ALASKA LEGISLATURE COMMITTEE FILES 1983-1984 8672

2771 HRES SB 105 - SB 108

2771

Introduced: 1/28/83
Referred: Resources and Finance

Funding Information

General Fund	$4,500,000
Other Funds	-0-
	$4,500,000

IN THE HOUSE BY DUNCAN AND M.M.MILLER

HOUSE BILL NO. 134

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act amending an appropriation made in ch. 90, SLA 1981, making an appropriation to the Alaska Power Authority for the Snettisham power project; and providing for an effective date."

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

* Section 1. Section 6(7); ch. 90, SLA 1981, page 2, line 22 (Snettisham power project) is repealed.

* Sec. 2. The sum of $4,500,000 is appropriated from the general fund to the Alaska Power Authority for feasibility studies, preconstruction design, engineering, and construction at the Snettisham (Crater Lakes) power project.

* Sec. 3. The appropriation made by this Act is for a capital project and is subject to AS 37.25.020.

* Sec. 4. This Act takes effect immediately in accordance with AS 01.-10.070(c).

Alaska State Legislature

Advisory Council Members
Senator Kerttula, Chairman
Senator Bennett
Senator Vic Fischer
Senator Fahrenkamp

Pouch V
State Capital
Juneau, Alaska 99811
Phone: (907)465-3114

SENATE ADVISORY COUNCIL

MEMORANDUM

TO: Senator Ray
Senator Josephson

FROM: Kurt S. Dzinich
Senior Advisor

DATE: February 24, 1983

RE: Snettisham Hydroelectric Project

In response to your request, I am providing you with comments on questions raised during the discussion of SB105 on the Senate floor today.

1. Why not amend SB105 requiring Crater Lake phase to become part of the energy program for Alaska under AS44.83.380?

First and foremost, Crater Lake phase represents a planned addition to the existing Federal project. It can not become part of the energy program for Alaska unless the Feds turnover the ownership to the State. Even if the Feds would be willing to turn over partial ownership of the project, the negotiations to conclude such a three-way agreement (APA, APA(DOE) and Corps) would be horrendously complicated and would result in a significant delay of initiating the construction of this much needed project.

Secondly, while it is correct to say that this project would be exempt from the provisions of AS44.83.177-44.83.185 under AS44.33.187(a), there is nothing in the statutes that would exempt it from AS44.83.398 which specified the sale of power from all power projects in the energy program for Alaska. Trying to apply this provision to a partially or totally owned Federal project would be a nightmare that will have made the unsuccessful Bradley Lake negotiations look like a piece of cake in comparison.

2. Why does my earlier memo of February 1, 1983 to Senator Ray recommend revision to HB134 (which is a duplicate of SB105)?

The reasons were exactly to avoid the kind of problems discussed in item 1 above. Those concerns have been since eliminated with the letter of intent accompanying SB105 which clearly states that APA is to expend the funds for the purpose of project completion by the Corps thereby clearly

implying continued Federal ownership and operation outside of the energy program for Alaska. The letter of intent removes the ambiguity in SB134 and SB105 as to who and when the project should be constructed.

3. What is the plan of finance or how much is the State in for?

Under the criteria that the project remains in Federal ownership, there are only a couple of practical ways for the State to fund our share of the project i.e. either grants, loans or a combination of the two. Based on testimony during Bradley project hearings, APA would not be able to sell revenue bonds on a project it did not own. The State's share of the estimated $60 million (1982 $) needed to complete Crater Lake depends on the Federal share and this can not be predicted in advance. The Feds have expended about $3.8 million through 1982 while their FY84 budgetary hearings are ongoing right now. Depending on the success of our congressional delegation, the State could end up financing a portion or the whole sum. Regardless of what portion we finance, Crater Lake will represent the most efficient utilization of our dollars when compared to any ongoing or proposed projects in the energy program. One could only wish that they were all as cost effective (this is to be expected since the powerhouse and the transmission line are already in place while the capacity will be fully utilized in about 3-4 years).

I have attached a copy of Senator Steven's comments on Crater Lake urging State participation as a precondition to obtaining additional Federal funds.

4. Is it fair for the State to finance Crater Lake outside of the energy program for Alaska?

We provided a $15 million low interest (4%) loan to Sitka to complete Green Lake project. My purpose in recommending State participation through grants or loans is to expedite the initiation and completion of the construction and as noted in the letter of intent. Clearly the Federal Government has expressed interest in getting out of Alaska and we should initiate discussions for the eventual takeover of the APA(DOE) projects and functions in Alaska along similar lines as the Railroad. It is equally clear that this agreement could take a few years to implement, especially if one considers the precedent setting implications of this action as viewed by some of the lower 48 poorer states. Once the State has taken over these projects obvicusly they would become part of the State owned system.

5. Are we sending the wrong signal to the Feds?

I can only defer to the comments of Senator Stevens. For the past couple of years or so, the State has stayed out of the way hoping the Feds would get going. While there has been much talk, there has been no construction to date. I don't think the State has much to lose by indicating now that it is ready to share some of the costs.

As a general comment, I would like to point out that there is still some way to go to obtain congressional approval for the Corps to take State funds, and for the Corps to obtain authority to initiate construction.

After all, the Congress told them to start the construction in '82 and again in '83, but to date the Federal bureaucracy and OBM have seen fit to disregard these instructions. Participation by the State with minimum strings attached will send the proper signal and make it easier for the congressional delegation to get the project going.

going to do [indiscern.] . . . reintroduce a similar bill this [indiscernible]

A. Yes, Senator, we are working on a new version of that bill. We are working very closely with the Department of Interior and the whole administration as well as members of the House on it and we hope to reintroduce it soon. I believe Senator Murkowski will co-sponsor it when I reintroduce it. It is a bill that provides for a revenue sharing of a percentage of the revenues the federal government currently receives from the Outer Continental Shelf development to go to states and to the communities in the area of the development. It doesn't represent a very large proportion if you look at it, but it is a lot better than nothing. And those revenues are projected to be rather sizeable. We have difficulty with this bill, as I'm sure you would recognize, because we have 70% of the Outer Continental Shelf. So any bill that deals with the OCS is really a bill to assist Alaska. And at the present time most people in Congress don't think we need much financial assistance. But from the long range point of view, we have no income from that development of that Outer Continental Shelf, and there are burdens for the state and the communities that will come if the Shelf areas are developed. And I believe, eventually, we will get that bill passed. It looks like we will be able to work out the support of the administration with a few amendments that they are discussing with us now.

PRESIDENT: Senator Halford, you were seeking the floor?

Q. Senator, there has been considerable discussion about the _____ ban on export of Alaskan oil. I wonder if you see any action in that area?

A. Mr. Halford, there will be, I think. As you know, the President and Prime Minister Nakasone appointed a task force of representatives of both Japan and the United States to review the whole question of Alaska resource policy as it affects the trade negotiations between Japan and the United States. And we expect a report from that commission soon. As far as developing the tactics for handling it, in the Senate at least Senator Murkowski is now on the Foreign Relations Committee and on Energy, and those are the two committees that that proposal will go before. I would urge you to discuss it with him when he is here next week. I personally favor, of course, the removal of that prohibition against export of Alaskan oil. I would call everyone's attention to the fact that the word Japan doesn't appear in that amendment. It is not a prohibition to Japan, it is a prohibition against export period. And we need, I feel, to develop an Alaska price for oil. I've spoken to the legislature about that in years gone by, but if we had an Alaska price for oil, as the OPEC pricing system breaks up, as it apparently is, I think that Alaska would be a lot better off. I think that that export provision is really a key to our future pricing mechanisms as far as the sale of the royalty oil of Alaska. So I'm hopeful that we will get some support on that. And I urge you to talk to Senator Murkowski about the timing of consideration of it.

PRESIDENT: Senator Ray and then Representative Wendte.

Q. Thank you. Senator Stevens, this is merely a parochial request, or question if you like. You touched briefly on the energy needs, and last year we inadvertently, we, meaning the legislature, passed legislation concerning

Snettisham and Crater Lake development, in which we appropriated the money and used the wrong language. It was federal funds I believe, that were going to be available or could be available to assist us in the engineering preparation. I wondered, sir, if you could help us in getting that money, or at least assist us in some way.

A. Well, Mr. Ray, I certainly hope that we are able to secure the cooperation that we need between the state and federal governments to get the future development of Snettisham assured. At my request, we did add on to the budget last year for public works, the monies to start that third phase as far as Snettisham is concerned. The difficulty that I have is, having gotten the money appropriated, we have not been able to get it released. I would urge that you do everything you can to make certain that the State of Alaska's portion of that funding is there and waiting, because if there are any strings on it at all, we'll not be able to get the federal money released, and we are going to be standing there, you know, on the ______________ routine. The state's participation has to be clear and unequivocal before we can get that money released. So anything you can do, here, will enable us to do what we have to do there. I agree with you one hundred percent about the need for that project. It is a project that was started as a federal project and ought to be continued with federal participation. But it does need state assistance in doing so.

(END OF SIDE 1, TAPE 1)

. . . I understand that's another project. They said, what would you ever do with the power? In a few short years, we need the power. That was the addition of Crater Lake.

PRESIDENT: Representative Wendte?

Q. Thank you, Mr. President. I hope the Speaker doesn't take the Senator's words too seriously and introduce a four-minute session limit bill. But I do have a question for the Senator. Senator, there is widespread opposition in Alaska, if not total opposition, to the current wording of the Canadian bilateral salmon treaty. Would you care to comment on the gravity of Alaska's position should they oppose that treaty? Perhaps even more importantly, what options are there within the consideration of a international treaty by the Senate to alter or revise the U.S. position on that treaty?

A. Well, answering the last part first -- I do think that there are mechanisms that we have in the Senate. You have all heard of reservations that we are capable of putting on a treaty. We are not able to modify the treaty text as such, but we can condition the Senate's ratification of a treaty on action contained in a reservation of the treaty. My position has been that we ought not to be, as a state, responsible for destroying that treaty process. We need the treaty in the long run more than anyone else. But we don't need this current draft of that treaty -- is pretty obvious. We all have, I think, discovered the inequities and the errors in the current draft of the treaty. We hope to convince our Canadian counterparts that that treaty is inequitable, if you look at the treatment of cohos, you

ALASKA POWER AUTHORITY

334 WEST 5th AVENUE - ANCHORAGE, ALASKA 99501

Phone: (907) 277-7641
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February 17, 1983

Honorable John Sackett
Senate Finance Committee
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Sackett:

You have requested information on the Snettisham hydropower project and the potential cost to the State if no or only partial federal funding is provided. As you know, Snettisham is a federal project presently consisting of 47 mw being fed from a reservoir at Long Lake. The phase presently being contemplated is the Crater Lake phase which would add another 27 mw of generation capacity and 106,000,000 kwh of energy. Present wholesale cost of energy is 1.5 ¢/kwh and this is projected to rise to 2.5 ¢/kwh in 1985 for the Long Lake phase.

In that Snettisham is a federal project the Power Authority has conducted no independent assessments of the need or cost of the Crater Lake phase. Thus, we have secured cost estimates from the Corps of Engineers and load demand projections from the federal Alaska Power Administration. On the surface, the project would appear quite economic based on the face value of the information provided by the two federal agencies.

In the event the State requires that a portion of the project is debt financed, power sales contracts would be required from the local utilities. This in turn would necessitate that we attempt to estimate a cost of power for the project. Cost of power would be dependent upon the mix of State, federal, and revenue bond financing provided. Present indications from the Alaska Power Administration are that federal interest rates would be roughly 3.5%. I have yet to see this in writing, however. Theoretically, it could be as high as the prevailing federal interest rate. Not knowing what the federal contribution might be, I have based our preliminary cost of power analysis on a mix of State and revenue bond financing. Our analysis assumes Snettisham is a "stand alone" project and that 10% - 35-year debt financing could be secured. Furthermore, our analysis covers cost of power only from the Crater Lake phase rather than the total melded cost of the two phases. If you wished to determine the melded cost, a close approximation would be two-thirds at 2.5¢/kwh plus one-third at our estimated rates below. Our projections of wholesale power cost are tentative in that there was little time to refine the model and verify the data used to generate the cost of power numbers.

Project Assumptions
(per telephone call from Mr. R. Cross,
Alaska Power Administration, Juneau)

Project Cost	$55,387,000
Project Sales	106 Million Killowatt Hours

First year 60 percent of capacity sales.
Third year 100 percent of capacity sales.

Project Cash Flow:		
	1982	$ 3,770,000
	1983	12,000,000
	1984	27,000,000
	1985	8,000,000
	1986	4,000,000
	1987	617,000
	Total	$55,387,000

Interest During Construction (IDC):

IDC was computed through the end-of-construction (1987) rather than to mid-point due to the lack of time necessary to reprogram the model. This results in an overstatement of IDC, but this should not result in a material distortion in the cost of power.

Inflation: DRI (Approximately seven percent per year.)
Interest: Ten percent, 35-year maturity.
Operation and maintenance: Rough estimate by Power Authority.

Estimated Cost of Power

State Contribution ($ million)	Debt (%)	Cost of Power 1988 (¢/kwh)	Cost of Power 1990 (¢/kwh)
61.4	0%	0.83	0.58
36.8	40%	6.58	4.03
0.0	100%	15.77	9.60

Once again, please note that these are tentative numbers generated on a 24-hour turnaround basis. We have not had sufficient time to varify project data from the Federal Government nor have we projected IDC to the mid-point of construction. Please call upon me if you desire additional information.

Sincerely,

Eric P. Yould
Executive Director

EPY/wfs 3/9
Enclosures
cc: Dick Lyon
Bob Cross
Neil Saling

1983 2 15

CRATER LAKE 0% DEBT CASE D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION

POWER RATE BASED ON THE INCLUSION OF: CRATER LAKE

PROJECT POWER RATE SUMMARY FOR : CRATER LAKE

YEAR	PROJ COST INCL IDC $MILLIONS	PROJ DEBT DRAW $MILLIONS	SALES GWH	W/O CAP D/S RATE C/KWH	WITH CAP D/S RATE C/KWH	O/M RATE C/KWH	TOTAL RATE C/KWH
1982	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1983	16.28	0.00	0.00	0.00	0.00	0.00	0.00
1984	46.11	0.00	0.00	0.00	0.00	0.00	0.00
1985	55.53	0.00	0.00	0.00	0.00	0.00	0.00
1986	60.57	0.00	0.00	0.00	0.00	0.00	0.00
1987	61.40	0.00	0.00	0.00	0.00	0.00	0.00
1988	61.40	0.00	63.60	0.00	0.00	0.83	0.83
1989	61.40	0.00	84.80	0.00	0.00	0.68	0.68
1990	61.40	0.00	106.00	0.00	0.00	0.58	0.58
1991	61.40	0.00	106.00	0.00	0.00	0.62	0.62
1992	61.40	0.00	106.00	0.00	0.00	0.67	0.67
1993	61.40	0.00	106.00	0.00	0.00	0.71	0.71
1994	61.40	0.00	106.00	0.00	0.00	0.76	0.76
1995	61.40	0.00	106.00	0.00	0.00	0.82	0.82
1996	61.40	0.00	106.00	0.00	0.00	0.87	0.87
1997	61.40	0.00	106.00	0.00	0.00	0.93	0.93
1998	61.40	0.00	106.00	0.00	0.00	1.00	1.00
1999	61.40	0.00	106.00	0.00	0.00	1.07	1.07
2000	61.40	0.00	106.00	0.00	0.00	1.14	1.14
2001	61.40	0.00	106.00	0.00	0.00	1.22	1.22

CRATER LAKE STAND ALONE 0% DEBT D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION

ALASKA POWER AUTHORITY FINANCIAL FORECAST FOR FISCAL YEARS ENDING JUNE 30 1983 2 15

($MILLIONS)

YEAR	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ENERGY GWH	-	-	-	-	-	-	63.6	84.8	106.0	106.0
REAL PRICE- C/KWH	-	-	-	-	-	-	0.5	0.5	0.4	0.4
INFLATION INDEX	100.0	100.0	107.0	114.5	122.5	131.1	140.3	150.1	160.6	171.8
PRICE- C/KWH	-	-	-	-	-	-	0.8	0.7	0.6	0.6
——INCOME——										
REVENUE	-	-	-	-	-	-	0.5	0.6	0.6	0.7
LESS OPERATING COSTS	-	-	-	-	-	-	0.3	0.3	0.3	0.4
OPERATING INCOME	-	-	-	-	-	-	0.2	0.3	0.3	0.3
ADD INTEREST EARNED ON FUNDS	-	-	-	-	-	-	-	0.1	0.1	0.1
LESS INT ON SHORT TERM DEBT	-	-	-	-	-	-	-	0.1	0.1	0.1
LESS INT ON LONG TERM DEBT	-	-	-	-	-	-	-	-	-	-
NET EARNINGS FROM OPERATIONS	-	-	-	-	-	-	0.2	0.3	0.3	0.3
——CASH SOURCE AND USE——										
CASH INCOME FROM OPERATIONS	-	-	-	-	-	-	0.2	0.3	0.3	0.3
STATE GRANTS	-	16.3	29.8	9.4	5.0	0.8	-	-	-	-
LONG TERM DEBT DRAWDOWNS	-	-	-	-	-	-	-	-	-	-
WORCAP DEBT DRAWDOWNS	-	-	-	-	-	-	0.6	-	-	0.1
TOTAL SOURCES OF FUNDS	-	16.3	29.8	9.4	5.0	0.8	0.9	0.3	0.3	0.3
LESS CAPITAL EXPENDITURES	-	16.3	29.8	9.4	5.0	0.8	0.2	0.3	0.3	0.3
LESS WORCAP AND FUNDS	-	-	-	-	-	-	0.6	-	-	0.1
LESS DEBT REPAYMENTS	-	-	-	-	-	-	-	-	-	-
LESS PAYMENT TO STATE	-	-	-	-	-	-	-	-	-	-
CASH SURPLUS(DEFICIT)	-	-	-	-	-	-	-	-	-	-
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
CASH RECOVERED	-	-	-	-	-	-	-	-	-	-
——BALANCE SHEET——										
RESERVE AND CONT. FUND	-	-	-	-	-	-	0.5	0.6	0.6	0.6
OTHER WORKING CAPITAL	-	-	-	-	-	-	0.1	0.1	0.1	0.1
CUM. CAPITAL EXPENDITURE	-	16.3	46.1	55.5	60.6	61.4	61.6	61.9	62.2	62.5
CAPITAL EMPLOYED	-	16.3	46.1	55.5	60.6	61.4	62.3	62.6	62.9	63.2
STATE CONTRIBUTION	-	16.3	46.1	55.5	60.6	61.4	61.4	61.4	61.4	61.4
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
RETAINED EARNINGS FROM OPS.	-	-	-	-	-	-	0.2	0.5	0.8	1.1
DEBT OUTSTANDING-SHORT TERM	-	-	-	-	-	-	0.6	0.7	0.7	0.8
DEBT OUTSTANDING-LONG TERM	-	-	-	-	-	-	-	-	-	-
DEBT SERVICE COVER	-	-	-	-	-	-	-	-	-	-
ANNUAL BORROWING $1983	-	-	-	-	-	-	-	-	-	-
CUM. BORROWING $1983	-	-	-	-	-	-	-	-	-	-
ANNUAL STATE GRANTS $1983	-	16.3	27.9	8.2	4.1	0.6	-	-	-	-
CUM. STATE GRANTS $1983	-	16.3	44.2	52.4	56.5	57.1	57.1	57.1	57.1	57.1
TOTAL ANNUAL FINANCING $1983	-	16.3	27.9	8.2	4.1	0.6	-	-	-	-
TOTAL CUM. FINANCING $1983	-	16.3	44.2	52.4	56.5	57.1	57.1	57.1	57.1	57.1

SOURCES:

:PROJECT COST: $55,387,000.00 MID 1982 DOLLARS

:O&M FROM MYLES YERKES OF ALASKA POWER AUTHORITY

:

CRATER LAKE STAND ALONE 0% DEBT D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION

ALASKA POWER AUTHORITY FINANCIAL FORECAST FOR FISCAL YEARS ENDING JUNE 30 1983 2 15

($MILLIONS)

Y E A R	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ENERGY GWH	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
REAL PRICE- C/KWH	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
INFLATION INDEX	183.8	196.7	210.5	225.2	241.0	257.9	275.9	295.2	315.9	338.0
PRICE- C/KWH	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2
----INCOME----------										
REVENUE	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.3
LESS OPERATING COSTS	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7
OPERATING INCOME	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6
ADD INTEREST EARNED ON FUNDS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS INT ON SHORT TERM DEBT	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS INT ON LONG TERM DEBT	-	-	-	-	-	-	-	-	-	-
NET EARNINGS FROM OPERATIONS	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
----CASH SOURCE AND USE----										
CASH INCOME FROM OPERATIONS	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
STATE GRANTS	-	-	-	-	-	-	-	-	-	-
LONG TERM DEBT DRAWDOWNS	-	-	-	-	-	-	-	-	-	-
WORCAP DEBT DRAWDOWNS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TOTAL SOURCES OF FUNDS	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7
LESS CAPITAL EXPENDITURES	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
LESS WORCAP AND FUNDS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS DEBT REPAYMENTS	-	-	-	-	-	-	-	-	-	-
LESS PAYMENT TO STATE	-	-	-	-	-	-	-	-	-	-
CASH SURPLUS(DEFICIT)	-	-	-	-	-	-	-	-	-	-
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
CASH RECOVERED	-	-	-	-	-	-	-	-	-	-
----BALANCE SHEET----------										
RESERVE AND CONT. FUND	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.3
OTHER WORKING CAPITAL	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CUM. CAPITAL EXPENDITURE	62.8	63.1	63.5	63.9	64.3	64.7	65.2	65.7	66.2	66.8
CAPITAL EMPLOYED	63.6	64.0	64.4	64.9	65.4	65.9	66.4	67.0	67.7	68.3
STATE CONTRIBUTION	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
RETAINED EARNINGS FROM OPS.	1.4	1.7	2.1	2.5	2.9	3.3	3.8	4.3	4.8	5.4
DEBT OUTSTANDING-SHORT TERM	0.8	0.9	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.5
DEBT OUTSTANDING-LONG TERM	-	-	-	-	-	-	-	-	-	-
DEBT SERVICE COVER	-	-	-	-	-	-	-	-	-	-
ANNUAL BORROWING $1983	-	-	-	-	-	-	-	-	-	-
CUM. BORROWING $1983	-	-	-	-	-	-	-	-	-	-
ANNUAL STATE GRANTS $1983	-	-	-	-	-	-	-	-	-	-
CUM. STATE GRANTS $1983	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.
TOTAL ANNUAL FINANCING $1983	-	-	-	-	-	-	-	-	-	-
TOTAL CUM. FINANCING $1983	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.

SOURCES:

:PROJECT COST: $55,387,000.00 MID 1982 DOLLARS

:O&M FROM MYLES YERKES OF ALASKA POWER AUTHORITY

:

1983 2 15

CRATER LAKE 40% DEBT CASE D/S=1.10 IDC INCLUDED NO O&M ESCALATION

POWER RATE BASED ON THE INCLUSION OF: CRATER LAKE

PROJECT POWER RATE SUMMARY FOR : CRATER LAKE

YEAR	PROJ COST INCL IDC $MILLIONS	PROJ DEBT DRAW $MILLIONS	SALES GWH	W/O CAP D/S RATE C/KWH	WITH CAP D/S RATE C/KWH	O/M RATE C/KWH	TOTAL RATE C/KWH
1982	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1983	16.61	6.84	0.00	0.00	0.00	0.00	0.00
1984	47.72	20.05	0.00	0.00	0.00	0.00	0.00
1985	59.33	26.01	0.00	0.00	0.00	0.00	0.00
1986	67.07	30.73	0.00	0.00	0.00	0.00	0.00
1987	70.99	34.15	0.00	0.00	0.00	0.00	0.00
1988	70.99	34.15	63.60	6.12	6.12	0.45	6.58
1989	70.99	34.15	84.80	4.59	4.59	0.42	5.01
1990	70.99	34.15	106.00	3.67	3.67	0.36	4.03
1991	70.99	34.15	106.00	3.67	3.67	0.38	4.05
1992	70.99	34.15	106.00	3.67	3.67	0.40	4.08
1993	70.99	34.15	106.00	3.67	3.67	0.43	4.10
1994	70.99	34.15	106.00	3.67	3.67	0.46	4.14
1995	70.99	34.15	106.00	3.67	3.67	0.52	4.19
1996	70.99	34.15	106.00	3.67	3.67	0.57	4.25
1997	70.99	34.15	106.00	3.67	3.67	0.63	4.31
1998	70.99	34.15	106.00	3.67	3.67	0.70	4.37
1999	70.99	34.15	106.00	3.67	3.67	0.77	4.44
2000	70.99	34.15	106.00	3.67	3.67	0.84	4.52
2001	70.99	34.15	106.00	3.67	3.67	0.92	4.60

CRATER LAKE STAND ALONE 40% DEBT D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION INCLUDED

ALASKA POWER AUTHORITY FINANCIAL FORECAST FOR FISCAL YEARS ENDING JUNE 30 1983 2 15

($MILLIONS)

YEAR	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ENERGY GWH	-	-	-	-	-	-	63.3	84.8	106.0	106.0
REAL PRICE- C/KWH	-	-	-	-	-	-	4.7	3.3	2.5	2.4
INFLATION INDEX	100.0	100.0	107.0	114.5	122.5	131.1	140.3	150.1	160.6	171.8
PRICE- C/KWH	-	-	-	-	-	-	6.6	5.0	4.0	4.1
——INCOME——										
REVENUE	-	-	-	-	-	-	4.2	4.3	4.3	4.3
LESS OPERATING COSTS	-	-	-	-	-	-	0.3	0.3	0.3	0.4
OPERATING INCOME	-	-	-	-	-	-	3.9	3.9	3.9	3.9
ADD INTEREST EARNED ON FUNDS	-	-	-	-	-	-	-	0.1	0.1	0.1
LESS INT ON SHORT TERM DEBT	-	-	-	-	-	-	-	0.1	0.1	0.1
LESS INT ON LONG TERM DEBT	-	-	-	-	-	-	3.4	3.4	3.4	3.4
NET EARNINGS FROM OPERATIONS	-	-	-	-	-	-	0.5	0.5	0.5	0.5
——CASH SOURCE AND USE——										
CASH INCOME FROM OPERATIONS	-	-	-	-	-	-	0.5	0.5	0.5	0.5
STATE GRANTS	-	9.8	17.9	5.7	3.0	0.5	-	-	-	-
LONG TERM DEBT DRAWDOWNS	-	6.8	13.2	6.0	4.7	3.4	-	-	-	-
WORCAP DEBT DRAWDOWNS	-	-	-	-	-	-	1.0	-	-	-
TOTAL SOURCES OF FUNDS	-	16.6	31.1	11.6	7.7	3.9	1.5	0.5	0.6	0.6
LESS CAPITAL EXPENDITURES	-	16.6	31.1	11.6	7.7	3.9	0.2	0.3	0.3	0.3
LESS WORCAP AND FUNDS	-	-	-	-	-	-	1.0	-	-	-
LESS DEBT REPAYMENTS	-	-	-	-	-	-	0.1	0.1	0.2	0.2
LESS PAYMENT TO STATE	-	-	-	-	-	-	-	-	-	-
CASH SURPLUS(DEFICIT)	-	-	-	-	-	-	0.1	0.1	0.1	0.1
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
CASH RECOVERED	-	-	-	-	-	-	0.1	0.1	0.1	0.1
——BALANCE SHEET——										
RESERVE AND CONT. FUND	-	-	-	-	-	-	0.5	0.6	0.6	0.6
OTHER WORKING CAPITAL	-	-	-	-	-	-	0.5	0.5	0.5	0.5
CUM. CAPITAL EXPENDITURE	-	16.6	47.7	59.3	67.1	71.0	71.2	71.5	71.8	72.1
CAPITAL EMPLOYED	-	16.6	47.7	59.3	67.1	71.0	72.2	72.5	72.8	73.2
STATE CONTRIBUTION	-	9.8	27.7	33.3	36.3	36.8	36.8	36.8	36.8	36.8
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
RETAINED EARNINGS FROM OPS.	-	-	-	-	-	-	0.4	0.8	1.2	1.7
DEBT OUTSTANDING-SHORT TERM	-	-	-	-	-	-	1.0	1.0	1.1	1.1
DEBT OUTSTANDING-LONG TERM	-	6.8	20.1	26.0	30.7	34.1	34.0	33.9	33.7	33.6
DEBT SERVICE COVER	-	-	-	-	-	-	1.1	1.1	1.1	1.1
ANNUAL BORROWING $1983	-	6.8	12.3	5.2	3.9	2.6	-	-	-	-
CUM. BORROWING $1983	-	6.8	19.2	24.4	28.2	30.9	30.9	30.9	30.9	30.9
ANNUAL STATE GRANTS $1983	-	9.8	16.7	4.9	2.5	0.4	-	-	-	-
CUM. STATE GRANTS $1983	-	9.8	26.5	31.4	33.9	34.3	34.3	34.3	34.3	34.3
TOTAL ANNUAL FINANCING $1983	-	16.6	29.1	10.1	6.3	3.0	-	-	-	-
TOTAL CUM. FINANCING $1983	-	16.6	45.7	55.8	62.1	65.1	65.1	65.1	65.1	65.1

SOURCES:
:PROJECT COST: $55,387,000.00 MID 1982 DOLLARS
:O&M FROM MYLES YERKES OF ALASKA POWER AUTHORITY
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CRATER-LAKE STAND ALONE 40% DEBT D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION INCLUDED

ALASKA POWER AUTHORITY FINANCIAL FORECAST FOR FISCAL YEARS ENDING JUNE 30 1983 2 15

($MILLIONS)

YEAR	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ENERGY GWH	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
REAL PRICE- C/KWH	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.4
INFLATION INDEX	183.8	196.7	210.5	225.2	241.0	257.9	275.9	295.2	315.9	338.0
PRICE- C/KWH	4.1	4.1	4.1	4.2	4.2	4.3	4.4	4.4	4.5	4.6
——INCOME——										
REVENUE	4.3	4.3	4.4	4.4	4.5	4.6	4.6	4.7	4.8	4.9
LESS OPERATING COSTS	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7
OPERATING INCOME	3.9	3.9	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.2
ADD INTEREST EARNED ON FUNDS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS INT ON SHORT TERM DEBT	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
LESS INT ON LONG TERM DEBT	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1
NET EARNINGS FROM OPERATIONS	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0
——CASH SOURCE AND USE——										
CASH INCOME FROM OPERATIONS	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0
STATE GRANTS	-	-	-	-	-	-	-	-	-	-
LONG TERM DEBT DRAWDOWNS	-	-	-	-	-	-	-	-	-	-
WORCAP DEBT DRAWDOWNS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TOTAL SOURCES OF FUNDS	0.6	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1
LESS CAPITAL EXPENDITURES	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
LESS WORCAP AND FUNDS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS DEBT REPAYMENTS	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4
LESS PAYMENT TO STATE	-	-	-	-	-	-	-	-	-	-
CASH SURPLUS(DEFICIT)	-	-	-	-	-	-	-	-	-	-
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
CASH RECOVERED	-	-	-	-	-	-	-	-	-	-
——BALANCE SHEET——										
RESERVE AND CONT. FUND	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.3
OTHER WORKING CAPITAL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
CUM. CAPITAL EXPENDITURE	72.4	72.7	73.1	73.5	73.9	74.3	74.8	75.3	75.8	76.4
CAPITAL EMPLOYED	73.6	73.9	74.4	74.8	75.3	75.8	76.4	77.0	77.6	78.3
STATE CONTRIBUTION	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
RETAINED EARNINGS FROM OPS.	2.2	2.7	3.3	3.9	4.6	5.3	6.1	7.0	7.9	8.9
DEBT OUTSTANDING-SHORT TERM	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9
DEBT OUTSTANDING-LONG TERM	33.4	33.2	33.0	32.7	32.4	32.1	31.8	31.5	31.1	30.6
DEBT SERVICE COVER	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2
ANNUAL BORROWING $1983	-	-	-	-	-	-	-	-	-	-
CUM. BORROWING $1983	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
ANNUAL STATE GRANTS $1983	-	-	-	-	-	-	-	-	-	-
CUM. STATE GRANTS $1983	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
TOTAL ANNUAL FINANCING $1983	-	-	-	-	-	-	-	-	-	-
TOTAL CUM. FINANCING $1983	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1

SOURCES:

:PROJECT COST: $55,387,000.00 MID 1982 DOLLARS

:O&M FROM MYLES YERKES OF ALASKA POWER AUTHORITY

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1983 2 15

CRATER LAKE 100% DEBT CASE D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATIOPN

POWER RATE BASED ON THE INCLUSION OF: CRATER LAKE

PROJECT POWER RATE SUMMARY FOR : CRATER LAKE

YEAR	PROJ COST INCL IDC $MILLIONS	PROJ DEBT DRAW $MILLIONS	SALES GWH	W/O CAP D/S RATE C/KWH	WITH CAP D/S RATE C/KWH	O/M RATE C/KWH	TOTAL RATE C/KWH
1982	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1983	17.10	17.10	0.00	0.00	0.00	0.00	0.00
1984	50.13	50.13	0.00	0.00	0.00	0.00	0.00
1985	65.03	65.03	0.00	0.00	0.00	0.00	0.00
1986	76.83	76.83	0.00	0.00	0.00	0.00	0.00
1987	85.37	85.37	0.00	0.00	0.00	0.00	0.00
1988	85.37	85.37	63.60	15.31	15.31	0.45	15.77
1989	85.37	85.37	84.80	11.48	11.48	0.49	11.97
1990	85.37	85.37	106.00	9.19	9.19	0.51	9.70
1991	85.37	85.37	106.00	9.19	9.19	0.53	9.72
1992	85.37	85.37	106.00	9.19	9.19	0.48	9.67
1993	85.37	85.37	106.00	9.19	9.19	0.48	9.67
1994	85.37	85.37	106.00	9.19	9.19	0.51	9.70
1995	85.37	85.37	106.00	9.19	9.19	0.54	9.73
1996	85.37	85.37	106.00	9.19	9.19	0.57	9.76
1997	85.37	85.37	106.00	9.19	9.19	0.61	9.79
1998	85.37	85.37	106.00	9.19	9.19	0.64	9.83
1999	85.37	85.37	106.00	9.19	9.19	0.68	9.87
2000	85.37	85.37	106.00	9.19	9.19	0.72	9.91
2001	85.37	85.37	106.00	9.19	9.19	0.77	9.95

CRATER LAKE STAND ALONE 100% DEBT D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION

ALASKA POWER AUTHORITY FINANCIAL FORECAST FOR FISCAL YEARS ENDING JUNE 30 1983 2 15

($MILLIONS)

YEAR	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ENERGY GWH	-	-	-	-	-	-	63.6	84.8	106.0	106.0
REAL PRICE- C/KWH	-	-	-	-	-	-	11.2	8.0	6.0	5.6
INFLATION INDEX	100.0	100.0	107.0	114.5	122.5	131.1	140.3	150.1	160.6	171.8
PRICE- C/KWH	-	-	-	-	-	-	15.8	12.0	9.6	9.6
——INCOME——										
REVENUE	-	-	-	-	-	-	10.0	10.2	10.2	10.2
LESS OPERATING COSTS	-	-	-	-	-	-	0.3	0.3	0.3	0.4
OPERATING INCOME	-	-	-	-	-	-	9.7	9.8	9.8	9.8
ADD INTEREST EARNED ON FUNDS	-	-	-	-	-	-	-	0.1	0.1	0.1
LESS INT ON SHORT TERM DEBT	-	-	-	-	-	-	-	0.2	0.2	0.2
LESS INT ON LONG TERM DEBT	-	-	-	-	-	-	8.5	8.5	8.5	8.4
NET EARNINGS FROM OPERATIONS	-	-	-	-	-	-	1.2	1.2	1.3	1.3
——CASH SOURCE AND USE——										
CASH INCOME FROM OPERATIONS	-	-	-	-	-	-	1.2	1.2	1.3	1.3
STATE GRANTS	-	-	-	-	-	-	-	-	-	-
LONG TERM DEBT DRAWDOWNS	-	17.1	33.0	14.9	11.8	8.5	-	-	-	-
WORCAP DEBT DRAWDOWNS	-	-	-	-	-	-	1.6	0.1	-	-
TOTAL SOURCES OF FUNDS	-	17.1	33.0	14.9	11.8	8.5	2.8	1.3	1.3	1.4
LESS CAPITAL EXPENDITURES	-	17.1	33.0	14.9	11.8	8.5	0.2	0.3	0.3	0.3
LESS WORCAP AND FUNDS	-	-	-	-	-	-	1.6	0.1	-	-
LESS DEBT REPAYMENTS	-	-	-	-	-	-	0.3	0.3	0.4	0.4
LESS PAYMENT TO STATE	-	-	-	-	-	-	-	-	-	-
CASH SURPLUS(DEFICIT)	-	-	-	-	-	-	0.6	0.6	0.6	0.6
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
CASH RECOVERED	-	-	-	-	-	-	0.6	0.6	0.6	0.6
——BALANCE SHEET——										
RESERVE AND CONT. FUND	-	-	-	-	-	-	0.5	0.6	0.6	0.6
OTHER WORKING CAPITAL	-	-	-	-	-	-	1.0	1.1	1.1	1.1
CUM. CAPITAL EXPENDITURE	-	17.1	50.1	65.0	76.8	85.4	85.6	85.9	86.1	86.4
CAPITAL EMPLOYED	-	17.1	50.1	65.0	76.8	85.4	87.2	87.5	87.8	88.2
STATE CONTRIBUTION	-	-	-	-	-	-	-	-	-	-
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
RETAINED EARNINGS FROM OPS.	-	-	-	-	-	-	0.6	1.2	1.8	2.5
DEBT OUTSTANDING-SHORT TERM	-	-	-	-	-	-	1.6	1.6	1.7	1.7
DEBT OUTSTANDING-LONG TERM	-	17.1	50.1	65.0	76.8	85.4	85.1	84.7	84.3	83.9
DEBT SERVICE COVER	-	-	-	-	-	-	1.1	1.1	1.1	1.1
ANNUAL BORROWING $1983	-	17.1	30.9	13.0	9.6	6.5	-	-	-	-
CUM. BORROWING $1983	-	17.1	48.0	61.0	70.6	77.1	77.1	77.1	77.1	77.1
ANNUAL STATE GRANTS $1983	-	-	-	-	-	-	-	-	-	-
CUM. STATE GRANTS $1983	-	-	-	-	-	-	-	-	-	-
TOTAL ANNUAL FINANCING $1983	-	17.1	30.9	13.0	9.6	6.5	-	-	-	-
TOTAL CUM. FINANCING $1983	-	17.1	48.0	61.0	70.6	77.1	77.1	77.1	77.1	77.1

SOURCES:

:PROJECT COST: $55,387,000.00 MID 1982 DOLLARS

:O&M FROM MYLES YERKES OF ALASKA POWER AUTHORITY

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CRATER LAKE STAND ALONE 100% DEBT D/S=1.10 IDC INCLUDED NO REAL O&M ESCALATION

ALASKA POWER AUTHORITY FINANCIAL FORECAST FOR FISCAL YEARS ENDING JUNE 30 1983 2 15

($MILLIONS)

YEAR	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ENERGY GWH	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
REAL PRICE- C/KWH	5.2	4.9	4.6	4.3	4.0	3.8	3.6	3.3	3.1	2.9
INFLATION INDEX	183.8	196.7	210.5	225.2	241.0	257.9	275.9	295.2	315.9	338.0
PRICE- C/KWH	9.6	9.7	9.7	9.7	9.8	9.8	9.8	9.9	9.9	10.0
——INCOME——										
REVENUE	10.2	10.3	10.3	10.3	10.3	10.4	10.4	10.5	10.5	10.5
LESS OPERATING COSTS	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7
OPERATING INCOME	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.9	9.9	9.9
ADD INTEREST EARNED ON FUNDS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS INT ON SHORT TERM DEBT	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LESS INT ON LONG TERM DEBT	8.4	8.3	8.3	8.2	8.2	8.1	8.0	8.0	7.9	7.8
NET EARNINGS FROM OPERATIONS	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0
——CASH SOURCE AND USE——										
CASH INCOME FROM OPERATIONS	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0
STATE GRANTS	-	-	-	-	-	-	-	-	-	-
LONG TERM DEBT DRAWDOWNS	-	-	-	-	-	-	-	-	-	-
WORCAP DEBT DRAWDOWNS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TOTAL SOURCES OF FUNDS	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1
LESS CAPITAL EXPENDITURES	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
LESS WORCAP AND FUNDS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LESS DEBT REPAYMENTS	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	1.0	1.1
LESS PAYMENT TO STATE	-	-	-	-	-	-	-	-	-	-
CASH SURPLUS(DEFICIT)	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3
RECOVERY FROM HB9	-	-	-	-	-	-	-	-	-	-
CASH RECOVERED	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3
——BALANCE SHEET——										
RESERVE AND CONT. FUND	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.3
OTHER WORKING CAPITAL	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2
CUM. CAPITAL EXPENDITURE	86.8	87.1	87.5	87.8	88.3	88.7	89.2	89.7	90.2	90.8
CAPITAL EMPLOYED	88.5	88.9	89.3	89.8	90.3	90.8	91.3	91.9	92.6	93.2
STATE CONTRIBUTION	-	-	-	-	-	-	-	-	-	-
RECOVERY FROM HB?	-	-	-	-	-	-	-	-	-	-
RETAINED EARNINGS FROM OPS.	3.3	4.2	5.1	6.1	7.2	8.3	9.6	11.0	12.6	14.2
DEBT OUTSTANDING-SHORT TERM	1.8	1.8	1.9	2.0	2.0	2.1	2.2	2.3	2.3	2.4
DEBT OUTSTANDING-LONG TERM	83.5	82.9	82.4	81.8	81.1	80.4	79.5	78.6	77.7	76.6
DEBT SERVICE COVER	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
ANNUAL BORROWING $1983	-	-	-	-	-	-	-	-	-	-
CUM. BORROWING $1983	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1
ANNUAL STATE GRANTS $1983	-	-	-	-	-	-	-	-	-	-
CUM. STATE GRANTS $1983	-	-	-	-	-	-	-	-	-	-
TOTAL ANNUAL FINANCING $1983	-	-	-	-	-	-	-	-	-	-
TOTAL CUM. FINANCING $1983	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1

SOURCES:

:PROJECT COST: $55,387,000.00 MID 1982 DOLLARS

:O&M FROM MYLES YERKES OF ALASKA POWER AUTHORITY

:

Alaska State Legislature

Advisory Council Members
Senator Kerttula, Chairman
Senator Bennett
Senator Dankworth
Senator Fahrenkamp

Pouch V
State Capital
Juneau, Alaska 99811
Phone: (907) 465-3114

SENATE ADVISORY COUNCIL

MEMORANDUM

TO: Senator Ray

FROM: Kurt S. Dzinich KSD
Senior Advisor

RE: Crater Lake

DATE: February 1, 1983

Since my previous memo of November 3, 1982, the following significant events have taken place:

1. The U.S. Congress passed a continuing resolution for FY83 urging the Corps of Engineers to proceed with the construction of the third unit and chided them for not initiating the construction in FY82 with the $2,000,000 appropriated for that purpose.

2. The AEL&P has requested a moratorium on new electric space heating and hot water installation.

3. Colonel Saling, District Engineer, Alaska District Corps of Engineers, has initiated action through his chain of command to obtain $2,000,000 in FY83 funds (in addition to carry-over funds of $250,000 from FY82) and permission to initiate construction in FY83 (ends on September 30, 1983).

4. Introduction of HB134 by Representatives Duncan and Miller amending earlier Snettisham legislation. Copy attached.

Assuming that the Corps can obtain permission to start the construction in FY83, of the 2.25 million total requirement in FY83 about 1.3 million would be for construction while the remainder would be for engineering and design. In FY84 the requirement would be about 12 million of which 10 million would be for construction. Power-on-line would be in 1987 according to their current schedule.

The best and simplest solution remains for the Corps to finish the Snettisham project using only Federal funds. It is essential that the project construction be initiated in 1983 and completed as expeditiously as possible in order to minimize the negative impacts on the Juneau community.

Given sufficient funds, I don't see any reasons why the Corps should not complete the project in three years i.e. power-on-line in 1986. In order for this scenario to succeed, maximum participation and pushing will be required by our Congressional Delegation. As an additional inducement to obtain Federal funding, we could offer to start negotiations for the eventual takeover of Federal power projects in Alaska.

If the construction is initiated by the Feds in 1983 and if they provide all needed funds in a manner allowing for the most expeditious completion of the project, then there is not much left for the State to do. If, however, the Feds choose not to initiate construction in 1983, or if they provide insufficient funds to allow for an expeditious completion of the project, then there is something that the State could and should do.

If the Feds do not want to fund the start of construction in 1983, the State should provide the funds to the Corps on the basis of some type of cost sharing. (It should be made clear to all that this cost sharing would not have anything to do with the "Innovative Financing" program proposed by the Administration and the Corps last year). In order for the cost sharing to work the following would have to be accomplished:

1. The Corps must obtain Congressional approval to receive the State funds.

2. The Corps must obtain permission to initiate construction in 1983 as desired by Congress.

3. The State must appropriate sufficient funds to the Corps with minimum red tape to allow for the most expeditious start and completion of the project. (In this regard, recently introduced HB134 will probably have to be revised.)

With reference to item 3 above, I believe that the best way of coming up with a fund transfer mechanism would be to have the Legal Services draft appropriate legislation. Towards that end I have prepared a memo to Bill Berrier and attached it for your signature.

For the longer term, pending completion of ongoing intertie studies by the Alaska Power Administration, we will probably need to have a study to determine the next best energy source for the Juneau area after Snettisham. As you are probably aware, interties to Canada or other S.E. communities and additional hydro such as Dorothy Lake are just some of the more attractive alternatives. Because of the various ongoing actions, it would probably be better to wait until the FY85.

Please let me know if you need additional information.

Alaska State Legislature

Advisory Council Members
Senator Kerttula, Chairman
Senator Bennett
Senator Dankworth
Senator Fahrenkamp

Pouch V
State Capital
Juneau, Alaska 99811
Phone: (907) 465-3114

SENATE ADVISORY COUNCIL

MEMORANDUM

TO: Senator Bill Ray

FROM: Kurt S. Dzinich KSD
Senior Advisor

RE: Crater Lake

DATE: November 3, 1982

According to the latest forecasts by the Alaska Power Administration, and based on Juneau remaining the Capital, the second stage of the Snettisham project -- Crater Lake -- should be completed as soon as possible. If the Hoonah intertie is built, the energy use would increase an additional 13% (includes Noranda).

Due to a phenomenal growth in the past couple of years, Juneau's energy demand is expected to grow 23% and peak demand by 30% just between 1981 and 1982. The energy demand has almost equaled the existing Snettisham capacity. In order to preclude serious energy problems, it is essential that Crater Lake construction be initiated in 1983, and completed as expeditiously as practical. Any delays in the construction of Crater Lake will significantly constrain the economic growth and diversification of the Juneau area.

Since you are well up on the history of Snettisham, as well as the current Federal status of the project, I would like to explore the alternatives under which Crater Lake can be built. In my opinion these are:

Alternative 1. Federal Government completes the project using Federal funds and the Corps of Engineers and Alaska Power Administration operates the project

Alternative 2. Federal and State cost sharing; built by the Corps and operated by APA(DOE)

Alternative 3. State funds totally, Corps builds, APA(DOE) operates

Alternative 4. State funds totally, APA builds and operates

Alternative 5. State completes project as part of a takeover package deal of APA(DOE) functions and facilities

Based on my experience with Bradley Lake project and attempts to resolve many complex issues, many or all of which will again be involved in Crater Lake, my evaluation of the above alternatives is as follows:

Alternative 1. In view of the Administration's policies to date, there is very little likelihood of the Feds totally funding this project with an estimated cost now at about 68 million. Except for that, this alternative is the cleanest method with the least number of pitfalls.

Alternative 2. This method is very similar to the one we tried to implement on the Bradley project. These were the key issues that had to be resolved:

a. Three way agreement between APA, APA(DOE) and Corps
b. Bonding and ownership
c. Congressional approval for Corps to proceed with State funds
d. Use of State funds for a Federal project

To make a long story short, the agreement was not consummated because bonding experts convinced the APA and its Board of Directors that revenue bonding would be almost impossible without ownership and because it appeared that the Corps would have difficulty in obtaining Congressional approval. Only the issue of using State funds for a Federal project was successfully solved through legislative action.

Because Alaska is now perceived as being rich, the chances of Feds sharing in the costs of building Crater Lake are only slightly better than Alternative 1, while all other unresolved issues would still have to be solved.

Alternative 3. This is better than the previous two because the State can appropriate the funds as needed thereby expediting construction as much as possible. If the State can not appropriate all of the funds, then it could provide a low interest loan. By providing all of the funds, the issue of bonding vs. ownership can be avoided although a special agreement between APA, APA(DOE) and the Corps would still be required. In order to make it easier to achieve the agreement, Crater Lake should be built as a special project outside of the existing criteria applying to other projects in the Energy Program.

Under both Alternative 2 & 3, existing State legislation would have to be amended to allow the use of the 4.5 million for construction, as well as supplemental funding to allow maximum progress in 1983. This alternative is better than the previous two. Maximum progress in 1983 would probably require more than 14 million currently envisioned by the Corps and based on their Oct. 87 power on line date.

Alternative 4. Under this scenario APA would take the project over and construct it with State funds only, or in combination with bond financing. The takeover agreement would be quite complex as Snettisham would be Federal

while Crater would be State owned. I believe the complexity and the risk of delays to be the greatest under this scenario.

Alternative 5. This scenario is similar to Alternative 4 above except the State would take over Crater Lake as part of a package of taking over all APA(DOE) facilities and functions. Based on similar problems as the Railroad, I believe that the negotiations would be hard and long -- one to two years -- and that considerable delay of power on line would result.

Based on the above, I would recommend proceeding with Alternative 3 as the option with the highest chance of succeeding in a timely fashion. Because the power consumption has increased over 50% in the last two years, time is of essence and the implementing actions designed to start construction in 1983 will have to be pursued aggressively and wholeheartedly by all concerned.

Proceeding expeditiously with Alternative 3 will require action by the Congressional as well as Juneau's legislative delegations. Authority for the Corps to use State funds could be obtained at the upcoming lame duck session as part of an appropriation bill. Failing that, the issue would have to be addressed by the next Congress early in 1983. This action has to be accomplished regardless of whether the costs are shared or solely State funded.

On the State side, the Legislature would have to pass legislation authorizing use of existing funds for construction and provide additional appropriations if at all possible, probably as part of FY83 supplemental appropriations. Specific language would also have to be provided to insure that the project is not needlessly delayed. The bottom line would be to allow the Corps to start construction as early as possible in 1983.

I would be happy to discuss the problem and solution(s) with you at your convenience.

Department Of Energy
Alaska Power Administration
P.O. Box 50
Juneau, Alaska 99802

December 6, 1982

Honorable Bill Ray
Alaska Senate
Pouch V
Juneau, AK 99811

Dear Mr. Ray:

Here's the information packet we are using to alert Juneau area power consumers on limits of the area hydro supply pending completion of the Crater Lake Unit.

Sincerely,

Robert J. Cross
Administrator

Enclosure

Department Of Energy

November 19, 1982

NOTES ON JUNEAU AREA POWER SUPPLY

Juneau faces an important electric energy supply problem for the next few years. Starting in the 1982-1983 winter, power use levels will equal or exceed the energy supply available from APA and AEL&P hydroelectric projects. The difference, or hydro energy deficit, is expected to get larger each year until power becomes available from the Crater Lake Unit of Snettisham. With a 1983 construction start, Crater Lake power would be available in the 1986-1987 winter. However, funding has not yet been secured for construction.

The deficits can be met in only two ways: reducing growth in demand or producing power from oil-fired generators.

Most Juneau power consumers are aware that producing power from oil is very expensive. Fuel is the major cost item, amounting to over 10 cents per kilowatt-hour. Thus it will be very important to the community to try to keep the deficit as small as possible.

This paper is intended to provide current information on several of the issues relating to the power supply problem as well as the status on Crater Lake.

The attachments provide additional detail:

- November 3, 1982, summary sheet on costs, capacity, and energy capability for the Snettisham Project, including Crater Lake.
- November 10, 1982, update of Juneau area power requirement study.
- November 1982 APA policy statement on electric space and water heating.

Status of Crater Lake

The 1962 legislation which authorized the Snettisham Project covers both the present or Long Lake stage and the Crater Lake stage. The Corps of Engineers, which has design and construction responsibility, is presently

preparing the detailed design and construction specifications and is prepared to initiate construction in 1983 if funding is secured. The Corps estimates power on line in June 1986, again depending on funding.

The Crater Lake Unit would be rated at 27 MW and estimated new firm energy is 106 million kWh/year. This is approximately a 60 percent increase in firm energy capability for the project.

Congress appropriated $2 million for Crater Lake in FY 1982 which is being used by the Corps for designs and specifications.

The President's FY 1983 budget request did not include funds to continue construction of Crater Lake. Alaska's congressional delegation requested funding for the project, however, Congress has not yet completed action on the 1983 appropriations.

Amount of Deficit

APA estimates of hydro deficit are contained in table 6 of the power requirement study. Separate numbers are shown for "firm" and "average" conditions.

Firm hydro energy is the amount expected in a critical year of low water supply. More energy is available in most years, so average available energy is higher than the firm.

Expected firm energy deficits and the approximate fuel costs associated with the deficits are as follows:

	Requirements	Deficit		Fuel cost at
	kWh x 10^6	kWh x 10^6	%	10¢/kWh
FY 1983	232	11	4	$1,100,000
FY 1984	253	32	13	3,200,000
FY 1985	273	52	19	5,200,000
FY 1986	301	80	27	8,000,000

Table 6 also indicates the deficits could be reduced significantly if the trend to electric space heating is abated.

The weather, the area economy, and individual decisions on power use are the factors that will determine the size of the hydro deficits, and the fuel bills that accompany them.

From the power supply side, amount of energy available in the winter controls. This is limited by storage in the reservoir and water inflow during the winter. Water inflow is smallest when the weather is the coldest. In a mild, wet winter the inflow is higher and more energy can be produced.

Power use is also related to the weather--normally the highest use levels occur in the coldest days of winter. APA estimates that weather factors can cause at least a 10 percent difference in winter season electric energy use--higher use levels if the weather is unusually cold; lower if the winter is mild. The weather impact on peak demands is even more noticeable.

Increases in Juneau area electric energy and peak demand since 1970 are shown on table 1 of the load forecast. Increases in 1981 and 1982 are substantially larger than in the earlier years. The FY 1982 increases of 21.7 percent for energy and 30.4 percent for peak demand are by far the largest of record. Part of this very large increase is attributable to weather (the 1981-1982 winter season was much colder than the prior year); part is due to the continued strength in the Juneau economy; part is due to the trend to use of electric energy for space and water heating.

APA's estimates of future requirements involve somewhat lower rates of growth than in recent years. FY 1983 growth is estimated at 14.3 percent; 1984 at 9.1 percent, and 1985 at 7.9 percent. If the growth turns out to be higher, the deficits would be larger.

The immediate outlook for 1982-1983 is not too bad: a fairly small deficit if critical year water supply conditions occur, but a "most probable" outlook that hydro energy supply will be sufficient if consumers use the energy wisely.

However, the outlook for the following years is not so good. The deficits will get larger each year until Crater Lake becomes available.

Department of Energy
Alaska Power Administration
P.O. Box [illegible]
[illegible]

November 3, 1982

COST DATA, CAPACITY, AND ENERGY CAPABILITY FOR SNETTISHAM PROJECT

Investment and repayment obligations, for first or Long Lake stage of Snettisham Project. (Figures as of the end of FY 1981.)

Cumulative Investment:	$79,414,583
Balance to be Repaid:	77,767,774
Deferred Interest:	12,941,794
Total Repayment Obligation:	$90,709,568

Cost estimates for second or Crater Lake stage. (Data from Corps of Engineers, 8/82.)

	(1,000's)
(1) Est. expenditures thru FY 1982	$3,770
(2) Balance to completion	51,617
(3) Construction cost of Crater Lake Unit	55,387

Funding requirements by year ($1,000's):

1	$12,000
2	27,000
3	8,000
4	4,000
5	617
	$51,617

($ millions)

Funding requirements, with allowance for inflation

Year	Inflation estimate	1984 Start	1983 Start	Inflation multiplier
1983	7%	--	12.8	1.07
1984	9%	14.0	31.6	1.17
1985	10.5%	34.8	[illegible]	1.29
1986	10.5%	11.4	[illegible]	1.42
1987	10.5%	6.3	[illegible]	1.57
1988	10.5%	1.1	--	1.73
		67.6	61.4	

(POL 1987) (POL 1986)

Alaska Power Administration

Part 1 Update of July 1982 Juneau Load Forecast

November 1982

Introduction

Alaska Power Administration (APA) has compared the actual Juneau area power requirements through the end of fiscal year 1982 (September 30, 1982) with projections made in July 1982. The earlier projections were based on data through April 1982 and this comparison reflects any changes due to a differing growth pattern than originally forecast for the remainder of the fiscal year.

Basic Data

The basic data and assumptions used previously were essentially the same for this study with minor changes in the distribution among user classes made to reflect actual conditions.

The projections for the base case and the case with electric heat restrictions at the end of FY 1983 were updated and new projections were also made for a case involving electric heat restrictions at the end of calendar year 1982.

Results and Conclusions

Table 1 presents annual system net generation and peak demand for fiscal years 1970 through 1982 along with annual percent increases. The only elements differing from the July 1982 study are the net generation and percent increase for 1982. The actual net generation for 1982 was 202,900 MWh for an increase of 21.7 percent. The earlier study had forecast only slightly higher figures--205,000 MWh and a 23 percent increase.

Table 2 presents the estimates of future demand for the base case. Compared to the earlier projections the actual totals for FY82 were:

- higher for total residential customers (2%)
- higher for general class (8%)
- lower for hot water class (9%)
- lower for all electric class (5%)
- total residential use slightly lower (3%)
- commercial use slightly higher (5%)

The residential sector was expected to have fewer general class customers than the previous year due to customers switching from general class to hot water class. This apparently did not happen as there were actually more general class customers than the previous year. Slight adjustments were thus made to reflect this in future years. The total sales and net generation were also adjusted for future years to reflect slightly lower figures for FY82 than expected. This resulted in somewhat lower total loads in the forecast.

Table 1. Juneau Area Energy and Peak Demand

Fiscal Year	System Net Generation MWH*	MWH % Annual Increase	Peak Demand Mw	MW % Annual Increase
1970	58,266		12.4	
		9.5		11.3
1971	63,786		13.8	
		10.1		8.0
1972	70,255		14.9	
		7.8		4.0
1973	75,753		15.5	
		9.6		4.5
1974	83,059		16.2	
		13.9		9.9
1975	94,609		17.8	
		12.4		11.2
1976	106,296		19.8	
		5.6		3.0
1977	112,197		20.4	
		13.0		14.7
1978	126,800		23.4	
		9.5		-1.3
1979	138,900		23.1 (R)	
		4.5		13.4
1980	145,200		26.2	
		14.8		22.9
1981	166,700		32.2	
		21.7		30.4
1982	202,900		42.0	

* Includes AEL&P and GHEA sales and losses.
(R) Revised from previously published data.

APA 11/82

Table 2. Estimate of Future Demands
Base Case

Fiscal Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1990	1995	2000
Population	20,005	21,495	22,353	23,250	24,100	25,146	25,650	26,160	26,603	27,220	30,050	33,100
People per Customer	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Residential Customers (Average)	7,725	8,267	8,600	8,940	9,300	9,670	9,865	10,060	10,260	10,470	11,560	12,760
Residential Sales												
General Class, Customers	5,161	5,207	5,160	4,900	4,880	4,860	4,730	4,790	4,945	4,505	4,055	4,065
KWH/Customer	6,074	7,052	7,003	6,890	6,890	6,890	6,890	6,750	6,620	6,480	5,070	5,070
KWH, Million	31.4	37.3	36.6	34.3	33.6	33.5	32.6	32.3	30.1	29.2	23.8	23.9
Hot Water Class, Customers	2,040	1,935	1,900	2,005	2,190	2,295	2,375	2,455	2,535	2,615	2,765	2,885
KWH/Customer	12,000	13,100	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900
KWH, Million	24.5	25.3	25.5	26.9	28.3	29.6	30.6	31.7	32.7	33.7	35.7	37.2
All Electric Class, Customers	520	1,043	1,460	1,875	2,230	2,515	2,760	2,815	3,180	3,350	4,740	[illegible]010
KWH/Customer	23,800	26,700	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	[illegible],500
KWH, Million	12.4	27.8	40.2	51.6	61.3	69.2	75.9	77.4	87.5	92.1	130.4	159.8
Subtotal Residential, KWH, Million	68.4	90.3	102.2	112.8	123.2	132.3	139.1	141.4	150.2	155.1	189.8	220.9
Commercial Sales (historic (30%) Subtotal Commercial, KWH, Million	39.7	46.7	53.7	59.0	64.0	69.0	71.0	74.0	77.0	80.0	95.0	110.0
Government Sales (historic (26%) Subtotal Govt., GWH	34.9	37.1	44.6	47.0	48.9	50.9	60.8	62.7	64.6	72.9	82.4	102.0
Street Lighting, Residential & Government, GWH			1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5
Total Sales, GWH	142.5	174.2	201.6	220.0	237.3	261.4	272.1	279.4	293.1	309.3	368.6	434.4
Net Generation, GWH (115% of Sales)	164.7	202.9	231.9	253.0	272.9	300.6	312.9	321.3	337.1	355.6	423.9	499.5
System Cap. Factor %	59.0	55.0	55.0	55.0	55.0	55.0	55.0	59.0	55.0	55.0	55.0	55.0
Peak Demand, MW	32.2	42.0	40.1	52.5	56.6	62.4	65.0	66.7	70.0	73.8	88.0	103.7

(Revised) APA 11/83

Table 3 and 4 present the estimates of future demand if electric heat--including hot water--is restricted at the start of calendar year 1983 and fiscal year 1984 respectively. Restricting electric heat at the earlier date would result in about 8 percent lower net generation in 1985 and 16 percent lower in 1990. Restrictions at the later date would result in 5 percent lower in 1985 and 14 percent lower in 1990 compared to the base case. Table 5 summarizes the net generation and peak demand for the three cases.

Table 6 compares the hydro resources and estimated loads for the Juneau area under the three cases. The firm energy figure for Snettisham is higher than used in previous studies. Original power studies by the Corps had indicated 168 GWh of firm energy while the latest studies associated with the design of Crater Lake show 179 GWh of firm energy. Both these figures are theoretical and actual firm energy will have to be proven through operation of the project. All cases indicate an energy deficit of firm energy while only the base case experiences deficits of average energy in a few years. Restricting electric space and hot water heating in January versus October of 1983 would result in slightly lower deficits of firm energy.

Table 4. Estimate of Future Demands
Electric Heat Restricted 10/03

Fiscal Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1990	1995	2000
Population	20,085	21,495	22,395	23,250	24,180	25,146	25,650	26,160	26,685	27,220	30,050	33,180
People per Customer	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Residential Customers (Average)	7,725	8,267	8,600	8,940	9,300	9,670	9,865	10,060	10,260	10,470	11,560	12,760
Residential Sales												
General Class, Customers	5,165	5,289	5,160	5,105	5,545	5,913	6,110	6,305	6,505	6,715	7,805	9,005
KWH/Customer	6,074	7,052	7,003	6,760	6,700	7,040	6,900	6,760	6,630	6,500	5,090	5,090
KWH, Million	31.4	37.3	36.6	35.1	38.3	41.6	42.2	42.6	43.1	43.6	46.0	53.0
Hot Water Class, 1/ Customers	2,040	1,935	1,980	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,055	2,055
KWH/Customer	12,000	13,100	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900
KWH, Million	24.5	25.3	25.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
All Electric Class, Customers	520	1,043	1,460	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
KWH/Customer	23,800	26,700	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
KWH, Million	12.4	27.8	40.2	46.8	46.8	46.8	46.8	46.8	46.8	46.8	46.8	46.8
Subtotal Residential, KWH, Million	68.4	90.5	102.2	108.5	111.5	114.9	115.4	115.9	116.4	116.9	119.3	126.3
Commercial Sales (historic (30%) Subtotal Commercial, KWH, Million	39.7	46.7	51.6	53.6	56.2	57.0	58.0	59.0	60.0	61.0	66.0	71.0
Government Sales (historic (26%) Subtotal Govt., GWH	34.9	37.1	44.6	46.5	48.4	51.1	53.0	54.9	55.0	57.0	67.3	76.0
Street Lighting, Residential & Government, GWH			1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5
Total Sales, GWH	142.5	174.2	199.5	209.6	215.3	224.2	227.6	231.1	233.5	237.0	253.9	275.6
Net Generation, GWH (115% of Sales)	166.7	202.9	229.5	241.1	247.6	257.8	261.8	265.7	268.5	272.6	292.0	316.9
System Cap. Factor %	59.0	55.0	57.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
Peak Demand, MW	32.2	42.0	47.6	50.0	51.4	53.5	54.3	55.2	55.7	56.6	60.6	65.8

1/ Hot Water Class included in restriction.

APA 11/02

Table 3. Estimate of Future Demands
Electric Heat Restricted 1/03

Fiscal Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1990	1995	2000
Population	20,305	21,495	22,355	23,250	24,100	25,146	25,650	26,160	26,685	27,220	30,050	33,180
People per Customer	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Residential Customers (Average)	7,725	8,267	8,600	8,940	9,300	9,670	9,865	10,060	10,260	10,470	11,560	12,760
Residential Sales												
General Class, Customers	5,165	5,209	5,220	5,560	5,920	6,290	6,405	6,600	6,800	7,070	8,100	9,300
KWH/Customer	6,074	7,052	7,003	6,760	6,900	7,040	6,900	6,760	6,630	6,500	5,090	5,060
KWH, Million	31.4	37.3	37.0	37.6	40.8	44.3	44.7	45.2	45.6	46.1	40.2	55.2
Hot Water Class, 1/ Customers	2,040	1,935	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
KWH/Customer	12,000	13,100	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900
KWH, Million	24.5	25.3	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
All Electric Class, Customers	520	1,043	1,400 2/	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
KWH/Customer	23,000	26,700	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500	27,500
KWH, Million	12.4	27.8	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
Subtotal Residential, KWH, Million	68.4	90.3	101.0	101.6	104.9	108.3	108.8	109.2	109.7	110.1	112.2	119.3
Commercial Sales (historic (30%) Subtotal Commercial, KWH, Million	39.7	46.7	51.6	53.6	56.2	57.0	58.0	59.0	60.0	61.0	66.0	71.0
Government Sales (historic (26%) Subtotal Govt., GWH	34.9	37.1	44.6	46.5	46.4	51.1	53.0	54.9	56.8	57.8	67.3	76.8
Street Lighting, Residential & Government, GWH			1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5
Total Sales, GWH	142.5	174.2	198.3	202.9	208.7	217.6	221.0	224.4	228.8	230.2	246.9	268.6
Net Generation, GWH (115% of Sales)	166.7	202.9	228.1	233.4	240.0	250.3	254.1	258.1	262.8	264.8	284.0	308.9
System Cap. Factor %	57.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
Peak Demand, MW	33.2	42.0	47.3	48.4	49.8	51.9	52.7	53.6	54.1	55.0	58.9	64.1

1/ Hot Water Class included in restriction.
2/ Total all electric customers on 9/30/02 was 1,304.

APA 11/02

Table 5. Juneau Area Power Requirements

Fiscal Year	Basic Case	Electric Heat Restricted 1/83	Electric Heat Restricted 10/83
1981 GWH	166.7		
MW	32.2		
1982 GWH	202.9	202.9	202.9
MW	42.0	42.0	42.0
1983 GWH	232	228	230
MW	48	47	48
1984 GWH	253	233	241
MW	52	48	50
1985 GWH	273	240	248
MW	57	50	51
1986 GWH	301	250	258
MW	62	52	54
1990 GWH	356	265	273
MW	74	55	57
1995 GWH	424	284	292
MW	88	59	61
2000 GWH	500	309	317
MW	104	64	66

(Revised) AFA 11/82

Table 6. Comparison of Juneau Area Hydro Resources and Estimated Loads

Resource

	Annual Energy GWH Firm	Annual Energy GWH Average
Snettisham Long Lake	179 (R)	216 (R)
AEL&P Hydro	42	48
	221	264

Estimated Loads and Deficits

	Base Case			Electric Heat Restricted 1/83#			Electric Heat Restricted 10/83#		
FY	Estimated Loads-GWH	Deficit-GWH Firm	Deficit-GWH Average	Estimated Loads-GWH	Deficit-GWH Firm	Deficit-GWH Average	Estimated Loads-GWH	Deficit-GWH Firm	Deficit-GWH Average
1983	232	-11	+32	228	-7	+36	230	-9	+34
1984	253	-32	+11	233	-12	+31	241	-20	+23
1985	273	-52	-9	240	-19	+24	248	-27	+15
1986	301	-80	-37	250	-29	+14	259	-38	+5
1987	313	-92	-49	254	-33	+10	262	-41	+2

(R) Revised from previously published data.
Includes electric hot water heating.

(Revised) APA 11/82

Department Of Energy
Alaska Power Administration
P.O. Box 50
Juneau, Alaska 99802

November 1982

POLICY STATEMENT/ELECTRIC SPACE AND WATER HEATING FOR JUNEAU

Juneau has had substantial growth in use of electricity for space and water heating in the past several years. This is most notable in residential classes of consumers, but is significant also for commercial, industrial, and government customers.

There have been substantial benefits--important amount of oil saved through substitution of electricity from hydro, improved utilization of the hydro resource, and so forth, as well as substantial dollar benefits to consumers and local firms.

The hydro resources are finite. The latest studies show power demands will exceed firm hydro energy capability from now until completion of the Crater Lake unit of Snettisham. This is further complicated because the funding for Crater Lake construction has not yet been secured. Longer term concerns include knowledge that future hydro projects (after completion of Snettisham) will have substantially higher financing and construction costs--depending of course on future inflation and interest rates.

Much work has been accomplished in identifying energy options for Juneau. Increased use of local renewable resources (principally hydro and wood) and reduced dependency on petroleum products have been proposed as desirable objectives and supported by the community, along with the all important objective of increasing efficiency of all energy uses.

Now we face at least a short term future in which increases in electric power consumption will also increase consumption of oil. That situation calls for careful examination of policies of APA and area utilities which may influence consumer decisions on power use.

The following policy guides are considered appropriate for the current situation:

A. With respect to electric space heat:

1. Continue for the present policies of:

   a. No promotion of electric heat.

   b. Encouraging builders and owners who are considering electric heat first to seek optimum building efficiency, and second consider maximizing efficiency of heating systems.

2. Provide added emphasis on builder/owner options such as audits, dual heating systems, sectional controls, load management, and proper sizing of installations.

3. Encourage those contemplating conversion to electric heat to:

   a. Consider deferring the conversion for a few years until power from Crater Lake is available.

   b. Plan on retaining oil systems as a backup wherever possible.

4. Encourage those contemplating electric heat in new construction to:

   a. Strive for heating efficiency at least as great as average heat pump performance in a "code" building through a combination of additional thermal efficiency measures and heating system design.

   b. Include a backup heating system.

B. With respect to electric hot water heating:

1. Encourage maximum efficiency in design of heating system, including consideration to pre-heating methods and insulation.

2. Encourage use of dual systems which can use oil for water heating as well as electricity.

C. With respect to all classes of power use:

1. Encourage continued activities by consumers to improve efficiency of power use.

2. Monitor overall system loads and be prepared to institute program to actively discourage or prohibit new electric heating applications if necessary.

It is noted that AEL&P is considering additional measures including a possible prohibition of new all-electric services pending availability of Crater Lake power and seasonal rates. APA supports and endorses those measures.

Robert J. Cross
Administrator

MISCELLANEOUS

DATA

SHEETS

NET GENERATION (million kWh)

FY	Snettisham		AEL&P Hydro		AEL&P Diesel		Total
78	78.4 (5%)	(62%)	42.9	(34%)	5.5	(4%)	126.8
79	82.3 (15%)	(59%)	47.6	(34%)	8.9	(7%)	138.9
80	94.6 (24%)	(65%)	49.1	(34%)	1.5	(1%)	145.2
81	117.0 (25%)	(70%)	48.7	(29%)	1.0	(1%)	166.7
82	146.5	(72%)	39.9	(20%)	16.5	(8%)	202.9

ELECTRIC HEAT

	1979	1980	1981	1982
All Electric Homes	69	145	520	1,043

SNETTISHAM PROJECT DATA

Stage	Installed Capacity Kw	Energy Million kWh Firm	Average
Existing	47,160	179	216
Crater Lake	27,000	106	118
Long Lake Dam	---	57	25
Total	74,160	342	359

Snettisham Peaks -- Dec. '79 = 23.2 MW; Nov. '82 = 36 MW

ADDITIONAL PROJECTS

	Installed Capacity Kw	Firm Energy kWh
Lake Dorothy	34,000	150
Sweetheart Lake	29,000	125
Speel River	63,000	275
Tease Creek	16,000	70
Total	142,000	620

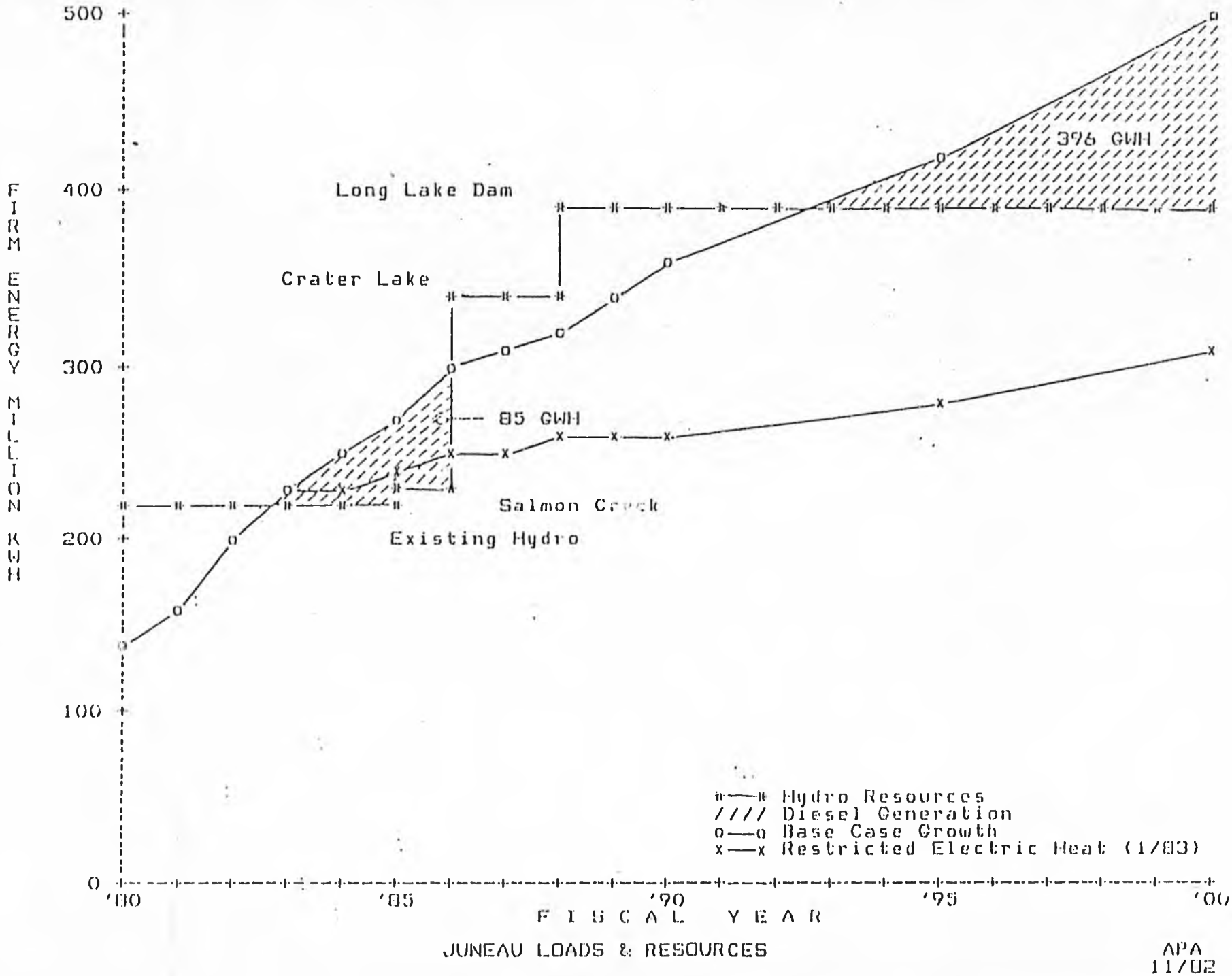
JUNEAU AREA HISTORIC ENERGY AND PEAK DEMAND

Fiscal Year	System Generation MWh	Peak Demand MW
1970	58,266	12.4
1971	63,785	13.8
1972	70,255	14.9
1973	75,753	15.5
1974	83,059	16.2
1975	94,609	17.8
1976	106,296	19.8
1977	112,197	20.4
1978	126,818	23.4
1979	138,922	23.1
1980	145,200	26.2
1981	166,700	32.2
1982	202,900	42.0

EXISTING JUNEAU AREA GENERATION CAPABILITY

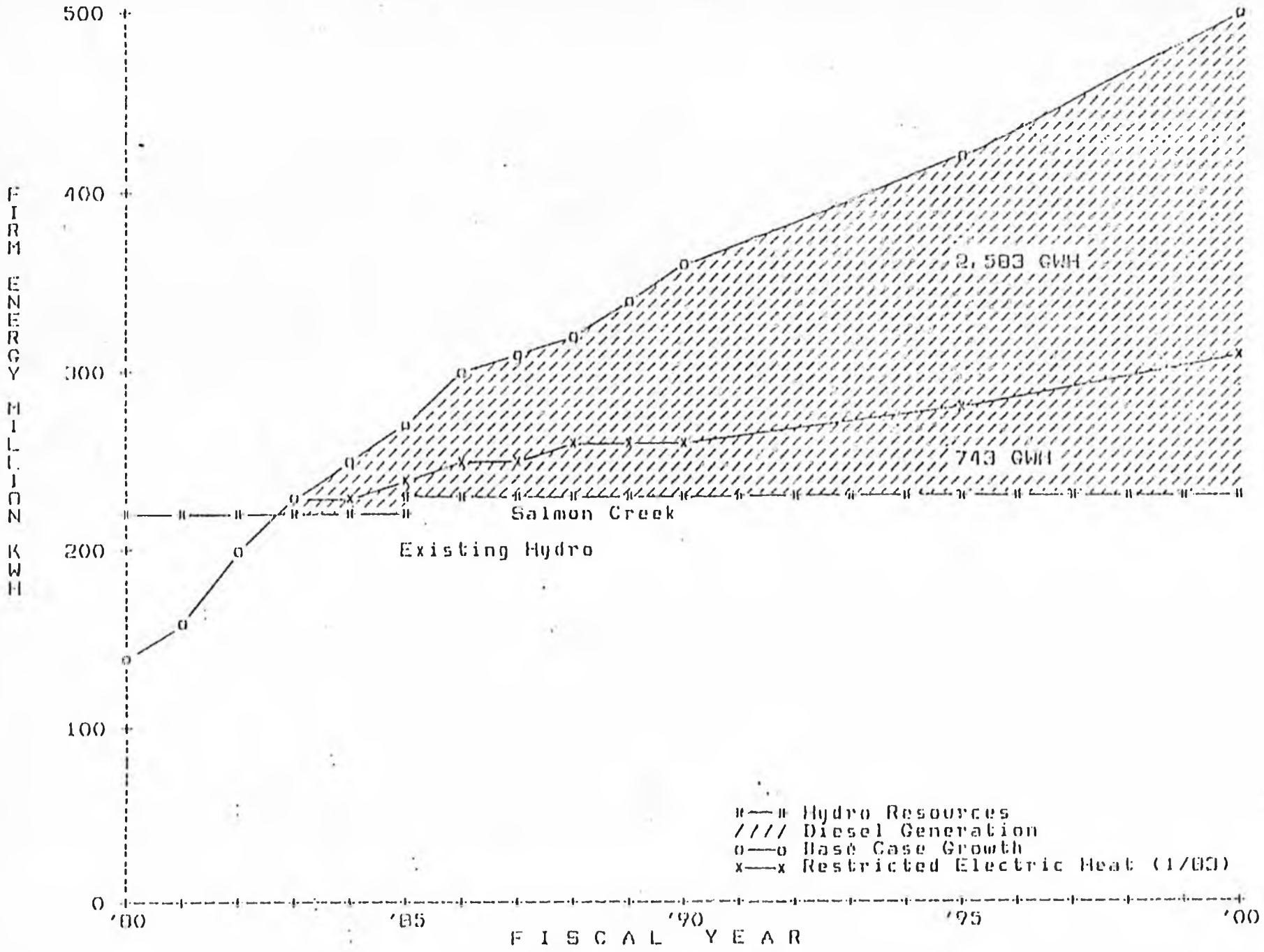
PROJECT	Capacity (kW)	Firm Energy (kWh)
Snettisham	47,160	179 million
Utility Hydro	8,200	42 million
Utility Diesel *	38,200	
	93,560	221 million

* - includes combustion turbine unit



JUNEAU LOADS & RESOURCES

APA
11/82



JUNEAU LOADS & RESOURCES
WITHOUT CRATER LAKE

APA
11/82

BACKGROUND
Snettisham Project

The Snettisham Project was authorized and designed as a staged project to meet the long-term power needs of the Juneau area. The Corps of Engineers is responsible for design and construction, and the Alaska Power Administration is responsible for operation and maintenance of Federal project facilities. The first or Long Lake stage was completed and has been in commercial operation since October 1975.

Snettisham is the largest hydroelectric project in Alaska and the main power source for Juneau, Alaska's capital city. The Snettisham Powerplant is 28 air miles southeast of Juneau.

The Long Lake stage, now on-line, includes a low dam at the outlet of Long Lake, power tunnel and penstock totaling 10,000 feet in length, and an underground powerplant with two generators, each with a rated capacity of 23,580 kilowatts. Power is transmitted to Juneau over a 44-mile-long, 138,000-volt transmission line, which includes a 3-mile underwater section. The Juneau Substation, located 4 miles south of Juneau, is the point of delivery to the local utility system. Supervisory control equipment provides for operating the Snettisham Powerplant from the Juneau Substation.

The powerplant site is remote, accessible only by air or water. Onsite facilities include an air strip, barge dock and boat harbor, a local road system, living quarters, warehouses, and water and sewer systems, all maintained by the APA maintenance staff stationed at the Project. The staff also has capability to operate the project onsite in case of problems with the supervisory control system.

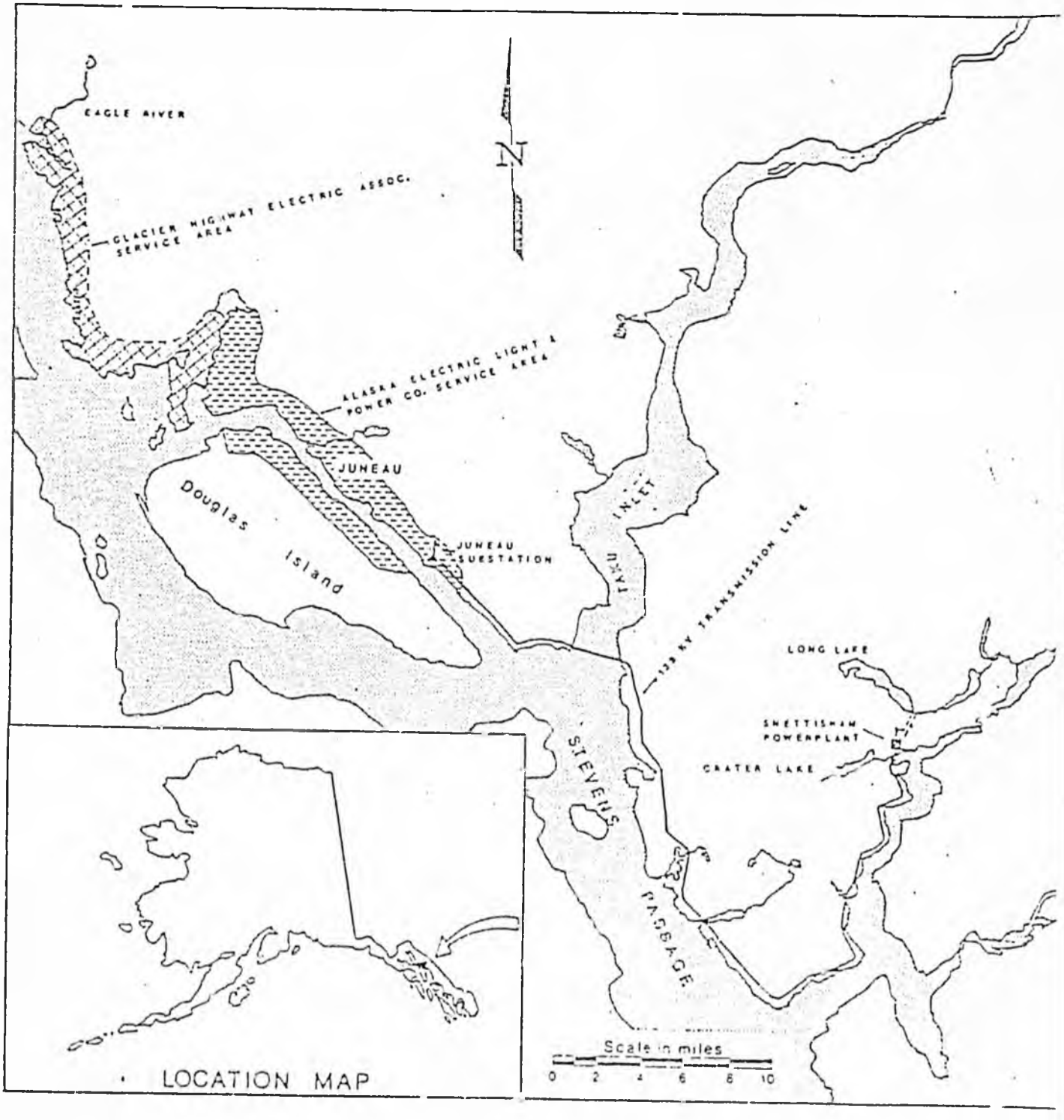
Crater Lake stage is an authorized future addition which would add 27,000 kilowatts of capacity and 106 million kWh per year annual firm energy. New facilities to develop Crater Lake include a tunnel and penstock to tap the existing lake and installation of a new turbine-generator set in the existing powerplant. The existing powerplant was constructed with provisions for the Crater Lake turbine-generator set.

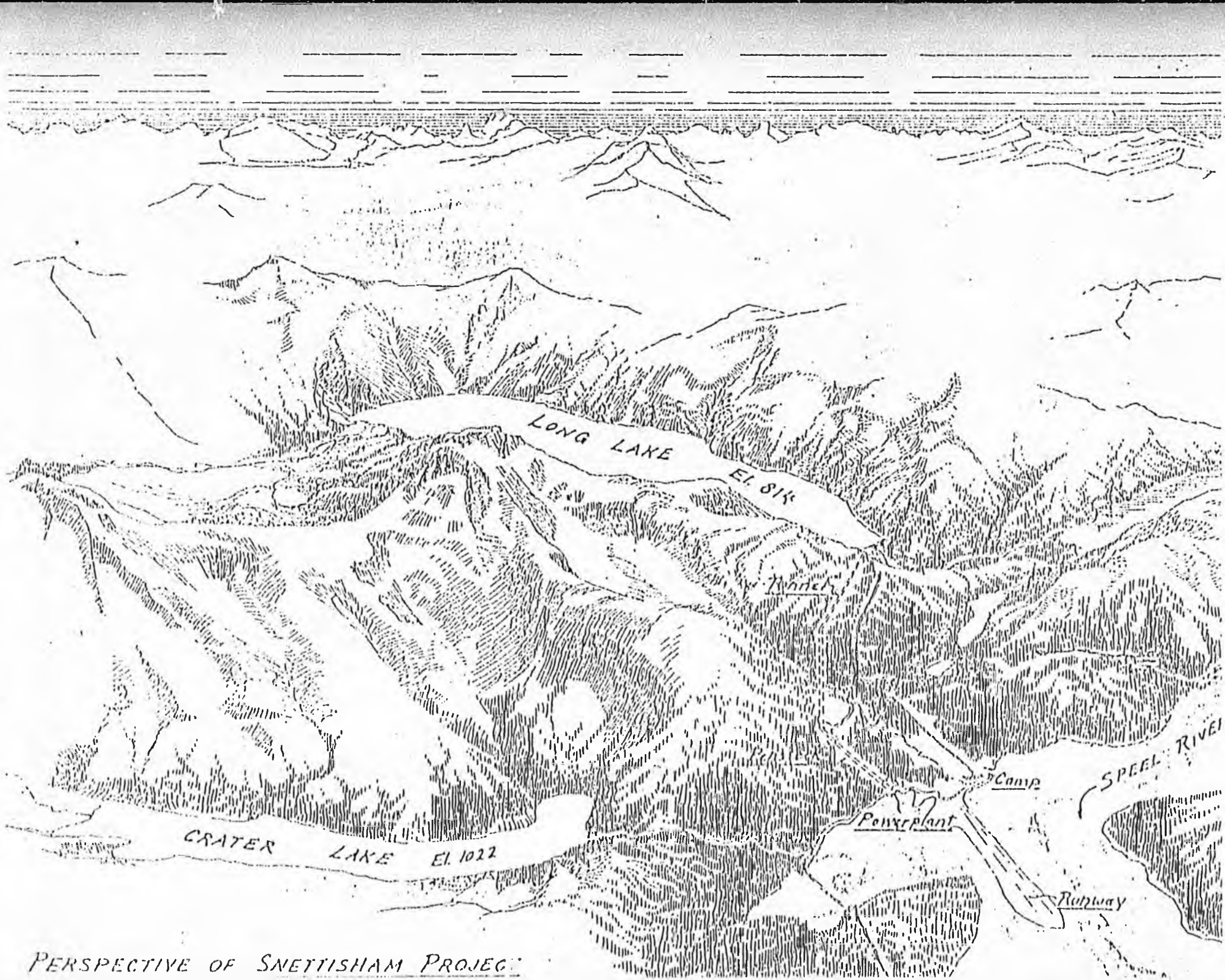
The addition of Long Lake dam would add 57 million kWh of firm annual energy to the project. The new dam would raise the water surface elevation of Long Lake from the present maximum of 813 feet MSL to elevation 885 feet MSL.

The existing transmission line is capable of transmitting the additional power from the Crater Lake and Long Lake dam features.

LOCATION MAP

Snettisham Project and Juneau Power Market Area





PERSPECTIVE OF SNETTISHAM PROJECT

A summary of the capabilities of the existing Snettisham Project and the Crater/Long Additions is shown in the following table:

Project	Capacity (KW)	Firm Annual Energy (1,000 kWh)
Existing	47,160	179,000
Crater Lake	27,000	106,000
Long Lake Dam	------	57,000
Total Project	74,160	342,000

Snettisham Project repayment criteria are governed by language in the initial project authorization (Flood Control Act of 1962) as amended by the Water Resources Development Act of 1976. The present wholesale rate of 15.6 mills per kilowatt-hour reflects deferral of portions of the interest expense for an initial 10-year period pursuant to the 1976 Act. All costs, including the deferred interest, are to be repaid in a subsequent 50-year period which begins in 1986.

SB
108

HOUSE CS FOR CS FOR SENATE BILL 108 (Rules), STATE FORESTS

RINGSTAD AMENDMENT

---Deletes approximately 19,500 acres in Nenana Ridge unit of Tanana Valley State Forest between Fairbanks and Nenana, including area burned in Rosy Creek

---Deletes 13,000 acres in Quartz Lake Unit near Big Delta.

---Deletes 4160 acres along the Chatanika River north of Fairbanks accessible at the end of Bennett Road.

---Adds Back 35,000 acres in Salcha unit between Eielson and Big Delta.

---Adds back 18,000 acres in Tower Bluff unit near Tok.

---Adds back 50,000 acres in Gerstle Unit between Delta Junction and Tok.

This amendment intended to strike a better balance between designating lands for timber harvesting, firewood use and other public uses versus retaining the option of possible future disposal and/or development of these state lands. Areas deleted would be road accessible primarily.

COMPARISON WITH SENATE-PASSED BILL

---With the Ringstad amendment the House bill would contain about 25,000 acres less than Senate bill in the Nenana Ridge unit near Fairbanks.

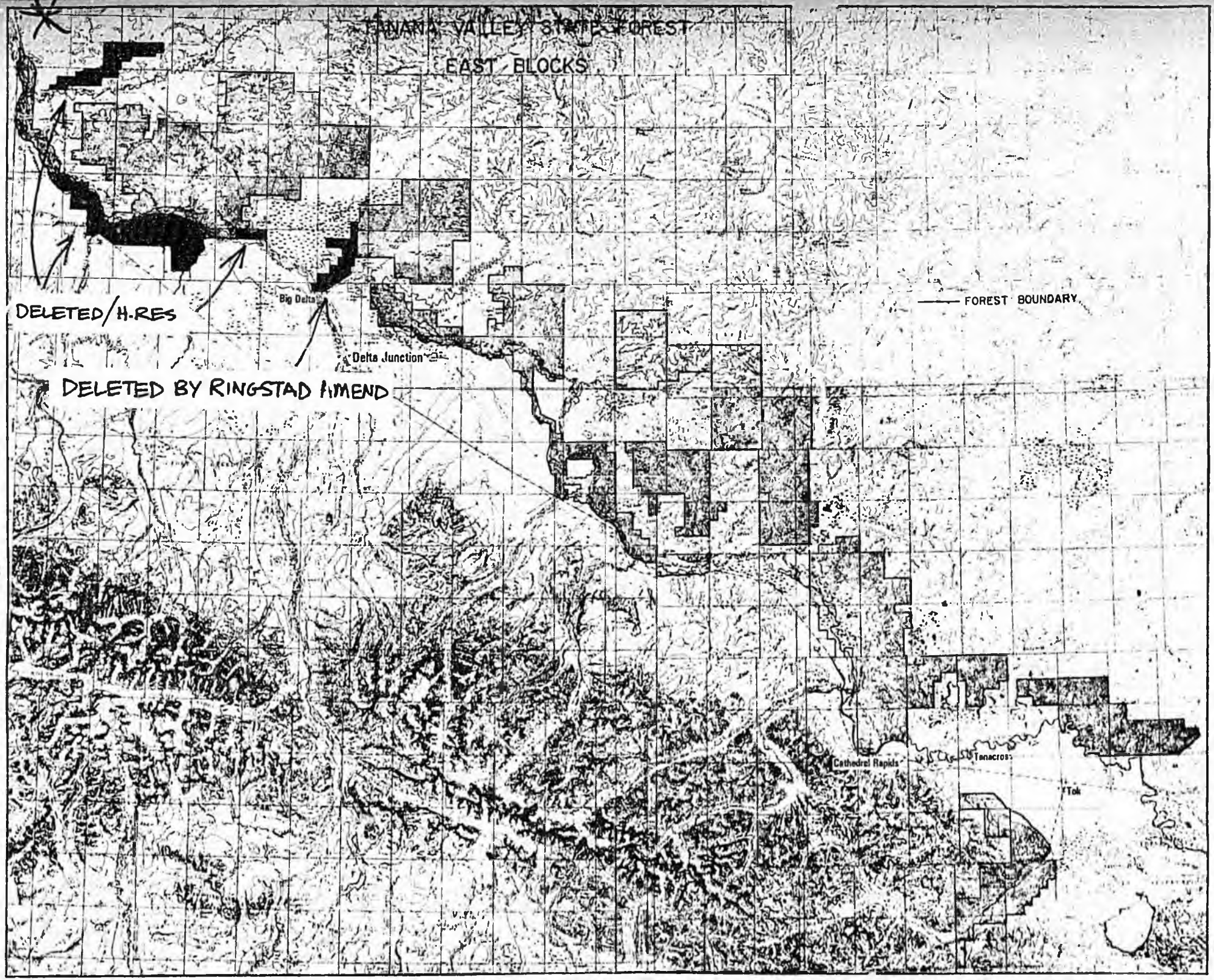
---House bill would contain about 9000 acres less than Senate bill along the Chatanika River north of Fairbanks.

---House bill would contain about 45,000 acres less in the Salcha unit between Eielson and Big Delta.

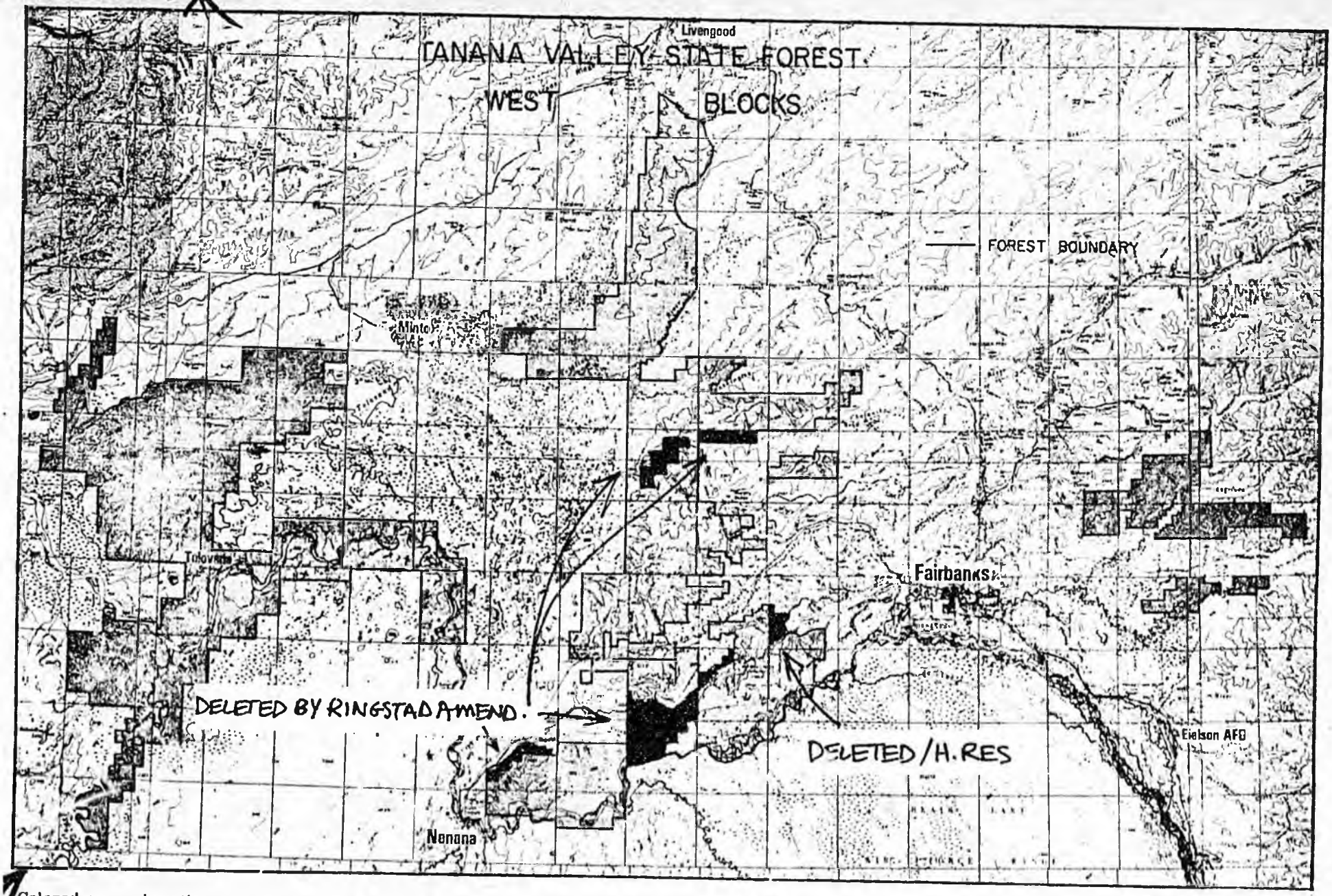
---House bill would contain about 13,000 acres less in the Quartz Lake unit near Big Delta.

---House bill contains shorter time frames for completion of management plans and somewhat more specific management prescriptions than Senate bill.

---House bill also contains several additional townships of land north of Tok which are not contained in the Senate bill.


TANANA VALLEY STATE FOREST
EAST BLOCKS
DELETED/H.RES
DELETED BY RINGSTAD AMEND
Big Delta
Delta Junction
FOREST BOUNDARY
Cathedral Rapids
Tenacross
Tok

May 7, 1983



Colored areas show the 1.7-million-acre Tanana Valley State Forest proposed in Senate bill 108.

AMENDMENT

OFFERED IN THE HOUSE: BY: Ringstad

TO: HCS CSSB 108 (Rules) HOUSE BILL No. _____

SENATE BILL No. _____

PAGE: 5 LINE: 2

Delete Section 3, and insert in its place the following new section:

* Sec. 3. AS 41.17 is amended by adding a new section to read:

ARTICLE 4. TANANA VALLEY STATE FOREST.

Sec. 41.17.400. TANANA VALLEY STATE FOREST. (a) Subject to valid existing rights and except for land owned by or transferred to the University of Alaska under a settlement agreement between the state and the university, the state-owned or acquired land and water lying within the parcels described in (d) of this section is designated as the Tanana Valley State Forest.

(b) The commissioner shall prepare a management plan for the Tanana Valley State Forest under AS 41.17.230. The commissioner shall submit the management plan to the legislature for its approval within the first 10 days of the Second Session of the Fourteenth State Legislature. The management plan for the Tanana Valley State Forest is approved unless the legislature adopts legislation disapproving the management plan.

(c) The commissioner shall consider and permit the uses described in AS 41.17.230(e) within the Tanana Valley State Forest, subject to the procedures established in AS 41.17.230(f). The commissioner may establish transportation corridors within the Tanana Valley State Forest.

(d) The Tanana Valley State Forest includes the state-owned or acquired land and water lying within the following described parcels.

Township 1 North, Range 2 East, Fairbanks Meridian

Sections 1 - 3

Sections 10 - 12

Sections 13 - 15, N1/2

Township 1 North, Range 3 East, Fairbanks Meridian

Section 1, E1/2, E1/2SW1/4, SW1/4SW1/4, SE1/4NW1/4

Section 2, NW1/4, NW1/4SW1/4

Sections 3 - 5

Section 6, N1/2

Section 7, E1/2E1/2

Sections 8 - 9

Section 10, NW1/4SW1/4, N1/2NW1/4, SW1/4NW1/4

Section 11, E1/2, S1/2SW1/4

Sections 12 - 14

Section 15, S1/2NE1/4, NE1/4NE1/4, S1/2

Township 1 North, Range 4 East, Fairbanks Meridian

Sections 1 - 12

Sections 16 - 18

Township 1 North, Range 5 East, Fairbanks Meridian

Sections 6 - 10

Sections 15 - 16

Township 1 North, Range 4 West, Fairbanks Meridian

Section 5, W1/2

Sections 6 - 11

Section 15

Sections 16 - 24

Section 27

Section 28, NE1/4, NE1/4SE1/4

Section 29, S1/2, W1/2NW1/4

Sections 30 - 32

Section 33, W1/2

Township 1 North, Range 5 West, Fairbanks Meridian

Township 1 North, Range 8 West, Fairbanks Meridian

Sections 17 - 20

Sections 29 - 34

Section 35, W1/2

Township 1 North, Range 9 West, Fairbanks Meridian

Sections 13 - 36

Township 1 North, Range 10 West, Fairbanks Meridian

Sections 13 - 36

Township 1 North, Range 11 West, Fairbanks Meridian

Sections 5 - 7

Sections 18 - 19

Sections 30 - 36

Township 1 North, Range 12 West, Fairbanks Meridian

Township 1 North, Range 13 West, Fairbanks Meridian

Sections 1 - 3

Sections 10 - 15

Sections 22 - 26

Sections 35 - 36

Township 2 North, Range 2 East, Fairbanks Meridian

Sections 34 - 36

Township 2 North, Range 3 East, Fairbanks Meridian

Sections 13 - 16

Sections 21 - 29

Sections 31 - 36

Township 2 North, Range 4 East, Fairbanks Meridian

Sections 5 - 8

Sections 17 - 19

Section 30, N1/2

Township 2 North, Range 3 West, Fairbanks Meridian

Section 11, S1/2

Section 12, S1/2

Sections 13 - 17

Sections 19 - 24

Township 2 North, Range 5 West, Fairbanks Meridian

Section 1

Section 2, N½

Section 3, N½

Sections 4 - 8

Section 9, N½

Section 11, S½

Sections 12 - 14

Section 15, S½

Section 17, N½

Sections 18 - 19

Sections 21 - 36

Township 2 North, Range 10 West, Fairbanks Meridian

Sections 4 - 7

Township 2 North, Range 11 West, Fairbanks Meridian

Sections 1 - 12

Sections 16 - 21

Sections 28 - 33

Township 2 North, Range 12 West, Fairbanks Meridian

Township 2 North, Range 13 West, Fairbanks Meridian

Sections 1 - 30

Sections 33 - 36

Township 2 North, Range 14 West, Fairbanks Meridian

Sections 23 - 26

Township 3 North, Range 2 West, Fairbanks Meridian

Section 7, Tract E, ASLS 81-20

Section 8, Tracts H,J,K,L, ASLS 81-20

Section 17, Tracts M,N,O, ASLS 81-20

Section 18, Tracts A,B, ASLS 81-20

Section 19

Township 3 North, Range 3 West, Fairbanks Meridian

Section 13

Sections 19 - 36

Township 3 North, Range 4 West, Fairbanks Meridian

Section 3, west of Washington Creek

Section 4 - 7

Section 8, west of Washington Creek

Section 9 - 10, west of Washington Creek

Section 17, west of Washington Creek

Section 18 - 36

Township 3 North, Range 5 West, Fairbanks Meridian

Section 1

Sections 4 - 5, north of left limit of Tatalina River

Sections 6 - 7

Sections 11 - 36

Township 3 North, Range 6 West, Fairbanks Meridian

Sections 1 - 12

Township 3 North, Range 7 West, Fairbanks Meridian

Sections 1 - 3

Sections 10 - 12

Township 3 North, Range 10 West, Fairbanks Meridian

Sections 1 - 10

Sections 15 - 33

Township 3 North, Range 11 West, Fairbanks Meridian

Sections 1 - 3

Sections 10 - 15

Sections 19 - 36

Township 3 North, Range 12 West, Fairbanks Meridian

Sections 1[illegible] - 21, east of right limit of Hutlitakwa Creek

Sections 22 - 29

Section 30, east of right limit of Hutlitakwa Creek

Sections 31 - 36

Township 3 North, Range 13 West, Fairbanks Meridian

Sections 3 - 4

Section 9

Sections 16 - 17

Sections 19 - 20

Section 21, W1/2

Sections 25 - 26, east of right limit of Hutlitakwa

Creek

Sections 29 - 32

Sections 34 - 35, east of right limit of Hutlitakwa Creek

Section 36

Township 3 North, Range 14 West, Fairbanks Meridian

Section 25, E1/2

Section 36

Township 4 North, Range 5 West, Fairbanks Meridian

Section 1, west of left limit of Tatalina River

Sections 2 - 10

Sections 11 - 12, west of left limit of Tatalina River

Sections 14 - 15, west of left limit of Tatalina River

Sections 16 - 21

Section 22, west of left limit of Tatalina River

Sections 27 - 28, west of left limit of Tatalina River

Sections 29 - 32

Section 33, west of left limit of Tatalina River

Township 4 North, Range 6 West, Fairbanks Meridian

Section 1

Sections 10 - 15

Sections 22 - 36

Township 4 North, Range 7 West, Fairbanks Meridian

Sections 25 - 29

Sections 32 - 36

Township 4 North, Range 13 West, Fairbanks Meridian

Section 27

Section 33, SE1/4

Section 34

Township 5 North, Range 5 West, Fairbanks Meridian

Sections 1 - 2, west of Slate Creek

Sections 3 - 5

Section 6, E1/2

Section 7, E1/2

Sections 8 - 11

Section 12, west of Slate Creek

Sections 13 - 17

Section 18, E1/2

Sections 19 - 36

Township 6 North, Range 4 West, Fairbanks Meridian

Section 5, west of Alyeska Pipeline right-of-way and north of left limit of Slate Creek

Section 6, west of Alyeska Pipeline right-of-way

Sections 7 - 8, west of left limit of Slate Creek

Sections 18 - 19, west of left limit of Slate Creek

Township 6 North, Range 5 West, Fairbanks Meridian

Sections 1 - 4

Section 5, E1/2

Section 8, E1/2

Sections 9 - 16

Section 17, E1/2

Sections 20 - 23

Sections 24 - 26, west of left limit of Slate Creek

Sections 27 - 29

Sections 32 - 34

Section 35, west of left limit of Slate Creek

Township 7 North, Range 4 West, Fairbanks Meridian

Sections 30 - 31, west of Alyeska Pipeline right-

of-way

Township 7 North, Range 5 West, Fairbanks Meridian

Section 15, west of Alyeska Pipeline right-of-way

Section 16, E1/2

Section 21, E1/2

Sections 22 - 23, west of Alyeska Pipeline right-of-way

Sections 25 - 26, west of Alyeska Pipeline right-of-way

Section 27

Section 28, E1/2

Section 33, E1/2

Sections 34 - 36

Township 15 North, Range 11 East, Copper River Meridian

Sections 1 - 2

Section 3, excl. ASLS 78-42

Sections 4 - 8

Sections 17 - 19

Section 30

Section 31

Township 16 North, Range 11 East, Copper River Meridian

Sections 1 - 3

Sections 10 - 15

Sections 22 - 36

Township 16 North, Range 12 East, Copper River Meridian

Sections 1 - 12

Sections 14 - 22

Sections 28 - 32

Township 17 North, Range 11 East, Copper River Meridian

Sections 1 - 3

Sections 10 - 15

Township 17 North, Range 12 East, Copper River Meridian

Sections 5 - 6, west of Eagle Trail

Sections 7 - 8

Section 9, west of Eagle Trail

Sections 15 - 16, west of Eagle Trail

Sections 17 - 21

Sections 22 - 23, west of Eagle Trail

Section 26, west of Eagle Trail

Sections 27 - 34

Section 35, west of Eagle Trail

Township 18 North, Range 11 East, Copper River Meridian

Section 26, west of Eagle Trail

Sections 27 - 33

Sections 34 - 36, west of Eagle Trail

Township 19 North, Range 8 East, Copper River Meridian

Sections 1 - 2, east of left limit of Tanana River

Sections 12 - 13, east of left limit of Tanana River

Sections 24 - 25, east of left limit of Tanana River

Township 19 North, Range 9 East, Copper River Meridian

Sections 1 - 21

Sections 22 - 25, north of left limit of Tanana River

Sections 28 - 32, north of left limit of Tanana River

Township 19 North, Range 13 East, Copper River Meridian

Sections 1 - 4

Sections 5 - 6, excl. F028758

Sections 7 - 16

Section 17, northeast of Tanana River

Section 18, north of Tanana River

Section 20, northeast of Tanana River

Section 21, north of Tanana River

Sections 22 - 27

Section 28, north of Tanana River

Section 29, east of Tanana River

Section 34, north and east of Tanana River

Section 35, north of Tanana River

Section 36

Township 19 North, Range 14 East, Copper River Meridian

Township 19 North, Range 15 East, Copper River Meridian

Township 20 North, Range 8 East, Copper River Meridian

Sections 1 - 2

Section 3, east of Alaska Highway

Section 10, east of Alaska Highway

Sections 11 - 13

Section 14, east of Alaska Highway

Section 23, east of Alaska Highway

Sections 24 - 25

Section 26, east of Alaska Highway

Section 35, east of Alaska Highway

Section 36

Township 20 North, Range 9 East, Copper River Meridian

Township 20 North, Range 10 East, Copper River Meridian

Township 20 North, Range 11 East, Copper River Meridian

Sections 1 - 16

Section 17, excl. NA, Par. C, F12548

Section 18

Sections 20 - 23

Sections 28 - 29

Section 32

Section 33, excl. USS 4377, NA, Par. A, F12549, NA, Par. B, F-14422

Township 20 North, Range 12 East, Copper River Meridian

Sections 20 - 23

Section 24, excl. NA, F-12107

Sections 25 - 29

Sections 34 - 36

Township 20 North, Range 13 East, Copper River Meridian

Township 21 North, Range 8 East, Copper River Meridian

Sections 8 - 17

Sections 21 - 25

Sections 26 - 27, excl. USS 3620

Section 34, excl. USS 5622A

Section 36

Township 21 North, Range 9 East, Copper River Meridian

Township 21 North, Range 10 East, Copper River Meridian

Township 22 North, Range 5 East, Copper River Meridian

Sections 1 - 12

Sections 13 - 18, north of Alaska Highway

Township 22 North, Range 8 East, Copper River Meridian

Sections 1 - 5

Sections 8 - 18

Sections 20 - 24

Sections 27 - 32

Sections 34 - 36

Township 22 North, Range 9 East, Copper River Meridian

Township 23 North, Range 5 East, Copper River Meridian

Sections 1 - 3

Sections 10 - 15

Sections 21 - 24

Township 23 North, Range 6 East, Copper River Meridian

Sections 5 - 7

Township 23 North, Range 7 East, Copper River Meridian

Sections 1 - 30

Township 23 North, Range 8 East, Copper River Meridian

Township 24 North, Range 5 East, Copper River Meridian

Sections 1 - 5

Sections 8 - 17

Sections 20 - 29

Sections 34 - 36

Township 24 North, Range 6 East, Copper River Meridian

Township 24 North, Range 7 East, Copper River Meridian

Sections 1 - 30

Sections 32 - 36

Township 25 North, Range 6 East, Copper River Meridian

Township 25 North, Range 8 East, Copper River Meridian

Township 26 North, Range 5 East, Copper River Meridian

Township 26 North, Range 6 East, Copper River Meridian

Township 1 South, Range 3 East, Fairbanks Meridian

- Section 1
- Sections 11 - 14
- Section 15, S1/2, S1/2N1/2
- Section 16
- Section 23, NE1/4
- Section 24, N1/2

Township 1 South, Range 4 East, Fairbanks Meridian

- Sections 1 - 2
- Section 4, S1/2
- Section 5, S1/2, NW1/4
- Sections 6 - 7
- Section 8, north of Chena River
- Section 9, the NW1/4 north of Chena River, N1/2NE1/4
- Section 10, NE1/4
- Section 11
- Section 12, N1/2
- Section 17, north of Chena River
- Section 18

T wnship 1 South, Range 5 East, Fairbanks Meridian

- Section 6

Township 1 South, Range 3 West, Fairbanks Meridi

- Section 26, S1/2 south of Parks Highway
- Sections 27 - 28, south of Parks Highway
- Section 29, west of Old Nenana Highway and south of Parks Highway
- Sections 31 - 34, south of Parks Highway

Section 35

Township 1 South, Range 4 West, Fairbanks Meridian

Section 4, SW1/4

Sections 7 - 8

Section 9, NW1/4

Section 18, N1/2

Section 23, SE1/4, SE1/4NE1/4

Sections 24 - 29

Section 32, N1/2N1/2

Section 34, excl. NW1/4NW1/4

Sections 35 - 36

Township 1 South, Range 5 West, Fairbanks Meridian

Sections 2 - 12

Section 13, N1/2

Sections 14 - 23

Sections 28 - 30

Section 31, N1/2,N1/2S1/2

Section 32, N1/2, N1/2S1/2

Township 1 South, Range 6 West, Fairbanks Meridian

Sections 1 - 4

Sections 9 - 16

Sections 21 - 28

Sections 32 - 34

Section 35, E1/2

Section 36, N1/2

Township 1 South, Range 8 West, Fairbanks Meridian

Sections 3 - 10

Sections 15 - 22

Sections 27 - 34

Township 1 South, Range 10 West, Fairbanks Meridian

Sections 1 - 6

Township 1 South, Range 11 West, Fairbanks Meridian

Sections 1 - 24

Sections 27 - 3[illegible]

Township 1 South, Range 12 West, Fairbanks Meridian

Sections 1 - 2

Sections 11 - 14

Section 21, south of the unnamed creek

Sections 22 - 28

Sections 31 - 32, south of right limit of Tanana River

Sections 33 - 36

Township 1 South, Range 13 West, Fairbanks Meridian

Section 27, north of a branch of Tanana River

Sections 34 - 36, north of a branch of Tanana River

Township 2 South, Range 3 West, Fairbanks Meridian

Section 2, N1/2, tract F, ASLS 80 - 118

Sections 3 - 10

Section 13, Lots A and C

Section 14, Lots 5 - 7, NE1/4, SW1/4

Section 15, west of left limit of Tanana River

Sections 16 - 19

Sections 20 - 24, north of military reservation

Sections 28 - 29, north of military reservation

Sections 30 - 31

Section 32, north of military reservation

Township 2 South, Range 4 West, Fairbanks Meridian

Sections 1 - 3

Section 7, SE¼SE¼

Section 8, south of Parks Highway

Section 9, south of Parks Highway

Section 10 - 16

Section 17, south of Parks Highway

Section 18, south of Parks Highway

Section 19, south of Parks Highway

Sections 20 - 36

Township 2 South, Range 5 West, Fairbanks Meridian

Sections 1 - 2

Sections 7 - 23

Section 24, north of Parks Highway

Section 26, north of Parks Highway

Section 27, north of Parks Highway

Township 2 South, Range 6 West, Fairbanks Meridian

Section 3

Section 4, N1/2, SE1/4, SW1/4SW1/4

Section 5

Sections 10 - 12

Section 16

Township 2 South, Range 7 West, Fairbanks Meridian

Section 35, SE1/4SE1/4

Section 36, SE1/4, SE1/4NE1/4, E1/2SW1/4, SW1/4SW1/4

Township 2 South, Range 11 West, Fairbanks Meridian

Section 6

Township 2 South, Range 12 West, Fairbanks Meridian

Sections 1 - 24

Sections 27 - 34

Township 2 South, Range 13 West, Fairbanks Meridian

Sections 1 - 6

Section 7, Tracts A,B and C, ASLS 81-54 SW1/4

Section 8, NE1/4, Tracts D,E,F, ASLS 81-54

Sections 9 - 30

Sections 33 - 36

Township 3 South, Range 3 West, Fairbanks Meridian

Sections 6 - 7, north of military reservation

Township 3 South, Range 4 West, Fairbanks Meridian

Sections 1 - 11

Section 12, north of military reservation

Sections 14 - 15, north of military reservation

Section 16

Section 17, north of military reservation

Sections 20 - 22, north of military reservation

Township 3 South, Range 5 West, Fairbanks Meridian

Section 1

Sections 11 - 12

Section 13, NW1/4NW1/4, Lots 2 - 4

Sections 14 - 15, north of left limit of Tanana River

Section 19, north of left limit of Tanana River, excl. NE1/4NE1/4

Section 20, north of left limit of Tanana River, excl. Lot 3

Section 21, north of left limit of Tanana River

Section 31, Lot 2

Township 3 South, Range 6 West, Fairbanks Meridian

Sections 13 - 36

Township 3 South, Range 7 West, Fairbanks Meridian

Section 1

Section 2, E1/2, E1/2SW1/4, SW1/4SW1/4

Section 3, SE1/4SE1/4

Section 9, south of Parks Highway

Section 10, that portion of NE1/4 which lies south of Parks Highway; SW1/4SE1/2

Section 11, N1/2, N1/2SE1/4

Section 12, N1/2, N1/2S1/2

Section 20, S½

Sections 22 - 29

Sections 31 - 36

Township 3 South, Range 12 West, Fairbanks Meridian

Sections 3 - 10

Sections 15 - 19

Section 30

Township 3 South, Range 13 West, Fairbanks Meridian

Section 12, E1/2

Section 13

Section 14, E1/2

Sections 24 - 25

Section 26, E1/2

Sections 35 - 36

Township 4 South, Range 4 East, Fairbanks Meridian

Sections 30 - 32, west of Richardson Highway

Township 4 South, Range 6 West, Fairbanks Meridian

Sections 1 - 12

Sections 14 - 18

Township 4 South, Range 7 West, Fairbanks Meridian

Sections 1 - 12

Sections 13 - 14, north of left limit of Tanana River

Section 18, Lots 3-6

Township 4 South, Range 13 West, Fairbanks Meridian

Sections 1 - 2

Sections 3 - 4, east of left limit of Kantishna River

Sections 8 - 10 east of left limit of Kantishna River

Section 11

Section 15

Sections 16 - 17, east of left limit of Kantishna River

Sections 20 - 21, east of left limit of Kantishna River

Section 22

Sections 27 - 29, east of left limit of Kantishna River

Sections 33 - 34, east of left limit of Kantishna River

Township 5 South, Range 4 East, Fairbanks Meridian

Sections 5 - 6

Section 7, east of military reservation

Section 8

Section 17

Sections 18 - 19, east of military reservation

Section 20

Section 29

Section 30, east of military reservation

Section 31

Section 32, excl. NE1/4SE1/4, Lots 1-4

Township 5 South, Range 5 East, Fairbanks Meridian

Sections 25 - 29

Sections 33 - 36

Township 5 South, Range 6 East, Fairbanks Meridian

Sections 28 - 29

Section 30, S1/2

Sections 31 - 34

Section 36, S1/2

Township 5 South, Range 8 East, Fairbanks Meridian

Sections 1 - 6

Sections 8 - 17

Sections 20 - 30

Sections 32 - 36

Township 5 South, Range 9 East, Fairbanks Meridian

Sections 4 - 9

Sections 13 - 36

Township 6 South, Range 4 East, Fairbanks Meridian

Section 5, excl. Lots 1,2

Sections 6 - 7, east of military reservation

Section 3

Section 9, excl. N1/2NE1/4SE1/4, S1/2S1/2NE1/4, GL-5

Section 14, Lot 4

Section 15, south of Tanana River

Section 16

Section 21, east of military reservation

Section 22

Section 23, NE1/4NE1/4, that portion west of Richardson Highway

Section 25, south of Richardson Highway

Section 26, excl. Lot 1

Section 27, east of military reservation

Section 35

Section 36, W1/2SW1/4

Township 6 South, Range 5 East, Fairbanks Meridian

Sections 1 - 4

Sections 9 - 15

Section 16, S1/2, NE1/4

Section 20, S1/2

Sections 21 - 28

Section 29, N1/2

Section 36

Township 6 South, Range 6 East, Fairbanks Meridian

Section 1

Sections 3 - 9

Section 10, W1/2

Section 11, E1/2

Sections 12 - 36

Township 6 South, Range 7 East, Fairbanks Meridian

Sections 3 - 36

Township 6 South, Range 8 East, Fairbanks Meridian

Township 6 South, Range 9 East, Fairbanks Meridian

Township 6 South, Range 10 East, Fairbanks Meridian

Township 7 South, Range 6 East, Fairbanks Meridian

Sections 1 - 5

Sections 8 - 15

Sections 21-24

Sections 25-27, north of left limit of Tanana River

Section 28

Section 29, S½

Section 30, S½

Sections 31-32

Section 33, north of left limit of Tanana River

Township 7 South, Range 7 East, Fairbanks Meridian

Sections 1-18

Sections 23-26

Sections 35-36, excl. ASLS 81-213 except Tract A

Township 7 South, Range 8 East, Fairbanks Meridian

Sections 1-12

Sections 15-21

Sections 28-34

Township 7 South, Range 9 East, Fairbanks Meridian

Sections 3 - 10

Sections 15 - 16, N1/2

Township 7 South, Range 10 East, Fairbanks Meridian

Sections 24 - 25

Sections 35 - 36

Township 7 South, Range 11 East, Fairbanks Meridian

Sections 1 - 2

Sections 11 - 14

Sections 19 - 36

Township 7 South, Range 12 East, Fairbanks Meridian

Township 8 South, Range 7 East, Fairbanks Meridian

Section 1

Township 8 South, Range 8 East, Fairbanks Meridian

Sections 4-6

Township 8 South, Range 10 East, Fairbanks Meridian

Section 1

Sections 12-13

Township 8 South, Range 11 East, Fairbanks Meridian

Sections 1 - 18

Sections 22 - 27

Section 36

Township 8 South, Range 12 East, Fairbanks Meridian

Sections 1 - 10

Sections 15 - 22

Sections 27 - 34

Township 8 South, Range 13 East, Fairbanks Meridian

Sections 25 - 26

Sections 33 - 36

Township 9 South, Range 11 East, Fairbanks Meridian

Section 3, S1/2

Sections 4 - 5

Sections 8 - 11

Sections 13 - 16

Section 17, E1/2, NE1/4SW1/4, SW1/4NW1/4

Sections 21 - 27

Section 28, excl. FO2662

Township 9 South, Range 12 East, Fairbanks Meridian

Sections 19 - 21

Sections 28 - 36

Township 9 South, Range 13 East, Fairbanks Meridian

Sections 1 - 3

Section 10, E1/2

Sections 11 - 13

Section 24 - 25

Section 26, S1/2

Section 27

Sections 34 - 36

Township 9 South, Range 14 East, Fairbanks Meridian

Township 9 South, Range 16 East, Fairbanks Meridian

Township 10 South, Range 2 East, Fairbanks Meridian

Sections 1 - 3

Sections 4 - 6, north of left limit of Tanana River

Sections 10 - 12, north of left limit of Tanana River

Township 10 South, Range 13 East, Fairbanks Meridian

Sections 1 - 6

Sections 7 - 8, north of left limit of Tanana River

Sections 9 - 12

Sections 14 - 15, N1/2

Township 10 South, Range 14 East, Fairbanks Meridian

Sections 1 - 20

Section 21, NE1/4SE1/4, W1/2, N1/2NE1/4

Sections 22 - 24

Section 25, excl. Tract C

Section 26, excl. SW1/4SW1/4

Section 27, N1/2NE1/4, NE1/4NW1/4

Section 28, W1/2

Section 29

Section 30, NE1/4NE1/4

Section 32, excl. Tract U, Delta I

Section 33, W1/2

Township 10 South, Range 16 East, Fairbanks Meridian

Sections 1 - 35

Township 11 South, Range 14 East, Fairbanks Meridian

Section 4, NW1/4, Tracts A,B,E

Section 5, excluding Tract U, Delta Barley I

Section 9, Tracts A,B, E1/2

Section 10, Tracts B,C

Section 15, Tracts B,C

Section 16, E1/2, Tracts A,B

Section 21, Tracts A,B

Section 22, NW1/4, Tracts A,B,D

Section 23, Tracts A,B,D,E

Section 26, Tracts A,B,C,D

Section 35, E1/2, Tracts A,B

Section 36, Tracts A,B,C,D,E

Township 11 South, Range 16 East, Fairbanks Meridian

Township 12 South, Range 14 East, Fairbanks Meridian

Section 1, excl. USS 4013

Section 2, excl. ASLS 79-93

Section 1[illegible] excl. ASLS 79-93

Sections 12 - 13

Section 14, excl. ASLS 79-93

Sections 23 - 25, excl. ASLS 79-93

Section 36, excl. ASLS 79-93

Township 12 South, Range 15 East, Fairbanks Meridian

Sections 2 - 6

Section 7, excl. SE1/4SW1/4

Sections 8 - 14

Section 15, E1/2, E1/2NE1/4

Sections 18 - 19, W1/2W1/2

Section 21, S1/2SE1/4

Section 22, excl. N1/2NW1/4

Sections 23 - 30

Section 31, SW1/4

Section 32, SE1/4, S1/2SW1/4

Sections 33 - 36

Township 12 South, Range 16 East, Fairbanks Meridian

Sections 1 - 5

Sections 9 - 16

Sections 21 - 28

Sections 34 - 36

Township 13 South, Range 15 East, Fairbanks Meridian

Sections 1 - 3

Section 4, N1/2SE1/4, NE1/4, N1/2NW1/4, SW1/4NW1/4, NW1/4SW1/4

Section 5, Tracts A and C

Section 6, north of Alaska Highway

Section 11, Tracts D and F

Section 12

Section 13, Tracts B and C

Township 13 South, Range 16 East, Fairbanks Meridian

Section 1

Sections 6 - 7

Section 12, excl. George Lake Subdivision

Sections 16 - 18

Sections 19 - 20, north of left limit of Tanana River

Section 21

Section 27

Sections 28 - 29, north of left limit of Tanana River

Sections 32 - 33, north of left limit of Tanana River

Sections 34 - 35

Township 14 South, Range 16 East, Fairbanks Meridian

Sections 1 - 3

Section 4, north of left limit of Tanana River

Sections 10 - 11, north of left limit of Tanana River

Section 12

Offered: 3/24/83
Referred: Finance

Original sponsors: Fahrenkamp, V.Fischer, Sturgulewski, et al

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 108 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act establishing the Tanana Valley State Forest and a program for the management of state forests and forest land of the state; and providing for an effective date."

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

* Section 1. AS 41.17 is amended by adding new sections to read:

ARTICLE 2. STATE FOREST SYSTEM.

Sec. 41.17.200. STATE FOREST PURPOSES. The purpose of AS 41.17.200 - 41.17.230 is to permit the establishment of designated state-owned or acquired land and water areas as state forests. The primary purpose in the establishment of state forests is the perpetuation of land, water, scenic, and recreational resources to ensure a variety of personal, commercial, and other beneficial uses through multiple-use management.

Sec. 41.17.210. STATE FOREST RECOMMENDATIONS AND DESIGNATIONS. (a) After planning and classification procedures identifying primary uses of the state lands in an area under AS 38.04 and AS 38.05 have been completed, the governor shall propose to the legislature the establishment of state forests, consisting primarily of forest land determined by the governor to be desirable for retention in state ownership and for management under the principles of multiple-use and sustained yield.

(b) A state forest established by the legislature shall be retained in state ownership.