seem to be the attributes of all hydro developments in general and not just the Susitna Hydro Project.

The benefit of the Susitna Hydro Project have been well publicized, but it's many impacts on downstream fisheries, wildlife habitat, the Alaskan Lifestyle, and the States economy have recieved little study or public exposure.

The railbelt area of Alaska is energy rich. There are numerous potential hydro sites within it. Many coal deposits with the most noticeable being the Healy fields and the Beluga fields just south west of Anchorage. Geothermal, wind, natural gas, solar, tidal, and conservation energy round out a most amazing variety of energy resources available to the railbelt area.

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The most evident conclusion is that we have great flexibility in choosing energy resources to be developed. This flexibility could allow us to evaluate the berefits and costs and choose energy devlop-ments that minimize social and environmental effects while still meeting our needs for electrical energy.

Which then brings us to the Fairbanks Environmental Centers main objection to S.B. 294,295 & 385. These bills make a mockery of any rational decision-making process to choose the best energy sources for the railbelt area. Instead, this proposed legislation totally usurp the feasibility study process and reduces this whole process to the traditional methods used for most hydro in the lower 48. It's called "pork barrel" or sometimes 'whole hog".

We at F.E C. cannot understand why these bills were introduced at this time when it is quite evident that the feasibility study process which has just begun, has been designed to take the shortest amount of time possible. If the intention of these bills is to force negligence of this projects potential problems, then we would have no choice but to oppose in any way possible progress of this project until all the potential impacts have been adequately addressed.

A review of this projects potential impact shows that the Susitna river is the highest producing river contributing to the Cook Inlet salmon fisheries

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In the winter the Susitna river runs clear allowing juvenile salmon to leave the dewatered tributaries and rear in the main channels. Fish and Game has stated that the proposed dams would ensure year-round siltations of the main channels producing potential dramatic adverse effects on salmon production.

The Susitna basin bordered by the Parks, Denali, and Richardson highways is one of the last major hunting area's where a hunter does not need to charter a plane to hunt. In 1979 5600 hunters applied to hunt caribou in this area. Twenty three percent of last years statewide moose take occured from from this same area. The proposed permanent access from both the Parks and Denali highways plus the transmission line corridor could have large impacts on this, the State's most heavily hunted region.

Recently, there has been a nationwide reduction of energy growth rates which also has occurred in Alaska. The need for Susitna Hydro's large block of electrical energy still has to be justified. Alternative hydro sites still have not been properly looked at.

The active Susitna fault goes right through the middle of the proposed Susitna hydro project. Five moderate earthquakes and many smaller ones occurred along this fault in the last six years. Many more earthquakes have been registered along the major Denali fault, which lies within 40 miles of the dam sites. Compounding this problem is the filling

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of reservoirs often induce earthquakes, sometimes of large magnitude. With the proposed Susitna reservoirs lying on either side of the active fault, the situation here could be particularly dangerous.

These potential adverse impacts plus the project's enormous price tag mandate a much more careful look then allowed by S.B. 294 & 295.

There is no need for the Anchorage/Fairbanks Intertie in the next ten years. The theoretical advantages of this intertie that would occur before the start-up of the Susitna project are very marginal. If the advantages of reserve-capacity sharing and the replacement of cheaper natural gas generation for more expensive production where very substantial, the utilities would have proposed this action years ago. Clearly, the intent of S.B. 385 is to take a back-door approach to getting the Susitna project started before the study phase is finished.

Communities along the corridor will not be able to hook-up to this express transmission line because of the .5 to .75 million dollar per substation cost, the only benefit of this proposal would be to Fairbanks. Fairbanks could replace 34 MW of peak oil-generated capacity with cheaper Anchorage capacity. No studies have been done to show that Anchorage utilities will indeed have the excess capacity on a regular basis to even ensure that this benefit will occur.

A much more reliable alternative to replacing Fairbanks expensive oil generation would be to take the proposed money for the intertie and

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fund GVEA's proposed waste heat generation plans at Alyeska pump stations 7,8,9,&10. If all four stations were built, they would provide 28 MW of inflation proof capacity to Fairbanks.

The question of an intertie is premature. In light of the proposed extensive studies to be conducted by Acres American on this subject, it seems truely unwise to rush the intertie before we really know what is needed.

In conclusion, if the intent of this committee is to get Alaska on a renewable energy path and to avoid major social and environmental problems. We then suggest the following actions:

1. Postpone action on S.B. 294, 295, & 385 until the feasibility studies to be conducted by Acres American are finished.
2. Fund or help GVEA fund thier proposed waste-heat utilization project at pump stations 7,8,9, & 10.
3. Fund and direct the A.P.A. to begin preliminary feasibility studies of the Chakachatna river 60 miles S.W. of Anchorage. This potential hydro site could have a firm capacity of 300 to 400 MW and avoid the major environmental problems the Susitna project might have.
4. Fund and direct the A.P.A. to begin preliminary feasibility studies of hydro sites in the interior region such as the Totatlanika river.

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Honorable committee members, please do not eliminate the great flexibility we have in developing our energy resources. The environmental community strongly support a renewable energy futurefor Alaska. We would support your efforts wholeheartedly if ybu choose other hydro sites for study along with the Susitna project. We have the time and tools to develop a model renewable power generation system for Alaska. But by reducing the decision making process to a simplistic one, where Susitna hydro is the only answer to Alaska's energy needs. you will destroy this opportunity and produce polarization of Alaska's citizenship.

Eve Dischner

how well Sees Utha

professional manner

Please sign In.

Name - Address

Lee Wareham 205 Gaffney FBK
Liz Gilbert P.O. Box 4-2825, Anchorage 99509
Tom Cashen Box 63 Douglas 99824
Rufus C Hinchee 3707 Arctic Bvd Anch 99503
Tom Stahr 6967 Laser Dr Anchorage 99504
Dorothy A. Jones Box 109, Talkeetna, Ak 99676
Owen Meekins Jr 326 4th St Juneau
J A Kornfeind 1830 2nd Ave Fbks AK 99701
Bill Egan 2704 Arlington Drive Anch 99503
Chuck Smith Box 1385 - Wasilla 99687
Arthur Ward 106 Charles St. Fbks. AK 99701
Jean Kline A.H.C. Juneau
Jim Elkins Mat So Boro. Palmer Ak.
Ike Waldrop Jr IBEW, Anchorage
Terry McGuire A.P. Authority 333 W. 4th, Suite 31 Anch
Robert Martin Tlingit Haida REA Juneau Ak
Eve Dischner 1332 Hillcrest Dr. Anch

file C
SB 294
stuff

DURING SESSION:
FOURTH V
JUNEAU ALASKA 99811
(907) 4[illegible]-3791

OUT OF SESSION:
1016 WEST 6TH AVENUE
SUITE [illegible]
ANCHORAGE ALASKA 99501
(907) 272-4841

BILL SUMNER

Alaska State Senator

DISTRICT T-E

COMMITTEES:
RESOURCES
CHAIRMAN
FINANCE
RULES
COMMITTEE ON COMMITTEES
JOINT INTERIM COMMITTEE
ON GAS PIPELINE FINANCING

April 22, 1980

Roy M. Huhndorf, President
Cook Inlet Region, Incorporated
Post Office Drawer 4-N
Anchorage, Alaska 99509

Dear Mr. Huhndorf:

I appreciate your sharing with me your comments on the Susitna Hydroelectric project. I was especially pleased to read of the cooperation you are having with the Alaska Power Authority during its feasability studies on Cook Inlet Region and Village lands.

The suggested amendment to Senate Bill 294 has merit and unfortunately the bill has already passed out of Senate Resources and is now pending in the Senate Finance Committee. I have, however, taken the liberty of forwarding your suggestion to Senator Sackett for consideration in amending the bill in his committee. I encourage you to again let him know of your interest in the amendment as well.

Again, thanks for the comments. I appreciate the well-thought input.

Sincerely,

Bill Sumner

BILL SUMNER
Senator

BS/cf

CIRI COOK INLET REGION INC.

March 31, 1980

Senator Bill Sumner
Alaska State Senate
Pouch V
Juneau, AK 99811

Re: Senate Bill 294

Dear Senator Sumner:

Thank you for affording me the opportunity to comment on Senate Bill No. 294, "An Act relating to the Susitna River Hydroelectric project; and providing for an effective date." As you may be aware, Cook Inlet Region, Inc. and certain Cook Inlet Region Village Corporations are participating in the feasibility analysis for the Susitna Hydropower project and have executed an agreement with the Alaska Power Authority authorizing the Authority to enter upon Cook Inlet Region and Village lands to perform activities necessary for the study.

Included in our agreement with the Alaska Power Authority is a clause requiring the Authority and its agents to employ Alaska Natives enrolled in Cook Inlet Region, Inc. or the Cook Inlet Village Corporations and to afford them a preference on award of contracts, commitments or other activities where authorized by law in accordance with the Alaska Plan to Provide Equal Employment Opportunity in the Construction Industry, approved by the U. S. Department of Labor on March 31, 1972. (See attachment.) I recommend that Senate Bill No. 294 be revised to include a section providing that:

> It is the policy of the State of Alaska to implement meaningful training and employment opportunities for minorities, and in particular, Alaska Natives, during the construction and operation of the Susitna River Hydroelectric Project, as authorized by law. Accordingly, the Alaska Power Authority

CIRI BUILDING 2525 "C" STREET P.O. DRAWER 4-N ANCHORAGE ALASKA 99509 PHONE 274-8638 TELECOPIER 907-279-8836

> shall afford minorities, including, in particular, Alaska Natives, and Alaska Native business entities, a preference in the award of contracts and sub-contracts in connection with the administration of those activities authorized herein.

I would appreciate your continuing to keep me posted on the status of Senate Bill No. 294. Thank you for your attention to this matter.

Sincerely yours,

COOK INLET REGION, INC.

Roy M. Huhndorf
President

RMH:JEB:cae
Attachment

To Senate Resources Committee,

As Resident and citizen of Alaska & America I strongly urge you as Elected or Appointed Public Representatives to consider strongly the great Benefits of the Susitina Hydro Project. With our Economy soaring downwards greatly influenced by our Dependence on foreign Resources.

What greater safer and more Renewable Resources's the water & sun of which right here in our Backyard lies a vast Abundance.

I urge you to Approve for All peoples Benefits a project of such great importance. in times where energy is in such Demand and will continue to be. I hope when election time arrives I can vote again with Confidence that my leaders are Representing the majority Rather than the minority of Businessman or Conservationists looking for a cause or profit.

Sincerely

Dana Fridlun

FIDC

DR. WILLIAM R. WOOD
EXECUTIVE VICE PRESIDENT

FAIRBANKS INDUSTRIAL DEVELOPMENT CORPORATION
Phone 907 452-5400 619 Eleventh Avenue Fairbanks, Alaska 99701

March 5, 1980

Senator Bill Sumner
Alaska State Senate
Pouch V
Anchorage, Alaska

Dear Senator Sumner:

I am William R. Wood, Mayor of Fairbanks, and Executive Vice President of the Fairbanks Industrial Development Corporation. I am pleased to testify once more in behalf of Senate Bill 294 relating to the Susitna River hydroelectric project.

It has been my privilege to study the bill with considerable care and I am in strong support of the procedures outlined therein for accomplishing a preliminary report that will give the Legislature basic information it must have in hand regarding the proposed phases for the construction of the Susitna River hydroelectric project, as well as the costs related thereto, and the necessary Federal and State permits that must be obtained. The bill is well designed to expedite the project which is essential to the wellbeing of all residents of South-Central and Interior Alaska, with secondary benefits to all the rest of the state.

Of a thousand or more pieces of legislation that will come to the attention of the Senate and House this session, I would rank Senate Bill 294 among the top half dozen of vital concern to the State of Alaska. The City Council of Fairbanks has already endorsed the project, as well as the membership of the Fairbanks Industrial Development Corporation, a non-profit, public service group of business and professional leaders who employ more than 10,000 persons on a year around basis within Alaska on non-government jobs.

We are also deeply interested in Senate Bill 385 that would provide for the immediate construction of an intertie system joining the Anchorage area to the Fairbanks area. This bill merits your most serious consideration as well as Senate Bill 294.

Sincerely yours,

Bill Wood

William R. Wood
Executive Vice President, and
Mayor, City of Fairbanks

WRW/kb

CITY OF FAIRBANKS ALASKA

The Golden Heart City

OFFICE OF THE MAYOR

March 5, 1980

Senator Bill Sumner
Alaska State Senate
Pouch V
Anchorage, Alaska

Dear Senator Sumner:

I am Ruth Burnett, member of the Fairbanks City Council. I am pleased to testify once more in behalf of the Susitna River hydroelectric project.

I have had an opportunity to study Senate Bill 294 with some care and am in strong support of the objectives and goals contained therein. I join my colleagues on the Council, who have unanimously endorsed the Susitna project, in urging all possible support for this legislation.

I am also in very strong support of Senate Bill 385 that would provide for immediate construction of an intertie system between the Anchorage area and the Fairbanks area.

I urge your strong support of Senate Bill 385, as well as of Senate Bill 294.

Sincerely yours,

Ruth Burnett

Ruth Burnett
Member, City Council

410 CUSHMAN, FAIRBANKS, ALASKA 99701

3/7/85

4

Testimony of Thomas Stahr
Before the ALASKA STATE SENATE
RESOURCES COMMITTEE

testifying in favor of SB 254 ~~25~~ 385

Not too long ago any consideration of Susitna would center around the question of whether or not we would actually need the electrical energy it would produce. Now the situation is radically changed. The proper concern now is how will we continue to supply present energy demands if we do not build Susitna.

Conservation is again a serious issue, not as an alternative because serious examination shows this is not a realistic concept, but that Susitna will in it's self be a massive contribution toward conservation of oil and gas, and serious conservation will be necessary to ~~[redacted]~~ keep demands from exceeding what Susitna can produce.

In 1995 the utilities in the area which could be supplied by Susitna generated 2.5 Billion kwh. Military central station generation of over 385 million kwh brings the total to over 2.8 Billion kwh. Watana dam, the first stage of the Susitna project will only produce 3.1 Billion kwh.

Therefore the load for this stage of the project already exists without considering the other existing energy demands where renewable hydro power could be beneficially substituted for oil.

To produce the 2.5 billion kwh the area utilities consumed 35.4 trillion BTU's of fossil fuels. This is the energy equivalent of 6.2 million barrels of oil. Therefore even the first stage of swhian will achieve massive conservation of oil and gas.

If Alaskans had to pay for this fuel at current world market prices the bill would be over 186 million dollars per year, which is approximately twice the total paid for electricity now. In term of electric rates world market fuel prices mean rates would, on the average, triple. It is inconceivable that by the 1990's when swhian is possible, that alaskan fuel prices will not be in excess of current world prices.

In regard to the complete swhian project the total output is slightly in excess of twice current electrical use. Since we are looking at 12 to 16 years for final completion even a small annual growth will close the gap. In fact a annual ~~growth~~ growth above the 4-7% range will result in demands in excess of capacity.

Since Alaskan historical growth rates are in the order of 13% it is clear that a great deal of conservation effort will be required to keep demand within the range of what Susitna can supply. Realistically this is the maximum we could possibly expect from serious conservation.

This brings what is perhaps the most critical issue. We must have some firm energy plans and goals and here I want to make it crystal clear I am not talking about the verbal hogwash that usually goes by the name of energy plans and policies.

The simple truth is that the world is running out of convenient and inexpensive oil and gas. Conservation alone is no answer, it can only buy us a little time. The only prudent approach is to make firm commitments to provide for our future energy needs by developing Susitna. We can then rationally use effective conservation measures as a bridge to that goal. A perfect example of this is the proposed Anchorage - Fairbanks tie line which complements the long term plan, conserves energy and more effectively utilizing existing power resources.

For the past Susitna you will find that the feasibility of most alternative energy schemes will be greatly by having Susitna as an energy

storage for the days when the sun does not shine and the wind does not blow. In the long run you will find a large hydropower project like sustina absolutely necessary to make significant use of ~~the~~ alternate energy sources

SENATE RESOURCES COMMITTEE
CHAIRMAN: BILL SUMNER
JUNEAU, AK.

MARCH 7, 1980

MR. CHAIRMAN AND COMMITTEE MEMBERS, I AM AUSTIN WARD OF FAIRBANKS, CURRENTLY PRESIDENT OF ALASKA ENERGY FOR AMERICA INC., AND MEMBER OF SUSITNA POWER NOW.

OVER 20 YEARS HAS PASSED SINCE MY INTEREST IN HYDRO POWER FIRST RECEIVED MY ATTENTION WITH THE RAMPART DAM PROJECT. SINCE THOSE EARLY YEARS, AND TO THIS DAY I HAVE WORKED FOR A RENEWABLE ENERGY SOURCE.

I WISH TO OPEN WITH A QUOTE, " RICH SEIFERT OF THE U.OF A. FBKS, INSTITUTE OF WATER RESOURCES" "SAYS IT NOW COSTS ABOUT $7.00 PER PEAK WATT TO GENERATE POWER FROM SOLAR CELLS(VOLTAIC PHOTO), BUT RECENT GOVERNMENT PROJECTIONS SAY IT WILL DROP TO .70¢ PER PEAK WATT BY THE MED-1980s.
BY COMPARISON, SEIFERT SAID THE COST PER PEAK WATT FROM THE 2 BILLION SUSITNA PROJECT WILL BE ABOUT 90¢ PER PEAK WATT.
BUT AS WITH THE TRANSISTOR AND PENCILLIN, SOLAR CELLS WILL ONLY BECOME FEASIBLE IF THE FEDERAL GOVERNMENT PUTS ITS WEIGHT INTO MAKING THE SO." WHAT MR. SEIFERT FAILED TO MENTION IS THE HIGH INFLATION RATE COULD RAISE THE PEAK PRICE OF SOLAR ENERGY FROM THE 70¢ LEVEL TO A HIGH THAT IS ANYONES GUESS. AND THATS ASSUMING THE GOVERNMENTS PROJECTIONS CAN BE MET.

ALASKA ENERGY FOR AMERICA INC., AND ITS MEMBERS SUSITNA POWER NOW AND ITS MEMBERS STRONGLY FAVOR THE CONSTRUCTION OF THE SUSITNA POWER PROJECT AS SOON AS PRACTICAL. SUPPORT FOR THE PROJECT DERIVES FOR THE KNOWLEDGE THAT ALASKA IS IN A POSITION TO ANSWER IT'S POWER NEEDS WITHOUT EXTENSIVE USE OF FOSSIL FUELS. THE SUSITNA PROJECT IS LOCATED SO THAT CLEAN, HYDROELECTRIC POWER CAN BE MADE AVAILABLE TO THE TWO LARGEST USER'S IN THE STATE, NAMELY FAIRBANKS AND ANCHORAGE. THE ADVANTAGE IS TWO FOLD: LESS WASTE OF FOSSIL FUELS, CLEANER AIR, THAT WILL DRAMATICALLY REDUCE WINTER ICE FOG IN FAIRBANKS, AND GIVE BOTH CITIES A CHANCE FOR CLEANER AIR.
OF SECONDARY INTEREST IN THE CONSTRUCTION OF SUSITNA POWER IS THE RESULTING RECREATION BENIFITS. AND THOSE BENIFITS WOULD BE AVAILABLE TO MANY DUE TO THE UNIQUE LOCATION OF SUSITNA, HALF WAY BETWEEN TWO POPULATION CENTERS, AND CLOSE TO HOME FOR MANY.

SENATE RESOURCES HEARING:
SENATOR SUMNER, CHRM.

(AUSTIN WARD)

IT MAKES MORE SENSE NOW THAN EVER BEFORE IN MANS HISTORY TO HARNESS THE FREE FLOWING ENERGY OF OUR RIVERS THROUGH THE USE OF MODERN CONSTRUCTION METHODS. WHEN WE ARE FACED WITH INFLATION, FACED WITH THE DWINDLING INVENTORY OF FOSSIL FUELS, IT SEEMS ALMOST INCONCEIVEABLE THAT WE SHOULD SIT BY, PAY THE HIGH PRICES FOR NONRENEWABLE FUELS WHEN ALL WE HAVE TO DO IS BUILD THE SUSITNA PROJECT THAT WILL STAND FOR GENERATION AFTER GENERATION PRODUCING PROWER AT LITTLE INCREASE IN COST FOR THE LIFE TIME OF THE DAMS.

IF SCIENCE COULD HARNESS THE ENERGY OF THE ENVIORMENTALISTS AND NAY SAYERS, WE WOULD'NT HAVE TO BUILD SUSITNA.

SINCERELY,

Austin D. Ward

AUSTIN G. WARD
FAIRBANKS, AK. 99701
106 CHARLES.

Senate Resource Committee

Subject: Susitna Hydro-Power Project & Railbelt Inter-Tye.

Gentlemen;

My name is Stephen A. Kerner and I am writing you in relation to the proposed Susitna Hydroelectric Project and the railbelt inter-Tye, I have lived in Alaska for 30 yrs. and, presently, enrolled in the third & fourth year Apprentice Wireman school (I.B.E.W.) here in Anchorage. I am for the building of the Hydro project even though I live in Fairbanks. The opportunities for employment, industry, recreation, and the eventual Low cost of electricity are to obvious to pass up. The President and all his men preach about conserving our resources (non renewable), and here is something with potential to please everyone from environmentalists to Industry.

I don't know what you people discuss in your committees, but I urge you to find a way to get this Project moving in accordance to the wishes of the people of Alaska.

Thank you for reading this,

Stephen A. Kerrces

March 4th, 1980

Senate Resource Committee
Susitna Hydro Power Project
Railbelt - Inter Tie

Dear Sir!

My name is Stanley Aarsund. I have been an Alaskan resident for more than eight years, since April 18th, 1971. I live at 1200 W. Dimond Blvd, Space 301, Anchorage, which is in Precinct 180, District 11.

There are several projects I've wanted the State to move on for years and one of them is the dams on the Susitna River. With all the coverage lately in the news about energy, or the shortage of it, people are probably aware that hydro power is the way to go, except the rivers in the lower 48 are getting tapped out. Here in Alaska we've hardly tapped our hydro potential. This Susitna dam Project has so many pluses going for it I don't see why we haven't started construction before.

It's a renewable resource, non-polluting, very cheap power once the dam is paid for; it will provide badly needed jobs. The Mat-Su borough has 20-25% unemployment. It will be a large recreational area and enhance wildlife. If we can sell cheap electrical power that reason will help bring in Industry and provide additional, long term, jobs for Alaskans.

Along with the Susitna project the Railbelt Inter-Tie should be built. Fairbanks has extreamly high electrical power rates due to the use of oil in electricity generation. This project should help bring down those costs as well as for the folks between Anchorage and Fairbanks. There's also the power line project between Valdez and Glenallen which should be completed.

So lets build these projects as soon as possible. Lets save all the natural gas

and oil that is now being used to produce electricity and make fertilizer and petroleum products from them here in Alaska or we could export the raw product. Hydro is clean energy, lets build the Susitna Hydroelectric project now.

Sincerely,

Stanley Hansmd

International Union of Operating Engineers

AFFILIATED WITH AFL-CIO

LOCAL 302 AND BRANCHES A, B, C AND D

FRANK T. POLSAK, *Business Manager*

JACK J. WILSON, *President*

ROD J. FRASER, *Financial Secretary*

Branch Offices:
WENATCHEE, WASHINGTON
YAKIMA, WASHINGTON
ANCHORAGE, ALASKA
FAIRBANKS, ALASKA
JUNEAU, ALASKA

WESTERN AVE. AND CLAY ST.
SEATTLE, WASHINGTON 98121
TELEPHONE: 622-6180

February 29, 1980

Senator Sumner
Capitol Building Rm. 12[illegible]
Pouch V
Juneau, Alaska 99811

RE: Susitna Power Project
SB 294

Sir:

The International Union of Operating Engineers, Local 302 (Alaska), which presently is composed of over 4000 members, has determined that the Susitna Power Project would be in the best interests of all of the people within our State. We would like the Legislature to not only know that we support the project but we also wish all practical speed in efforts to get it under construction.

Sincerely,

Roderick J Fraser

Roderick J. Fraser
Financial Secretary
I.U.O.E., Local 302

RJF/jch
cc: Susitna Power Now, Inc.

P.O. BOX 5109
NORTH POLE, ALASKA
99705

TOP OF THE WORLD
PHONE: 488-2281
AT YOUR SERVICE

2/4/80

Senator Bill Sumner
Senate Resources Committee
Pouch V
Juneau, Alaska 99811

Dear Senator Sumner;

The City Council of North Pole voted unanimously at the March 3, 1980 Council meeting to fully support the Susitna Project.

The City Council of North Pole believes that the Susitna Project will aid greatly in alleviating the tremendous energy costs experienced by the economically depressed Interior.

It is my hope that this will reach you in time for the hearing on Senate Bill 294.

Sincerely,

Carleta Lewis, Mayor
North Pole, Alaska

CAL/pe

United States Senate

COMMITTEE ON FINANCE

WASHINGTON, D.C. 20510

March 7, 1980

Hon. Bill Sumner
Chairman
Senate Resources Committee
Alaska State Senate

Dear Mr. Chairman:

I congratulate you and your committee for your continued interest in the economic welfare of Alaska and the future of energy supplies in our state. I regret that I am not able to join you for today's hearing, but hope that this letter will serve to state my position on this issue. As you know I have long been concerned over the growing power demands in Alaska and have sought ways in which to assure adequate supplies of reasonably priced power for our future.

My support for hydroelectric power, including the Susitna project, is well known. Because of my efforts the Susitna project feasibility studies were undertaken by the Army Corps of Engineers and the project was authorized for Phase I work by the federal government. However, the development of major hydroelectric projects by the federal government has all but stopped as a result of financial and environmental constraints in recent years. For that reason I am pleased to see the state of Alaska moving ahead with this important project.

Since early on I have felt that the state should own the Susitna project. If the state owns the project it can set the power rates and the benefits of Susitna can be spread among all the citizens of Alaska. In pursuit of this goal, as Chairman of the Senate Public Works Subcommittee, I authored an amendment to the 1976 Public Works Act which combined federal support for planning and construction with state ownership. While the Alaska Power Authority has opted to begin design and engineering work through a private contractor the federal option remains.

As a member of the Senate Finance Committee I offered a Committee amendment to the Windfall Profits Tax Bill (H.R.3919) which allowed the use of tax exempt bonds for financing of hydroelectric projects such as Susitna. This is a very controversial provision, but I prevailed in the Committee and the amendment was included in the Finance

Committee bill and the Senate version of Windfall Profits. Unfortunately, in the face of strong opposition from the Treasury Department and the House Conferees this provision was deleted from the Conference Committee version of the Windfall Profits Tax Bill. However, we will not be in a position to finance construction on the Susitna project before 1983 and I intend to raise the issue of tax exempt financing for large scale hydroelectric projects again before that date. I am confident that, at the appropriate time, we can prevail and that tax exempt financing will be available to finance the Susitna project, significantly reducing the cost of power from the dam.

Finally, I would like to encourage you in your efforts to move ahead on this project. I have said many times that the project should be constructed in the most expeditious manner and I have directed my efforts here in Washington toward that goal. If state financing is the quickest way to get the project built I am in full support of these efforts. The Susitna dam represents the best alternative for the future power demands of the railbelt. Let's move ahead.

With best regards,

Sincerely yours,

Mike

Mike Gravel

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, CORPS OF ENGINEERS
P.O. BOX 7002
ANCHORAGE, ALASKA 99510

REPLY TO
ATTENTION OF:

NPAEN-LS

NOV 1978

Mr. Eric Yould
Executive Director
Alaska Power Authority
333 West 4 Avenue
Suite 31
Anchorage, Alaska 99501

Dear Mr. Yould:

Attached are budget figures required for the first twelfth effort of feasibility studies as outlined in the Susitna HydroPlan of Study. Figures are presented on a quarterly obligationule and as such, run higher than the expenditure schedule outli the Plan of Study.

This budget is based on the assumptions that:

1. Authorization for funding will be given by the State Legislature not later than 15 February 1979.

2. Funds will be provided to the Alaska District, of Engineers not later than 15 March 1979.

Sincerely,

JAY K. SOPER
Chief, Engineering

1 Incl
as

SUSITNA HYDROELECTRIC PROJECT

BUDGET FOR CALENDAR YEAR 1979

ACTIVITY CATEGORY	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	TOTAL
SURVEY	$35,000	$460,000	$490,000	$73,000	$1,058,000
HYDROLOGY	73,000	150,000	196,000	130,000	549,000
EENVIRONMENTAL	20,000	22,000	2,000	2,000	46,000
RECREATION	2,000	19,000	2,000	2,000	25,000
PLAN FORMULATION	16,000	30,000	13,000	*******	59,000
POWER STUDIES	10,000	30,000	******	*******	40,000
FOUNDATIONS & MATERIALS	200,000	921,000	1,390,000	320,000	2,831,000
DESIGN	65,000	223,000	116,000	179,000	583,000
REAL ESTATE	5,000	14,000	4,000	*******	23,000
CCULTURAL	5,000	82,000	2,000	2,000	91,000
FIELD CAMP	750,000	500,000	125,000	125,000	1,500,000
REPORTS, REVIEWS PUBLIC PARTICIPATION	5,000	14,000	4,000	******	23,000
BIOLOGICAL	10,000	262,000	649,000	223,000	1,144,000
POWER MARKET STUDIES	5,000	162,000	11,000	28,000	206,000
TOTALS	$1,201,000	$2,889,000	$3,004,000	$1,084,000	$8,178,000

8

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2140 Sorbus Way
Anchorage, AK
March 5, 1980

Senator Bill Sumner
Chairman
Resources Committee
Pouch X
Juneau, AK.

Dear Senator Sumner,

It is my understanding the Resources Committee is reviewing two bills relating to the Susitna Power Project. I support the Susitna Power Project under the State of Alaska auspices and any action taken to expedite this p.oject to ensure it's timely completion would be beneficial to all Alaskans.

Sincerely,

Rebecca Ann Gottschalk

Rebecca Ann Gottschalk

CITY OF KENAI

"Oil Capital of Alaska"

P. O. BOX 580 KENAI, ALASKA 99611
TELEPHONE 283 - 7535

March 18, 1980

Honorable John Sackett
Alaska State Senate
Pouch V
Juneau, AK 99811

Dear Senator Sackett:

In regard to SB 294, the Susitna Project, please accept this letter as evidence of strongest support. We need a future supply of power to meet major industrial plant siting in this area, a need accepted and endorsed by our citizens.

We ask for your quickest and hopefully most favorable consideration.

Sincerely,

Vincent O'Reilly
Mayor

VOR: jw

cc: Senator Bill Sumner

55

BUMPER STICKER PROCLAIMS SUSITNA DAM SUPPORT

Bob Penney, Anchorage co-chairman of Susitna Power Now, a new group promoting the Susitna hydroelectric power project, gets a chuckle with his group's bumper sticker. At the head table are, from left, Fairbanks co-chairman Lee Wareham; Alaska Power Authority official Eric Yould; state Sen. Bill Sumner, R-Anchorage; state Sen. Jay Kerttula, D-Palmer; Anchorage Mayor George M. Sullivan; state Rep. Bill Miles, D-Anchorge, and Penney.

Alaska Power Authority Executive Foresees Susitna Electricity By 1990

By SUSAN ANDREWS
Times Staff Writer

Electricity could be produced from the proposed Susitna River hydroelectric power project by 1990, Alaska Power Authority executive director Eric Yould said here Friday.

The Army Corps of Engineers says power couldn't be on line before 1995 but Yould told a meeting here of Susitna Power Now Inc. he thinks it is "entirely possible" that the project could be constructed within 10 years.

Susitna Power Now is a group of Alaskans from Fairbanks to Homer who are urging construction of two proposed dams on the upper Susitna River. The group includes mayors and utility managers and was organized at the urging of Anchorage Mayor George Sullivan and John Spencer, chief administrative officer for Anchorage municipal utilities.

An estimated 80 boosters, including state legislators Sen. Jay Kerttula of Palmer and Sens. Bill Sumner and Brad Bradley and Reps. Bill Miles and Chat Chatterton of Anchorage, attended an organizational meeting here Friday at the Anchorage Westward-Hilton.

They elected Bob Penney of Anchorage and Lee Wareham of Fairbanks as co-chairmen. The two had been acting chairmen.

Sumner and Miles, who are chairmen of the Senate and House resources committees respectively, stated their support for funding for the Susitna project.

Sumner said this will be a fast-paced legislative session that will adjourn in late May or early June and the Susitna project "will need some fast up-front support."

Sullivan urged that a 2½-year feasibility study of the Susitna project by Acres American Engineering Co. be shortened.

"Two years is a long time to study a project that has already been studied," Sullivan said. The Susitna

Yould supported a proposal by Bob Hufman, manager of Golden Valley Electric Association at Fairbanks, that the state go ahead with surveys and right-of-way purchases for the transmission line which will link Anchorage with Fairbanks.

Sullivan pointed out that the tie-in would save money now by eliminating the need for additional back-up generation in Anchorage or Fairbanks. Excess power in either city could be made available to one another.

One hundred miles separates the end of the Fairbanks power line at Healy and the beginning of the Matanuska Electric line, Hufman pointed out. He urged that the citizens' group put pressure on the Legislature to finance construction of the 100 miles of transmission line and build it to Susitna project specifications.

He estimated construction costs at $100 million. It would cost 30 percent less to build the line to carry current electricity loads, Hufman said, but he favors building a bigger line so that if the Susitna project goes, it will be in place.

The "go or no go" decision on the Susitna project will be made a year from now, Yould said. Then another 18 months of field work will be needed to complete work on the Ferc license application.

U.S. Sen. Mike Gravel, who is pushing legislation to make Susitna project revenue bonds tax exempt, sent a message to the meeting Fri-

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, CORPS OF ENGINEERS
P.O. BOX 7002
ANCHORAGE, ALASKA 99510

REPLY TO
ATTENTION OF:

NPAEN-US

28 June 1978

Mr. Eric Yould
Executive Director
Alaska Power Authority
333 West 4th - Suite 31
Anchorage, Alaska 99501

Dear Mr. Yould:

I am pleased to submit in response to your 19 January letter the final Susitna Plan of Study prepared by the Alaska District, Corps of Engineers, for the State of Alaska, under provisions of Title 3, the Intergovernmental Cooperation Act of 1968.

The report incorporates the comments developed by other State agencies, which you provided, in particular those prepared by the Department of Fish and Game. As a result, the intensity of some of the biological studies has been expanded to help identify the magnitude of the resources that will be affected by the Susitna project. The total increase is $1,886,000 for biological activities.

To offset some of this increase, activities under the categories of survey and foundation and materials have been decreased as the result of the exercise presently under way at the Watana damsite in obtaining information as requested by the President's Office of Management and Budget (OMB). To respond to OMB's review comments on the 1976 Feasibility Report, test borings and geological data are being compiled which reduced the content of several activities outlined in the September 1977 POS draft. This reduction amounted to $1,150,000 which helped hold the overall cost increase to $736,000. The total study cost is now $24.1 million. The price level index was held at September 1977.

The Plan of Study retained the 46-month period to conduct the project feasibility studies based on a 1 May start. Several months of advanced preparation will be required before initiating the activities to allow

NPAEN-US
Mr. Eric Yould

28 June 1978

early mobilization of a camp facility and commence other contract activity actions to assure implementation at the beginning of the summer field season.

The studies will insure optimal basin and system generation planning along with a reasonably accurate cost estimate for the first phase of basin development. These studies represent approximately 25 percent of the total engineering and design effort envisioned for a two-dam complex.

The activities defined in this document have been developed to adequately address determination of project feasibility. The project feasibility analysis program does include suggestions and comments received from various agencies, both Federal and State, and I feel that the program will provide the information necessary for the State to determine desirability of proceeding into construction of a hydroelectric facility in the upper Susitna River basin.

Sincerely yours,

George R. Robertson

GEORGE R. ROBERTSON
Colonel, Corps of Engineers
District Engineer

Friends of Susitna
Hydro-electric project.

JAN 12 1980

(1.) Susitna file

MEETING TO CONSIDER THE ORGANIZATION

OF A

CITIZENS COMMITTEE FOR SUSITNA

Please send copy to me in June.
Kettle

PLEASE PRINT:

Name	Organization	Address
Roger Thiel	Local 190 Roofers	407 Denali St Anchorage Alaska 99503
Vernon D. Christiansen	City of Houston	SR Box 7144 A Wasilla AK 99687
Jack McLean	Commercial Fisherman	3542 North Point DR Anchorage Alaska 99502
Josephine McLean	Commercial Fishing	3542 North Point Dr, Anchorage AK 99502
A. C. Swalling	—	P.O. Box 1039 Anchorage 99510
J. M. Kettle		Box 2, Palmer Alaska
Joe J. Thomas	Laborers Local 942	315 Barnett ST. Fairbanks, Alaska 99701
Geo W Easley	[illegible]	1577 C St / Anchorage Ak. 99501
George M Sullivan	Mayor of Anchorage	Pouch 6-650 Anchorage
Robert C. Johnson	Matanuska Elec. Assoc.	P.O. Box 456 Eagle River, 99577
Frank H. Murkowski	Alaska Nat'l Bank of the North	Fairbanks Alaska 99701

PLEASE SIGN IN

MEETING TO CONSIDER THE ORGANIZATION

OF A

CITIZENS COMMITTEE FOR SUSITNA

PLEASE PRINT:

Name: [illegible] Organization: [illegible]
Address:

Name: [illegible] FREEMAN Organization: [illegible]
Address:

Name: [illegible] Organization: IBEW
Address: 2702 [illegible] Anchorage AK

Name: L M. Seay Organization: IBEW/NECA
Address: 5141 E 22ND ANCH 99504

Name: [illegible] Organization: [illegible] #23
Address: [illegible]

Name: [illegible] Organization: Cement Masons #367
Address: 625 [illegible] Ave

Name: Ken [illegible] Organization: Legislative Affairs Agency
Address: Pouch Y - State Capitol, Juneau 99801

Name: LEE METCALF Organization: [illegible] 367
Address: [illegible] W 54th Anch AK 99507

Name: [illegible] Organization: [illegible]
Address: [illegible]

Name: Malcolm Cheek Organization: MEA
Address: Palmer

Name: Tyler Jones Organization: [illegible] Chamber
Address: Box [illegible] Anchorage

Name: Tony Terry Organization: [illegible]
Address: 1?? C St Washington 2051?

Name: Tom Donnelly Organization:
Address: Same as above

Name: [illegible] Spencer Organization: City of Anch
Address: Pouch 6-650 - Anch 99502

Name: Geo M. Sullivan Organization: Mayor / Anch
Address: 6-650 Anch AK

Roy [illegible] Mat-Su
Palmer, Alaska 99645

Harry Dougherty   Kaiser Cement - Anchorage.

Bob Penney   Penco Inc   "

Wes Kennedy [illegible]

Joe J. Thomas   Laborers Local 942, Fbks, AK.

PLEASE SIGN IN

MEETING TO CONSIDER THE ORGANIZATION

OF A

CITIZENS COMMITTEE FOR SUSITNA

PLEASE PRINT:

Name: Dorothy A. Jones Organization: MAT-SU Borough ASSEMBLY
Address: Box 109, Talkeetna, AK. 99676
Name: JESS NICHOLAS Organization: ALASKA
Address: P.O. Box 177 KENAI RURAL ELECT COOP
Name: C.E. JOHNNY JOHNSON Organization: City of SEWARD
Address: Box 337 SEWARD, ALASKA 99664
Name: Willard H. Johnson Organization:
Address: P.O. Box 84 Palmer AK 99645
Name: DALE D. BRIGGS Organization: MEA
Address: Star Rt Box 65, Eagle River AK 99577
Name: JIM THOMPSON Organization: HEA
Address: Box 222 HOMER 99603
Name: PHIL OVELL Organization: M.E.A.
Address: Box 6 SUTTON ALASKA 99674
Name: JOHN E. LISTON Organization: BUILDING ALASKA MAGAZINE
Address: P.O. Box 1971, ANCHORAGE, AK 99510
Name: ILLEGIBLE R. WOOD Organization: FAIRBANKS ECONOMIC DEVELOPMENT Corp. City of Fairbanks
Address: 619 ELEVENTH AVENUE, Fairbanks, Alaska 99701
Name: R.L. HUFMAN Organization: GVEA
Address: 758 ILLINOIS Box 1249 FBKS
Name: Lee Wareham Organization: FBKS North Star Boro
Address: SR Box 20653 Fairbanks, AK
Name: Christine Wood Organization: Alaska Conservation Foundation
Address: 106 Chena St., Fbks. AK. 99701
Name: Harold Gillam Organization: EMUS
Address: 645-5th Ave Fairbanks
Name: Ron Huberdeau Organization: Cook Inlet Regional
Address: 2525 'C' ST RANCH AK
Name: Loren Leasburg Organization: U.V. Leasburg & Assoc.
Address: 723 W 6th Ave Anchorage 99501

MEETING TO CONSIDER THE ORGANIZATION

OF A

CITIZENS COMMITTEE FOR SUSITNA

PLEASE PRINT:

Name: JACK FLINT Organization: Matanuska [illegible]
Address: 814 [illegible] BLVD Anch 99502

Name: Russ Larson Organization: Matanuska-Susitna
Address: Box 13 Palmer, Alaska 99645

Name: Charlie Parker Organization: self employed land surveyor
Address: Box 349 Soldotna, AK.

Name: Ron Birch Organization: Birch, Horton, et al
Address: 1127 W. Seventh Anchorage

Name: Elaine Wurster Organization:
Address: 640 L #407

Name: Edward JANZEN Organization: Sheet Metal #23
Address: 825 E 8th Ave Anchorage Alaska 99501

Name: [illegible] Organization: IUOE 302
Address: 2510 Arctic

Name: Roderick J Fraser Organization: IUOE Local 302
Address: 2510 Artic Blvd. Anchorage AK 99503

Name: E. W. CASPER Organization: Green Construction Co
Address: 125 W. 5th Ave Anch 99501

Name: Lawrence Shay Organization: IBEW/NECA
Address: 6223 Geronimo Circle Anch 99504

Name: I. M. WALDROP (Retired) Organization: IBEW
Address: 2702 DENALI, ANCHORAGE, AK

Name: LEE METCALF Organization: U.A. LOCAL 367 PLASTERERS
Address: 610 W. 54TH ANCH., AK. 99502

Name: Joe L. Hayes Organization: State Legis.
Address: 625 W-5th Ave — Anchorage 99501

Name: Joe Armstrong Organization: NECA.
Address: 712-W 36th Ave Anch - 99503

Name: Allan Pilto Organization: PLASTERERS & CEMENT MASONS 367
Address: 825 E 8th Ave ANch AK 99501

MEETING TO CONSIDER THE ORGANIZATION

OF A

CITIZENS COMMITTEE FOR SUSITNA

PLEASE PRINT:

Name: Thomas Donnelly Organization: U.S. Senate Water Resource Committee (Sen. Gravel)
Address: 4204 DIRKSEN SENATE OFFICE BLDG WASH, D.C. 20510

Name: Tyler Jones Organization: Sen. Mike Gravel Office
Address: 701 C St Box 1 ANC. 99513

Name: BOB PENNEY Organization: U.P. ANCH. CH. of COMMERCE
Address: 600 E. BENSON. ANCH. 99503

Name: Wes Gregg Organization: Rep. Don Young
Address: 701 C ST Box 3 99513

Name: LEE A. WYATT Organization: MAT-SU BOROUGH
Address: BOX B PALMER ALASKA 99645

Name: Sue Tubbs Organization: Sen Kertula
Address: Box 61 PALMER 99645

Name: Kathryn Schmall Organization: MAT-SU-BORO
Address: Box 595 WASILLA 99687

Name: Norm Levesque Organization: MAT-Su BOR.
Address: Box B PALMER 99645

Name: Donald Shira Organization: Alaska Power Admin.-DOE
Address: Box 50, Juneau, AK 99802

Name: Jim Ekstedt Organization: Mat-Sue Bor.
Address: Box 105 Palmer 99645

Name: Thomas A Stobie Organization: MLGP
Address: 6967 Laser Dr Anchorage AK 99504

Name: Larry Madley Organization: Chugach Electric
Address: Box 3518 Anchorage Alaska 99501

Name: Andrew [illegible] Organization: [illegible] Local 341
Address: 1634 Garfield St. Anch. Ak. 99501

Name: PAUL A. DUNHAM Organization: MECHANICS LOCAL 601
Address: 825 E. 8th ANCHORAGE AK 99501

Name: Kathi Bickenbaugh Organization: Senator Ted Stevens DC Office
Address: 2100 Russell Senate Office Bldg WASH DC 20510

Jul-Susitna

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER / SUBPORT BUILDING
JUNEAU 99801

Rcvd 4/17

April 2, 1979

The Honorable Jalmar Kerttula
Alaska State Legislature
Pouch V, State Capitol
Juneau, Alaska 99811

Dear Senator Kerttula:

Please find enclosed per your request a synopsis of available information on the Susitna River fisheries.

The Susitna River basin is an important habitat for a wide variety of fish species, both resident and anadromous. Five species of salmon (chinook, coho, chum, pink, and sockeye) utilize the Susitna River drainage for spawning and rearing. The majority of the chinook, coho, chum, and pink salmon in the Cook Inlet area are produced in this drainage. Grayling, rainbow trout, Dolly Varden, burbot, lake trout, whitefish, and sculpins are the more common resident fish species.

Although total salmon escapement estimates have not been derived for the Susitna River, it is probably the second or third largest sockeye salmon production area within Cook Inlet. Economically, the estimated average annual commercial value of the sockeye, king, pink chum, and coho Susitna salmon stocks was $8,721,780 in 1975. This average value does not include the 1975 estimated value of $3,701,745 for the additional salmon in the Susitna River Basin necessary for producing this estimated potential catch (Friese, 1975). Although figures for subsequent years are unavailable at this time, with improved stock condition, etc., it can be assumed the value of the fishery has greatly increased.

Economic values related to recreation are unavailable but are assumed to be high due to high concentration of the population adjacent to the Susitna River. Non-consumptive economic values are also unavailable.

Baseline environmental fisheries studies have been conducted by ADF&G intermittently since 1974. The projects were financed with Federal funding averaging $29,000 per year in 1974, 1975 and 1976, with an allocation of

$100,000 in 1977. The National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) first contracted with ADF&G to conduct a one-year assessment of salmon populations utilizing the Susitna River in the vicinity of the proposed Devils Canyon dam site during 1974. The objectives of these studies were to determine the adult salmon distribution, relative abundance, and migrational timing and to identify juvenile rearing areas (Barrett, 1974). Funding was received in 1975, 1976, and 1977 from USFWS to continue and expand these studies and to monitor the physical and chemical parameters associated with the mainstem Susitna (USFWS, 1976, and Riis, 1977). Additional baseline studies were not initiated during 1978 due to lack of funding.

The construction and subsequent operation of the Devils Canyon and Watana dams will result in long-term ecological changes. The two dams will inundate an estimated 50,550 acres of aquatic and terrestrial habitat of the Susitna River Basin upstream of Devils Canyon. Regulation of the mainstem river will substantially alter the natural downstream flow regimes and temperature gradients. Secondary impacts such as improved road, water, and floatplane access may create some additional problems in regulating hunter and fishermen harvest.

Our preliminary studies have concluded that the effects of impoundment and construction activities will include alteration of the natural flow regimes, water temperatures, water chemistry, and transport of materials. Habitat requirements of the critical life history phases for passage, spawning, egg incubation, and juvenile rearing of the Susitna salmon species studied are quite specific. The USFWS Cooperative Instream Flow Service Group has developed criteria which demonstrate the narrow tolerances of certain salmonid and resident species to the hydraulic parameters of velocity, depth, substrate, and temperature (Bovee, 1978). The seasonally wide fluctuations of water velocity, depth, temperature, substrate and sediment of the free flowing mainstem Susitna, its sloughs and tributaries, determine the availability and accessability of salmon habitat. Thus, any alterations to the existing Susitna aquatic ecosystem which would restrict or reduce the availability of required habitat, will also reduce fish production in the Susitna Basin and Cook Inlet estuary.

For example, it is important to note that although the Susitna River is glacial and turbid more than half of the year, the river clears during the winter months and becomes the major winter rearing area for salmonids, assuming this function from its clearwater tributaries and sloughs which freeze and dewater. Chinook and coho salmon, which are of high interest to both commercial harvesters and sport anglers in the Cook Inlet area, are dependent on these freshwater rearing areas of the Susitna for a period of one to two years before migrating to saltwater. Should construction of the dam complex take place, these important rearing areas will be lost downstream of the dams because the river will be turbid year-round and have a higher water velocity due to a reversal of the natural seasonal flow and stage conditions after construction.

I hope these comments are useful to you. I appreciate the opportunity to express the Department's views on this matter.

Sincerely,

Ronald O. Skoog
Commissioner

ALASKA POWER AUTHORITY

333 WEST4th - SUITE 31 - ANCHORAGE ALASKA 99501

February 6, 1979

Senator Bill Sumner
Chairman
Resources C mittee
Alaska Stat egislature

Dear Senator Sumner:

The attached letter from the Corps of Engineers, Alaska District, details the quarterly obligation schedule for Program Activities for the Susitna Project Feasibility Analysis. The Program Activities are described beginning on page 45 of the Susitna Hydropower Plan of Study. Figure 8 on page 44 reflects $6.7 million in the accumulated expenditure schedule for the first 12 months of the study. The study will be ongoing for 46 months. Since the Corps of Engineers is required to have funds available on an obligation basis before work can be contracted, the budget submitted in the attached letter and requested in the appropriation bill are for the 12 month obligation amount of $8.128 million.

Passage of SJR #6 and SB #63 by the Legislature is requested by February 15 due to the extremely tight time schedule necessary to initiate the study. The Corps of Engineers has equipment remaining in field from the 1978 study activities performed to answer questions raised by the federal Office of Management and Budget on the 1975 Interim Feasibility Report. Equipment and materials can only be moved into the Watana damsite economically by winter cat-train overland movement. This is a requirement of BLM to protect against surface impacts to land under BLM management that is considered for potential wilderness classification. If the study is not funded, the Corps of Engineers must remove all equipment and materials presently on site this winter. If the study is funded, the Power Authrity must enter into agreements with the Corps of Engineers, and complete a bond sale to finance the cost of the entire study as authorized by SJR #6. The Corps of Engineers must mobilize 2 to 3 times the present amount of equipment on site, enter into contracts for support and operations, and enter the study area by winter cat-train access while sufficient snow cover and freeze conditions still exist.

If you have any additional questions relative to the costs of the study or the necessity for swift action by the Legislature, please contact this office at 277-7641. The Power Authority will be represented at the hearings scheduled by the Resource Committee at 1:30 pm on Friday, February 9, 1979

Sincerely,

Eric P. Yould
Executive Director

FEB 8 REC'D

BUDGET FOR CALENDAR YEAR 1979

ACTIVITY CATEGORY	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	TOTAL
SURVEY	$35,000	$460,000	$490,000	$73,000	$1,058,000
HYDROLOGY	73,000	150,000	196,000	130,000	549,000
ENVIRONMENTAL	20,000	22,000	2,000	2,000	46,000
RECREATION	2,000	19,000	2,000	2,000	25,000
PLAN FORMULATION	16,000	30,000	13,000	*******	59,000
POWER STUDIES	10,000	30,000	********	*******	40,000
FOUNDATIONS & MATERIALS	200,000	921,000	1,390,000	32[illegible],000	2,831,000
DESIGN	65,000	223,000	116,000	179,000	583,000
REAL ESTATE	5,000	14,000	4,000	*******	23,000
CULTURAL	5,000	82,000	2,000	2,000	91,000
FIELD CAMP	750,000	500,000	125,000	125,000	1,500,000
REPORTS, REVIEWS PUBLIC PARTICIPATION	5,000	14,000	4,000	*******	23,000
BIOLOGICAL	10,000	262,000	649,000	223,000	1,144,000
POWER MARKET STUDIES	5,000	162,000	11,000	28,000	206,000
TOTAL:	$1,201,000	$2,889,000	$3,004,000	$1,084,000	$8,178,000

ALASKA POWER AUTHORITY

333 WEST4th · SUITE 31 · ANCHORAGE ALASKA 99501

April 6, 1978

The Honorable John Rader
Senate President
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Rader:

The attached resolution is submitted to the Legislature at this time in order to urge Congress to make amendments to the Federal Hydroelectric Power Development Act with respect to the proposed Susitna Hydroelectric Project and to approve the issuance of revenue bond or note indebtedness by the Alaska Power Authority for Phase I Design and Feasibility Studies pursuant to AS 44.56.180.

As recited in the proposed joint resolution, amendments to P.L. 94-587 have been drafted by Authority representatives and representatives of Senator Gravel which would permit the financing by the Authority of the costs of the feasibility studies (known as Phase I Advanced Engineering and Design) required before the construction of the dams can go forward. Under the amendments, as drafted, an agreement would be entered into providing that the United States would reimburse the Authority for any bond or note proceeds spent to prepare the Phase I report for the project if the report is either not favorable or the Authority, within three years of the completion of the report, is unable to borrow money to pay the cost of constructing the project including the cost of preparation of the report based on the security of the project or its revenues. It is further anticipated that funds would be expended by the Authority for costs of the Phase I studies only to the extent federal dollars are paid into the Fund to guarantee reimbursement and retirement of the indebtedness if either of the two events occur.

In addition to urging Congressional passage of the above amendments, the resolution constitutes the consent of the Legislature which may be required pursuant to AS 44.56.180. That section requires "a statement outlining the general design, demonstration of financial feasibility, and maximum amount of bonds estimated to be necessary for each new project (be submitted) to the Legislature and the Commissioner of Commerce and Economic Development," together with a statement as to the means of design, acquisition and construction of the project which the

Authority intends to pursue. Under this section, the Legislature is to adopt "a joint resolution approving the general design and maximum amount of bonds."

It is not clear whether AS 44.56.180 has application to the present situation where Authority financing is to be used solely to pay Phase I design and feasibility costs, rather than construction costs of the project. Inasmuch, however, as public financing will be necessary under the proposed plan anticipated to be authorized by Congress, there must be no substantial question as to whether the legal prerequisites for such financing have been fulfilled. Therefore, bond counsel and the Authority's financial advisor have recommended specific legislative approval of the issuance of indebtedness by the Authority for the purpose of the Phase I design and feasibility costs as provided for in the attached joint resolution.

In compliance with AS 44.56.180 there is attached hereto the proposed joint resolution, with its attached Susitna Status Report, and the draft Susitna Hydropower Plan of Study which, with this letter, constitutes the requisite submission to the Legislature required by AS 44.56.180

This resolution is being forwarded pursuant to unanimous approval by the five members of the Board of Directors of the Alaska Power Authority on March 17, 1978.

Sincerely,

Eric P. Yould
Executive Director

EPY/mgf
Attachments:
as mentioned

Identical letters to
Rep. Hugh Malone
Comm. Hubbard

1. Who is against the bill- Environmental Groups
   a. They say conservation will take care of the power need. Essentially a no-growth stand.
   b. Wse our oil rather than selling it to the Outside. Gallaugher says Alaska should utilize our marketable resources to the hilt.

3. Project Status-
   a. Initial $8,000,000 appropriated for core drillings to determine dam strength. This appropriation will take the study through the fall of 80. This is the first in a total 25,000,000 necessary to complete the first stage evaluations.
   b. 1984 is the anticipated completion date of these first stage evaluations.
   c. 1990 is the expected completion date for the entire roject.

4.Contacts to make- Susitna Power Now Inc.
   a. Bob Penney-Penney Mobile Home Sales of Anchorage-277-2522
   b. Lee Wareham-Alascom in Fairbanks (H)452-8505 (o)452-1756

Not a complete Copy - Some Pages are Missing

EXECUTIVE SUMMARY

This plan of study (POS) prepared by the Alaska District Corps of Engineers for the State of Alaska presents a program of activities for project feasibility analysis of hydropower development in the Upper Susitna River Basin. It provides a description of each activity along with a cost estimate for its completion. The POS fulfills a Federal planning requirement while also providing the State of Alaska an overview of the planning activities associated with a large scale water resource project. The authority for proceeding with this joint State-Federal planning program is contained in Section 203 of the Water Resources Development Act of 1976 enacted by the 94th Congress. Funding for preparation of the POS was provided by the State of Alaska on 30 June 1977.

Existing electrical generation within the study area is produced almost exclusively by fossil fuel thermal resources. However, as these resources become more scarce, and perhaps very expensive, and as the energy demand increases to a projected 15 billion kilowatt hours by the year 2000, the advantage of non-cost-inflating, renewable energy, such as hydropower, becomes apparent. A feasibility report completed by the Corps of Engineers in 1976 outlined a number of alternative plans for developing the hydropower potential of the Upper Susitna Basin and identified the most economical plan, consisting of a system of two dams--a 635-foot-high concrete thin arch dam at Devil Canyon and an 810-foot-high earthfill dam at Watana, with 365 miles of transmission line. This system is capable of developing 6.1 billion kilowatt hours of firm annual energy, roughly triple the energy consumed in Anchorage and Fairbanks in 1974. While the 1976 feasibility report provided sufficient data to support the need and economic feasibility of a plan to develop the hydroelectric potential of the Upper Susitna Basin, it was recognized that additional field data and more detailed studies would be required. The POS outlines the additional studies required to determine the most cost-effective plan, and its environmental impacts.

The activities outlined in the POS have a total estimated cost of $24.1 million over a time frame of 46 months. The schedule is based on early notification of program initiation and timely receipt of study funds to allow mobilization for field explorations prior to

the summer season and arrangements for access to the sites. A critical path method network (CPM) shows the interrelationship of some 202 activities and indicates those activities and timing most critical for completion of the project feasibility analysis. Early acquisition of field data about foundation conditions, stream flows, and topographic surveys during the short summer months is very important.

Study management of physical and fiscal progress must be rigorously maintained throughout the 46-month period. Periodic progress reports and a report of expenditures would be provided the State of Alaska for their information and review. The project feasibility analysis activities have been programmed through three progressive steps: (1) preliminary screening, (2) detailed feasibility studies, and (3) detailed design studies for Watana, access road, and transmission system.

1) Preliminary Screening: In step 1 of the study, a number of potential damsites and combinations of different dams and heights would be evaluated to identify the most economical and environmentally acceptable plan based on a preliminary calculation of benefits and costs. During this study phase, the best plan identified in the 1976 feasibility report, Watana constructed initially followed by construction of Devil Canyon, would be reexamined. This first step is estimated to cost $4.3 million and be completed in 7 months. In order to meet the overall study schedule of 46 months, field work needed in later phases of the study has been scheduled concurrently with the preliminary study phase and these costs are included in the subtotal of $4.3 million. Results of the preliminary phase will provide the first important decision point as to whether the study should continue into the second step of detailed feasibility studies.

2) Detailed Feasibility Studies: Detailed studies would be concentrated on the best plan identified in the preliminary screening. Costs and benefits would be refined using more accurate data obtained from ongoing field work. This second step is estimated to cost $16.7 million and be completed in 25 months after completion of the initial step. As indicated above, additional field work would continue during this phase of the study and these costs have been included in the subtotal of $16.7 million. Also included are concurrent activities required for detailed design studies. Completion of the detailed feasibility report will provide a firm basis for recommending for or against construction of the project, whether Federally funded, State supported under Section 203, or totally financed by the State of Alaska.

Detailed Design Studies: Assuming a favorable showing of feasibility in step 2, the last step would be detailed design of any dams, powerhouses, access roads, and some 365 miles of double circuit transmission lines and substations to deliver power to the Anchorage and Fairbanks

load centers. A detailed and accurate cost estimate for construction of the initial element in a dam system will be provided to enable a decision on funding and initiation of construction. The third step is estimated to cost $3.1 million and be completed in an additional time frame of 14 months after completion of step 2.

The above estimates of cost and time for completion of the three steps are based on the findings and recommendations contained in the 1976 feasibility report, and envision a continuation of that planning study leading to the ultimate construction of the project.

At the end of any of the three program steps, Susitna hydroelectric development could be determined to lack economic or environmental justification. Such a conclusion would result in the termination of the planning program and in Federal assumption of responsibility for expended funds. Otherwise, the study costs would be borne by the State of Alaska. Assuming a favorable recommendation, detailed plans and specifications for the first construction contract could be undertaken immediately thereafter.

PURPOSE

The function of the plan of study is to delineate the engineering, economic, social, and environmental studies associated with planning for the Upper Susitna River Basin hydroelectric project, as a prelude to State participation under Section 203 of the 1976 Water Resources Development Act. The study will provide a description of activities to be performed, an estimate of cost and time for accomplishment of these activities, an indication of the activity interdependence, and a schedule of program activities that can serve as a management tool during the study effort. Should the State of Alaska desire to work toward development of the Upper Susitna Basin outside the provisions of the 1976 Water Resource Development Act, the plan of study will serve as a guide in assessing other proposals for analyzing the economic feasibility and environmental impact of the project.

AUTHORITY

The Corps of Engineers is participating in accordance with a Memorandum of Understanding, dated 30 June 1977, between the United States of America and the State of Alaska for preparation of a "Study Outline, Susitna Project." The memorandum directs that,

> "The Secretary of the Army, acting through the District Engineer, Alaska, shall prepare a study outline for the Susitna Project for the purpose of detailing the Scope of Work required to provide engineering, environmental, economical, and social information relating to the subject project under the provisions of Title 3, Public Law 90-577, 16 October 1968, the Intergovernmental Cooperation Act of 1968."

Studies considered in the Plan of Study were authorized by Public Law 94-587, entitled "Water Resources Development Act of 1976" enacted by the 94th Congress on 22 October 1976.

The authorizing legislation provided for two options for the conduct of Phase I studies. Section 160 states that,

> "The Secretary of the Army, acting through the Chief of Engineers, is authorized to undertake the Phase I design memorandum stage of advanced engineering and design of the project for hydroelectric power on the Susitna River, Alaska, in accordance with the recommendations of the Board of Engineers for Rivers and Harbors in its report dated June 24, 1976, at an estimated cost $25,000,000. This shall take effect upon submittal to the Secretary of the Army by the Chief of Engineers and notification to Congress of the approval of the Chief of Engineers."

The possibility for State of Alaska funding of Phase I studies is provided for by Section 203(e) which states,

> "The Secretary is authorized to make expenditures from the [Alaska Hydroelectric Development Fund] for the Phase I design memorandum stage of advanced engineering

and design for any project in Alaska that meets the requirements of Subsection (a)(2) of this Section, if appropriate non-Federal public authorities, approved by the Secretary, agree with the Secretary, in writing, to repay the Secretary for all the separable and joint costs of preparing such design memorandum, if such report is favorable. Following the completion of the Phase I design memorandum stage of advanced engineering and design under this subsection, the Secretary shall not transmit any favorable report to Congress prior to being repaid in full by the appropriate non-Federal public authorities for the costs incurred during such Phase I. The Secretary is also authorized to make expenditures from non-Federal funds deposited in the fund as an advance against construction costs."

Funds were provided for preparation of the Plan of Study by the State of Alaska on 30 June 1977.

PROBLEMS & NEEDS

Most of the present commercial electrical power in the Southcentral Railbelt area is derived from fossil fuel thermal and turbine generation. The Anchorage-Cook Inlet area had a total installed capacity of 504.8 megawatts (MW) in 1976. Natural gas fired turbines were the predominant energy source with 434.9 MW of installed capacity. Hydroelectric capacity of 45 MW was available from the Eklutna and Cooper Lakes projects. Steam turbines comprised 14.5 MW of capacity, and diesel generation, mostly in standby service, accounted for the remaining 10 4 MW.

The Fairbanks-Tanana Valley area commercial utilities had a total installed capacity of 222.2 MW in 1976. Oil-fired gas turbine generation provided the largest block of power with a capacity of 136.6 MW. Steam turbines provided 53.5 MW of power and diesel generators contributed 32.1 MW.

Recent electrical power growth rates have been in the neighborhood of 14 percent annually, and although these rates are projected to decline to 7 percent beyond 1980, the year 2000 Railbelt power requirements are estimated to be 15 million megawatt-hours energy and 3,170 megawatts peaking capacity.

Estimated Railbelt Area Power Requirements

	1976	1980	1990	2000
Capacity (MW)	569	870	1,670	3,170
Energy (GWH)	2,550	3,980	7,620	15,000

While increased power capability is the need which precipitated the 1972 U.S. Senate Committee on Public Works resolution which authorized the Corps of Engineers feasibility study, other problems and needs have also been identified. These include the need to preserve natural areas, to conserve or enhance fish and wildlife resources, to respond to problems of flood damage and air pollution, to expand recreation opportunities, and to conserve fossil fuels.

It would be presumptuous to assume that any single water resources plan could satisfy all the water-related needs of a region. Even if the plan could respond to the full range of water-related problems, there are often economic, social, and ot[illegible] that must be recognized. It is therefore necessary to sele[illegible] limited set of compatible needs to which the water resources p[illegible] espond. In other words, the extent to which desirable func[illegible] of a multipurpose project could be developed is highly dependent upon which various purposes are compatible.

Needs which the project development could help satisfy, but which may be contrary to the objective of power development, include the improvement of small boat and deep draft navigation conditions, augmentation of municipal water supplies, and development of an extensive irrigation system. The plans for power development are also relatively unresponsive to the desire for preservation of what could be termed the "Alaskan way of life," including prevention of further population growth, prevention of additional industrialization, and curtailment of urban expansion.

PROJECT DESCRIPTION

The plan of development recommended by the Corps of Engineers in 1976 consists of two dams and related reservoirs and powerplants to be constructed on the Upper Susitna River with transmission facilities to provide power to the Anchorage and Fairbanks load centers.

Watana and Devil Canyon were the two projects recommended in 1976. These two projects could produce 6.1 billion kilowatt hours (kWh) firm annual energy, 800 million kWh average annual secondary energy, and 1,392,000 kilowatts of dependable capacity based on a 50 percent system load factor. Watana, the first project to be built under this plan of development, would consist of an 810-foot-high earthfill structure located at river mile 165. The reservoir would extend 54 miles upstream and have a surface area of 43,000 acres. The total storage capacity would be 9,624,000 acre-feet after 50 years of sediment inflow. The useable storage capacity would be 6,100,000 acre-feet. Devil Canyon, 32 miles downstream of Watana, would be a concrete thin-arch dam with a maximum structural height of 635 feet. Construction of the Devil Canyon project after completion of Watana would be phased to meet the projected electrical energy demands of the Railbelt area. The Devil Canyon reservoir would inundate 7,550 acres and 28 miles of natural river, and would provide 1,050,000 acre-feet of storage capacity. Intake structures would be situated to allow a maximum power pool drawdown of 175 feet, but when operated in conjunction with the upstream Watana reservoir, Devil Canyon annual drawdown would normally be less than 5 feet.

The transmission line would be approximately 365 miles in length consisting of double towers, each carrying a single conductor three-phase circuit. About 25 percent of the energy would be provided to the Fairbanks load centers, with 75 percent being utilized in the Anchorage area. A basin map shows the location of the two dams (Figures 1 and 2). Detailed layouts of Devil Canyon and Watana are shown on Figures 3 and 4.

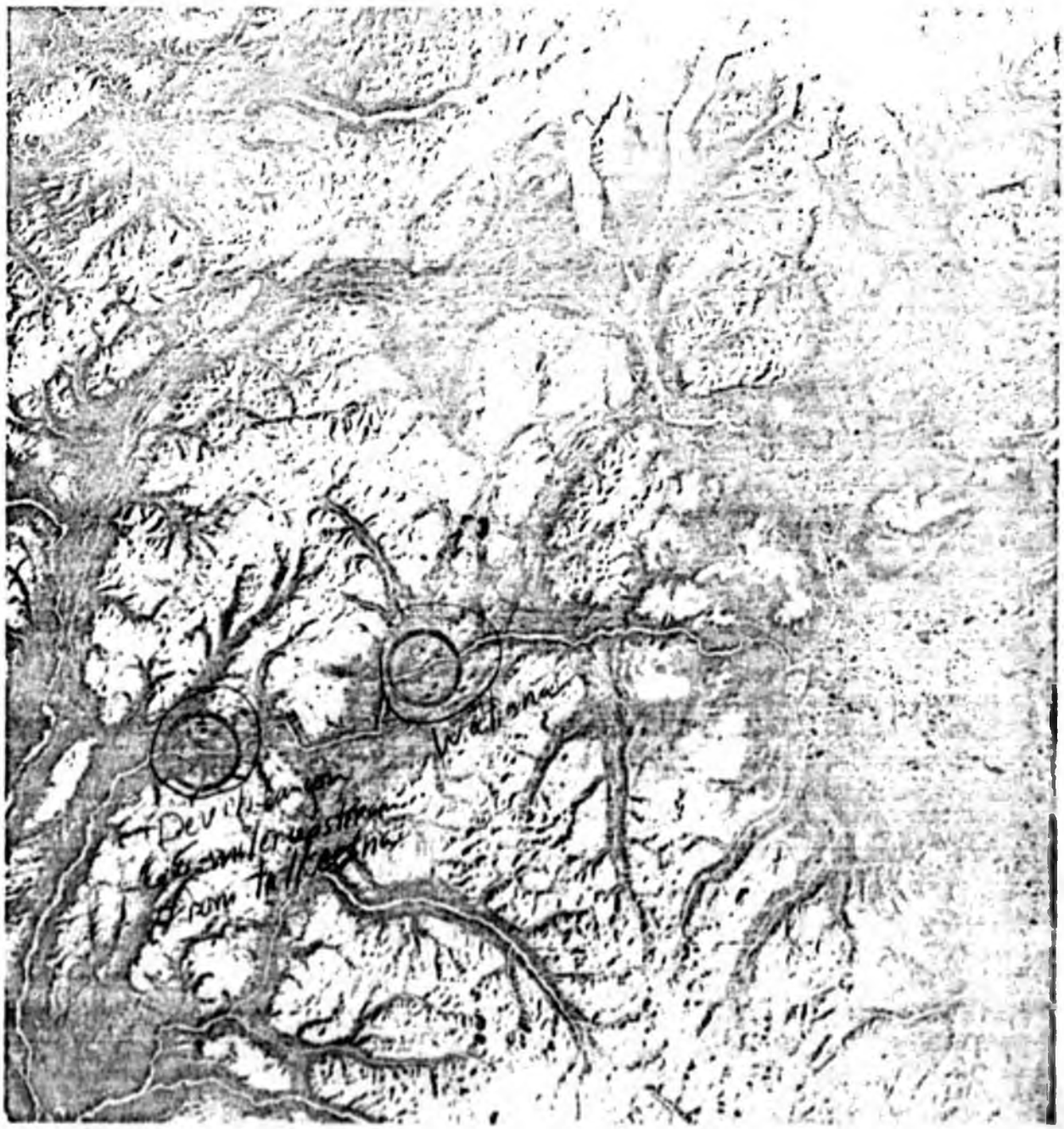

FIGURE 1. ERTS satellite photograph of the Upper Susitna River with the general location of the Devil Canyon and Watana Projects shown in the circles. Devil Canyon project, on the left, is roughly 65 miles upstream from Talkeetna, and Watana is 32 miles above Devil Canyon. Shown in the upper right corner of the photo are the glaciers of the Alaska Range, which provide much of the flow for Susitna River.

ENVIRONMENTAL SETTING

TOPOGRAPHY

The Upper Susitna River Basin contains several topographic features which provide a conglomerate stream flow heavily influenced by specific meteorological events. The basin was shaped by volcanism, diastrophism, glacial erosion, and marine deposition. The basin, as shown in Figure 1, is a fan-shaped area comprising about 6,160 square miles and is bordered by the Alaska Range to the north, the Talkeetna Mountains to the southeast, and flat, low-relief areas to the southwest.

Most of the basin has a well-defined branching stream pattern with a main channel emanating from glacial headwaters in the extreme northern segment of the divide. Below the glaciers, the braided stream traverses a high plateau composed of aggraded alluvial sediment, and then meanders several miles south to the confluence with the Oshetna River. It then takes a sharp turn to the west and flows through a steeply cut, degrading channel until it exits the basin at Gold Creek. The contributing glacial area comprises only 4 percent of the entire basin, but summer glacial melt provides a considerable portion of the total streamflow. By contrast, the flat, glacially carved Lake Louise area in the southeastern portion of the basin provides comparatively little flow from its 700-square-mile area.

The mountains within the basin reflect the influence of the Pleistocene Ice Age, during which glacial advancement over the topography planed the mountains and gave the basin surface a rounded and smoothed appearance. The highest elevation within the basin is 13,326 feet, and the lowest elevation is 740 feet. The basin relief implies a steep channel slope; however, variability of the slope compared to other mountain streams is somewhat reversed. The aggraded channel in the upper reaches of the basin has channel slopes in the range of only 4 to 7 feet per mile, while the lower basin channel drops as much as 37 feet per mile.

Main tributaries to the Susitna River have an even higher range of channel slopes. The deeply incised river channel below the Tyone River contrasts with the many traditional Alaskan U-shaped valleys, remnants

of glacial advances. The absence of broad flood plains in the lower basin results in high stages during high runoff due to confined flow areas. The Susitna River alluvium has developed into a continuous effluent aquifer. Most of the tributary aquifers do not sustain winter flow.

CLIMATE

The climate of the Upper Susitna Basin is characterized by cold dry winters and warm but moderately moist summers. The yearly precipitation distribution shows that 64 percent of precipitation occurs from June through October. Within the Railbelt area, the climate falls into three categories: (1) a zone dominated almost entirely by maritime influences, (2) a zone of transition from maritime to continental climatic influences, and (3) a zone dominated by continental climatic conditions. The Upper Susitna Basin falls within the transitional zone. The contrast between the maritime-influenced areas of the southern Kenai Peninsula and the continental conditions at Fairbanks is marked. Within the confines of the Upper Susitna Basin, away from the moderating influence of maritime air, there are greater temperature extremes than on the coast of the Gulf of Alaska. Extreme winter temperatures are caused by polar air masses which flow in from the north.

Mean annual precipitation in lower elevations of the basin would be expected to range between 18 and 22 inches, while precipitation in higher elevations, because of orographic effects, would be expected to reach 80 inches per year. Mean annual snowfall would range from 60 inches in the lowlands to as much as 400 inches in the high mountains. Freezeup in the highest reaches of the Susitna River starts in early October, and by the end of November the lower regions of the river are icebound. The river breakup begins in early May, and within two weeks of breakup the river tributaries are free of surface ice.

BASIN STREAMFLOW

The annual streamflow patterns of the Upper Susitna River and most of its tributary streams are best described as providing perennial flow. The main tributaries of the Susitna River consist of the East and West Fork Susitna Rivers which originate in the northern section of the drainage basin, the Maclaren River which originates in the northeastern portion of the basin, and the Tyone River which emanates from the southern reaches of the basin.

The flow regime of the Susitna River is seasonal, with more than half of the yearly streamflow occurring from May through September Summer streamflow consists mainly of snow and glacial melt combined with surface runoff from rainfall. Winter flows are restricted almost entirely to groundwater inflow. Primary water sources for the Maclaren and East and West Fork Susitna Rivers are the numerous glaciers which rim the northern basin divide in the Alaska Range.

The Tyone River contribution is mostly reservoir outflow from the multitude of lakes located within its subbasin. Winter flows begin in early November and are composed of baseflow from subsurface storage. When breakup nears in March and April, subsurface storage is depleted to the extent that many small tributaries cease flowing, and the Susitna River flow shrinks to its seasonal minimum. Following breakup, flows increase rapidly with the onset of spring snowmelt. As summer temperatures increase, glacial flow accentuated by rainfall runoff becomes the predominant river source. The cycle repeats itself with winter freezeup.

The variability of streamflow within the basin is extreme. The following table represents average annual streamflow conditions for portions of the basin above the Gold Creek gaging station.

Flow Variations in Upper Susitna River Basin

Gaging Station	Drainage Area (Sq Mi)	Percent of Gold Creek Drainage Area	Percent of Gold Creek Streamflow
Maclaren River near Paxson	280	4.5	10.0
Susitna River near Denali	950	15.4	27.6
Susitna River near Cantwell	4,140	67.2	64.8
Susitna River at Gold Creek	6,160	100.0	100.0

Nearly 38 percent of the Gold Creek streamflow originates from 20 percent of the area. This large percentage of streamflow is contributed by glaciers in the upper portion of the basin and by high precipitation runoff rates which result from impervious glaciers. In addition, it is suspected that the mountains form a geographic constraint, which causes excessive precipitation in this area in relation to the remainder of the basin.

By contrast, the Cantwell gaging station shows a r off rate not consistent with that which could be expected below the glaciers, indicating that below the Paxson and Denali stations a large area contributes little annual streamflow. This large, low contributing area is believed to be the flat, 700-square-mile Lake Louise area. Below the Cantwell station, flow percentages increase slightly to a more nearly normal area-discharge relationship for the basin.

GEOLOGY

The geology of the Upper Susitna River Region reflects the complex processes which make up its geologic history. It has undergone subsidence, marine deposition, volcanic intrusion, mountain building, glacial planing, and erosion. In the upper reaches of the river, the valley floor is composed of reworked glacial moraine and lakebed deposits, which are thought to be approximately 200 feet thick. Materials range in size from silt to boulders. Adjacent mountains are composed of metavolcanics and metasediments (lava flows and sediments which have been changed by heat and pressure), and the bedrock beneath the valley floor is also assumed to be a complex of rocks altered from preexisting rock by pressure, heat, and changes in the chemical environment. In the midsection of the Upper Susitna, massive intrusions of granitic rock have warped and uplifted the region. Subsequent vigorous earth movement resulted in the building of the Talkeetna Mountains. Throughout this area the metavolcanics and metasediments are warped and twisted; medium-grained granite intrusives are exposed intermittently along the valley walls. At the lower end of the drainage, glacial action is evidenced by the absence of overburden materials at higher elevations and the scouring and planing of the underlying bedrock.

REGIONAL TECTONICS

Tectonics deals with rock structures and external forms resulting from large movements or deformation of the earth's crust. Two major earth tectonic features bracket the Upper Susitna Region. The Denali Fault, active during Holocene (Recent) time, is one of the earth's major fractures. It lies approximately 43 miles north of the proposed Devil Canyon damsite. A second arcuate fracture, the Castle Mountain Fault, lies some 75 miles to the south of the river basin. Bisecting the region in a northeast-southwest direction and truncated by the Denali

Fault, the Susitna Fault lies approximately 2.5 miles west of the proposed Watana Dam. Large, prominent lineaments pass through the region trending northeast-southwest, and the river valley is controlled by many of these features.

SEISMOLOGY

Since it is located in an area of major faults, it is to be expected that the Upper Susitna Basin would lie in a zone of major seismic activity. During the period of record, through the end of 1970, 262 earthquakes had been recorded within a radius of 150 miles of the proposed Devil Canyon site (Kachadoorian 1974). Of these, 229 had a magnitude on the Richter scale of less than 5.3, while 20 were between 5.3 and 7.0, eleven were between 7.0 and 7.75, and two were greater than 7.75. An evaluation of the potential exposure of the Upper Susitna damsites to seismic activity was made by the Bureau of Reclamation. In view of the recent advances in seismic technology, faults capable of influencing major design features will be reevaluated for their potential Maximum Credible Earthquake.

VEGETATION

Most of the Upper Susitna River Basin is classified as moist or alpine tundra although the area adjacent to the main river channel below the Maclaren River is classified as either upland or lowland spruce-hardwood forest. Major timber species of the canyon slopes and surrounding benchlands are birch, balsam poplar, black cottonwood, white spruce, and black spruce. Overall, timber is of poor quality, varying widely in size, but mostly small and of little or no commercial value. Two distinctly different plant communities occupy portions of the alternate transmission corridors. Bottomland spruce-poplar is confined to the broad flood plains, river terraces, and warm slopes of major rivers. Throughout the lowlands, another distinct vegetation type is low brush-bog/muskeg. Common plants include tamarack, black spruce, alder, willow, and various berries.

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FISH AND WILDLIFE

Both resident and anadromous fish inhabit the Susitna Basin. Salmon are known to spawn in many of the sloughs and tributaries of the Susitna River below Devil Canyon; however, surveys indicate that salmon may be unable to ascend the turbulent Devil Canyon and thus may be prevented from migrating into the Upper Susitna River Basin. Grayling, rainbow trout, lake trout, Dolly Varden, whitefish, and burbot comprise the principal resident fish populations.

Mammals and birds found in the Upper Susitna Basin are representative of wildlife species common to interior Alaska. Important game species consist of moose, caribou, and Dall sheep. Wolves, wolverine, bear, and smaller fur bearers inhabit the basin. Birds are predominantly seasonal, and include waterfowl, raptors, and passerine species. The peregrine falcon is the only rare or endangered species presently known to frequent or inhabit the basin.