

COMMITTEE REPORT

SENATE

3/26/76

Mr. President:

Date \_\_\_\_\_

The Committee on Finance has had SB 282 authorizing construction of the Devil's Canyon Dam under consideration. A Majority of the members of the Committee

- ( ) recommends it DO PASS
- ( ) recommends it DO NOT PASS
- ( ) recommends it DO PASS WITH ATTACHED AMENDMENT(S)
- ( ) recommends it BE REPLACED WITH CS FOR \_\_\_\_\_ AND THAT  
CS FOR \_\_\_\_\_ DO PASS
- ( ) "and" recommends it BE REFERRED TO THE \_\_\_\_\_  
COMMITTEE
- ( ) reports it back WITHOUT RECOMMENDATION
- ( ) "other"

Members signing the Majority report:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Members NOT concurring in the Majority report:

_____	recommends:
_____	recommends:
_____	recommends:
_____	recommends:
_____	recommends:

\_\_\_\_\_  
Chairman

**\*\*FINANCE\*\***

# COMMITTEE REPORT

3/18/75

SENATE

Mr. President:

Date

MARCH 25, 1976

The Committee on STATE AFFAIRS has had SB 282 authorizing construction of the Devil's Canyon Dam under consideration. A Majority of the members of the Committee

- recommends it DO PASS
- recommends it DO NOT PASS
- recommends it DO PASS WITH ATTACHED AMENDMENT(S)
- recommends it BE REPLACED WITH CS FOR \_\_\_\_\_ AND THAT CS FOR \_\_\_\_\_ DO PASS
- "and" recommends it BE REFERRED TO THE \_\_\_\_\_ COMMITTEE
- reports it back WITHOUT RECOMMENDATION
- "other"

Members signing the Majority report:

[Signature] \_\_\_\_\_

[Signature] \_\_\_\_\_

[Signature] \_\_\_\_\_

[Signature] \_\_\_\_\_

Members NOT concurring in the Majority report:

[Signature] recommends: NO REC

\_\_\_\_\_ recommends:

\_\_\_\_\_ recommends:

\_\_\_\_\_ recommends:

\_\_\_\_\_ recommends:

[Signature] Chairman

Introduced: 3/18/75  
Referred: State Affairs and  
Finance

1 IN THE SENATE

BY KERTTULA

2 SENATE BILL NO. 282

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 NINTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act authorizing construction of the Devil's Canyon  
7 Dam, the issuance of revenue bonds for the project,  
8 and creating a division of hydroelectric power and  
9 dams within the Department of Public Works."

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

11 \* Section 1. AS 35.05 is amended by adding a new section to read:

12 Sec. 35.05.035. DIVISION OF HYDROELECTRIC POWER AND DAMS CREATED.

13 There is created within the Department of Public Works the hydroelectric  
14 power and dams division.

15 \* Sec. 2. AS 35.25.010 is amended to read:

16 Sec. 35.25.010. PURPOSE AND INTENT. The purpose of this title  
17 is to establish a public works department capable of carrying out a  
18 public works planning and construction program which will provide public  
19 buildings necessary to efficient government, and boat harbors, jetties,  
20 dikes, dams and breakwaters necessary to the economy of Alaska communi-  
21 ties, all of which is to the advantage and benefit of the general welfare  
22 of the public.

23 \* Sec. 3. AS 37.15 is amended by adding new sections to read:

24 ARTICLE 4. DEVIL'S CANYON DAM REVENUE BONDS.

25 Sec. 37.15.570. BOND AUTHORIZATION. For the purpose of providing  
26 part or all of the money to be used, with or without any grants or other  
27 money which may become available, the issuance and sale of revenue bonds  
28 of the state in the total principal sum of not to exceed \$500,000,000 is  
29 authorized to acquire, equip, and construct the dam and any additions,

1 improvements, and facilities authorized by sec. 670 of this chapter.  
2 The principal of and interest on these bonds shall be paid out of and  
3 secured by the gross revenues derived by the state from the ownership,  
4 lease, use and operation of the dam, and of all the facilities and out  
5 of any other revenues or money which the state legislature may provide  
6 exclusive of any state tax or license.

7 Sec. 37.15.580. CONSTRUCTION FUND. (a) There is a special fund  
8 of the state known as the "Devil's Canyon Dam Construction Fund," into  
9 which shall be paid the proceeds of the sale of the bonds (except any  
10 accrued interest paid on them, which shall be paid into the bond redemp-  
11 tion fund) and any grant or other money which is legally provided for  
12 the same purposes for which the bonds are authorized. The money in the  
13 construction fund shall be used to pay the costs of acquiring, equip-  
14 ping, and constructing the dam and any additions and improvements,  
15 including costs of the authorization, issuance and sale of the bonds.  
16 To the extent provided in the bond resolution, money in the construction  
17 fund may also be used for the payment of interest on the bonds during  
18 the period of actual construction, and for such further period, not  
19 exceeding one year after the period of construction, as may be provided  
20 in the bond resolution. Money in the construction fund may also be  
21 transferred to the bond redemption fund, to the extent provided in the  
22 bond resolution, to establish a reserve for the payment of the principal  
23 of and interest on the bonds.

24 (b) The bond resolution may provide for the investment of money in  
25 the construction fund in such manner as the committee may determine.  
26 The interest earned upon or any profits derived from the sale of this  
27 investment shall be deposited in and become a part of the construction  
28 fund.

29 Sec. 37.15.590. REVENUE FUND. (a) There is another special fund

1 of the state, known as the "Devil's Canyon Dam Revenue Fund," which  
2 shall be completely segregated and set apart from all other funds of the  
3 state, which is a trust fund for the uses and purposes provided in  
4 secs. 570 - 710 of this chapter, and into which shall be paid all  
5 revenues, fees, and charges derived by the state from the ownership, use  
6 and operation of the dam and all of its facilities and improvements and  
7 facilities and improvements used in connection with it. The money in  
8 the revenue fund shall only be used for the purpose of paying or securing  
9 the payment of the principal of and interest on the bonds and of and on  
10 any other revenue bonds issued by authorization of the legislature to  
11 provide funds for construction and to acquire, equip, construct and  
12 install additions and improvements to the dam and to be payable out of  
13 the revenue fund, the purpose of paying the normal and necessary costs  
14 of maintaining and operating the dam and all of its improvements and  
15 facilities, the purpose of paying the costs of replacement and extra-  
16 ordinary repairs to the dam and all its improvements and facilities, the  
17 purpose of redeeming before their fixed maturities any and all revenue  
18 bonds issued for the purposes of the dam, the purpose of providing  
19 funds to acquire, construct and install necessary additions and improve-  
20 ments to and facilities for the dam and all its facilities, and the  
21 purpose of providing funds to pay any and all other costs relating to the  
22 ownership, use and operation of the dam.

23 (b) The investment of money in the revenue fund may be made in  
24 such manner as the committee may determine. The interest earned upon  
25 or any profits derived from the sale of this investment shall be de-  
26 posited in and become a part of the revenue fund.

27 Sec. 37.15.600. REDEMPTION FUND. There is another special fund  
28 of the state, known as the "Devil's Canyon Dam Revenue Bond Redemption  
29 Fund," which is a trust fund for paying and securing the payment of the

1 principal of and interest and redemption premium, if any, on the bonds  
2 and which shall be at all times completely segregated and set apart from  
3 all other funds of the state. The committee, on behalf of the state,  
4 shall obligate and bind the state to set aside and pay into the bond  
5 redemption fund any part or parts of, or all of, or a fixed proportion  
6 of, or a fixed amount of the money in the revenue fund sufficient to  
7 pay the principal of and interest and redemption premium, if any, on the  
8 bonds as the payments become due and, if it considers it necessary, to  
9 set aside and maintain reserves for this purpose. The bond redemption  
10 fund shall be drawn upon for the purpose of paying the principal of and  
11 interest and redemption premium, if any, on the bonds, and the bonds do  
12 not constitute a general obligation of the state.

13 Sec. 37.15.610. BOND TERMS. (a) The bonds shall be sold in such  
14 amounts or series and at such time or times as determined by the com-  
15 mittee. Before selling a series of bonds, the committee shall give  
16 notice inviting sealed bids in such manner as it may prescribe. If  
17 satisfactory bids are received, the bonds offered for sale shall be  
18 awarded to the highest responsible bidder. If the committee determines  
19 that the bids received are not satisfactory as to price or responsi-  
20 bility of the bidders, it may reject all bids received. Interest shall  
21 be payable annually or semiannually.

22 (b) The bonds shall mature at such time or times as fixed by the  
23 committee. The bonds may be subject to redemption before their fixed  
24 maturities as determined by the committee and with such premium or premi-  
25 ums as fixed by the committee, but no bond may be subject to redemption  
26 before its fixed maturity date unless the right so to redeem that bond  
27 is expressly mentioned on the face of the bond. The bonds may be in  
28 denominations determined by the committee; may be issued in coupon form  
29 or in fully registered form, and may be registrable as to principal or

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1 both principal and interest, all under such regulations and conditions  
2 as the committee shall provide; shall be payable as to principal and  
3 interest at such place or places as may be determined by the committee;  
4 shall be signed on behalf of the state by the governor and shall be  
5 attested by the lieutenant governor, both of which signatures may be  
6 facsimile signatures; shall have the seal of the state impressed, printed  
7 or lithographed on them, and each of the interest coupons attached to  
8 them shall be signed by the facsimile signatures of these officials;  
9 shall be issued under and subject to such terms, conditions and covenants  
10 providing for the payment of the principal of them and interest on them  
11 and such other terms, conditions, covenants and protective features  
12 safeguarding this payment and relating to the maintenance, operation  
13 and improvement of the dam as found necessary by the committee, which  
14 covenants may include a provision requiring the setting aside and mainte-  
15 nance of certain reserves to secure the payment of this principal and  
16 interest. The committee may provide that any additional bonds authorized  
17 (after the effective date of this Act) by the legislature to be payable  
18 out of the same source or sources as the bonds authorized as of that  
19 date may later be issued on a parity with the bonds authorized as of that  
20 date upon compliance with any conditions which the committee may pre-  
21 scribe.

22 (c) If found reasonably necessary, the committee may select a  
23 trustee or trustees for the holders of the bonds or any series of them,  
24 for the safeguarding and disbursement of any of the money in any of the  
25 funds created by secs. 580, 590 and 600 of this chapter, or for such  
26 duties with respect to the authentication, delivery and registration  
27 of the bonds as the committee may determine, and shall fix the rights,  
28 duties, powers and obligations of the trustee or trustees.

29 (d) In its determination of all of the matters and questions

1 relating to the issuance and sale of the bonds and the fixing of the  
2 maturities, terms, conditions and covenants of them as provided in (a),  
3 (b) and (c) of this section, the decisions of the committee shall be  
4 those found to be reasonably necessary for the best interests of the  
5 state and its inhabitants, and those which will accomplish the most  
6 advantageous sale of the bonds, with due regard, however, to necessary  
7 or normal costs of maintenance, operation, and repairs to the dam and  
8 to all its improvements and facilities owned, used, or operated in  
9 connection with it. Any such decisions of the committee, as expressed  
10 in any bond resolution, are final and conclusive when any bonds have  
11 been issued pursuant to the bond resolution.

12 (e) A bond resolution may provide that the bonds issued shall  
13 contain a recital that they are issued under secs. 570 - 710 of this  
14 chapter, and any such bonds containing this recital shall be conclusively  
15 considered to be valid and to have been issued in conformity with secs.  
16 570 - 710 of this chapter.

17 (f) The validity of the authorization and issuance of bonds is not  
18 affected by any proceedings for the acquisition or construction of the  
19 additions, improvements, extensions or facilities for which the bonds  
20 have been issued or by any contracts in connection with the acquisition  
21 or construction.

22 Sec. 37.15.620. BOND RESOLUTION. The committee is authorized and  
23 directed to adopt the bond resolution and prepare all other documents  
24 and proceedings necessary for the issuance, sale and delivery of the  
25 bonds or any part or series of them. The bond resolution shall fix the  
26 principal amount, denomination, date, maturities, place or places of  
27 payment, rights of redemption, if any, terms, form, conditions and  
28 covenants of the bonds or each series of them. The committee shall also  
29 determine and provide for the date and manner of sale of the bonds, and

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1 shall provide whether the notice of sale is to be published elsewhere in  
2 addition to the publication required by sec. 610 of this chapter.

3 Sec. 37.15.630. ENFORCEMENT BY HOLDER. The holder of any bonds  
4 or the trustee for the holders of the bonds or any series of them, may  
5 by appropriate proceedings in the courts of record of the state, require  
6 and compel the transfer, setting aside and payment of money and the  
7 enforcement of all of the terms, conditions and covenants as required  
8 and provided in secs. 570 - 710 of this chapter and in the bond resolu-  
9 tion.

10 Sec. 37.15.640. AMOUNTS REQUIRED FOR PAYMENTS. The committee  
11 shall before December 31 of each year, commencing with the year in which  
12 the bonds are issued, certify to the commissioners of revenue and public  
13 works the amounts required in the next ensuing calendar year by the bond  
14 resolution or resolutions to be paid out of the revenue fund into the  
15 bond redemption fund and to be paid into and maintained in any reserve  
16 fund or account or any other fund or account created by the bond resolu-  
17 tion or resolutions, and shall also certify to the commissioners the  
18 last date or dates upon which payments may be made.

19 Sec. 37.15.650. BOND NEGOTIABILITY. The bonds and the coupons  
20 attached to them are fully negotiable instruments under the laws of the  
21 state.

22 Sec. 37.15.660. ELECTRICITY CHARGES. The commissioner of public  
23 works shall fix and collect, subject to the approval of the Public  
24 Utilities Commission, such fees and charges derived by the state from  
25 the ownership, use and operation of the dam and all of its facilities  
26 and improvements as will provide revenues sufficient to comply with all  
27 of the covenants of the bond resolution.

28 Sec. 37.15.670. STATE IMPROVEMENTS TO DAM. The state is authorized  
29 to acquire, equip and construct the dam and to install additions and

1 improvements to the dam, as found to be necessary by the commissioner of  
2 public works.

3 Sec. 37.15.680. REFUNDING. (a) The bonds or any part of them may  
4 be refunded at or before their maturity by the issuance of refunding  
5 revenue bonds of the state if in the opinion of the committee refunding  
6 is advantageous to and in the best interests of the state and its inhabi-  
7 tants.

8 (b) The issuance of refunding bonds need not be authorized by an  
9 Act of the legislature, and the committee is authorized and directed to  
10 adopt the resolution or resolutions and prepare all other documents and  
11 proceedings necessary for the issuance, exchange or sale, and delivery  
12 of such bonds. All provisions of secs. 570 - 710 of this chapter appli-  
13 cable to revenue bonds are applicable to the refunding bonds and to the  
14 issuance, sale or exchange of them, except as otherwise provided in this  
15 section.

16 (c) Refunding bonds may be issued in a principal amount sufficient  
17 to provide funds for the payment of all bonds to be refunded by them,  
18 and, in addition, for the payment of all expenses incident to the  
19 calling, retiring or paying of the outstanding bonds, and the issuance  
20 of the refunding bonds. These expenses include the difference in amount  
21 between the par value of the refunding bonds and any amount less than  
22 par for which the refunding bonds are sold, any amount necessary to be  
23 made available for the payment of interest upon the refunding bonds  
24 from the date of sale of them to the date of payment of the bonds to be  
25 refunded or to the date upon which the bonds to be refunded will be  
26 paid pursuant to the call of them or agreement with the holders of them,  
27 and the premium, if any, necessary to be paid in order to call or retire  
28 the outstanding bonds and the interest accruing on them to the date of  
29 the call or retirement.

1           Sec. 37.15.690. BONDS AS LEGAL INVESTMENTS. The bonds are legal  
2 investments for all banks, trust companies, savings banks, savings and  
3 loan associations and other persons carrying on a banking business, all  
4 insurance companies and other persons carrying on an insurance business,  
5 and all executors, administrators, trustees and other fiduciaries. The  
6 bonds may be accepted as security for deposits of all funds of the state  
7 and its political subdivisions.

8           Sec. 37.15.700. STATUTORY CONSTRUCTION. Sections 570 - 710 of  
9 this chapter shall be liberally construed in order to carry out the  
10 purposes for which they were enacted, and all existing laws in conflict  
11 with any of these sections are superseded insofar as necessary to accom-  
12 plish the purposes of and carry out the provisions of these sections.

13           Sec. 37.15.710. DEFINITIONS. As used in secs. 570 - 710 of this  
14 chapter, unless the context otherwise requires:

15           (1) "bond redemption fund" means the Devil's Canyon Dam  
16 Revenue Bond Redemption Fund created by sec. 600 of this chapter, includ-  
17 ing any accounts which are created in that fund after the effective date  
18 of this Act;

19           (2) "bond resolution" means the resolution or resolutions  
20 authorizing the issuance of bonds, adopted by the committee under sec.  
21 620 of this chapter;

22           (3) "bonds" means the Devil's Canyon Dam revenue bonds author-  
23 ized by secs. 570 - 710 of this chapter;

24           (4) "commissioner of public works" means the principal execu-  
25 tive officer of the Department of Public Works of the state as provided  
26 in AS 44.43.010, or his successor;

27           (5) "commissioner of revenue" means the principal executive  
28 officer of the Department of Revenue of the state as provided in AS 44.-  
29 25.010, or his successor;

1 (6) "committee" means the state bond committee created by  
2 sec. 110 of this chapter, or any other committee, body, department or  
3 officer of the state which or who succeeds to the rights, powers, duties  
4 and obligations of the state bond committee by lawful Act of the legis-  
5 lature;

6 (7) "construction fund" means the Devil's Canyon Dam Construc-  
7 tion Fund created by sec. 580 of this chapter;

8 (8) "dam" means the dam across the Susitna River at Devil's  
9 Canyon;

10 (9) "revenue fund" means the Devil's Canyon Dam Revenue Fund  
11 created by sec. 590 of this chapter.

12 \* Sec. 4. For the purpose of carrying out the provisions of AS 37.15.570 -  
13 37.15.710, there is appropriated from the Devil's Canyon Dam Construction  
14 Fund the sum of \$800,000,000.

ALASKA STATE LEGISLATURE

NINTH... Legislature FIRST... Session

SENATE BILL NO. 282

By KENNETHA

"An Act authorizing construction of the Devil's Canyon Dam, the issuance of revenue bonds for the project, and creating a division of hydroelectric power and dams within the Department of Public Works."

construction of Devils' Canyon

Introduced in the Senate 3/18, 19... 75

HISTORY IN THE SENATE

19 75

3 18

1476

3 26

Read first time and referred to Committee on State Affairs and Finance

Reported back with recommendation that S.H. be referred to Finance

Read second time and

Read third time and

PASS Effective Date  
Yeas Yeas  
Nays Nays  
Absent Absent  
Excused Excused

Reconsideration  
PASS Effective Date  
Yeas Yeas  
Nays Nays  
Absent Absent  
Excused Excused

Reported correctly engrossed  
Signed by President  
Sent to House

SECRETARY OF THE SENATE

HISTORY IN THE HOUSE

19

Read first time and referred to Committee on

Reported back with recommendation that

Read second time and

Read third time and

PASS Effective Date  
Yeas Yeas  
Nays Nays  
Absent Absent  
Excused Excused

Reconsideration  
PASS Effective Date  
Yeas Yeas  
Nays Nays  
Absent Absent  
Excused Excused

Reported correctly engrossed  
Signed by Speaker  
Returned to Senate

CHIEF CLERK OF THE HOUSE

HISTORY IN THE SENATE

19

Received from House

Reported correctly enrolled

Sent to Governor

..... By Governor

Filed with Lt. Governor

Chapter No. ....

## MEMORANDUM

## State of Alaska

DEPARTMENT OF COMMERCE &amp; ECONOMIC DEVELOPMENT

TO: Senate Finance Committee  
ATTN: Jim Fennel

DATE: April 9, 1976

FILE NO:

TELEPHONE NO:

FROM: Langhorne A. Motley   
CommissionerSUBJECT: Devil Canyon/Request for  
Fiscal Information on Senate  
Bill 282

Attached you will find a copy of Governor Hammond's task force report and recommendations on Devil Canyon as proposed by the Corps of Engineers. I have also attached a more recent memo as sent to Governor Hammond, which he has subsequently approved, regarding Devil Canyon, House Bill 779 (Alaska Power Authority), and Senator Gravel's proposal as outlined before a joint session of the Legislature recently. I think you will see from reviewing these documents that the Administration supports the Corps' proposal for further preconstruction planning funding. Further, the Administration feels that traditional federal funding for the entire Devil Canyon project, estimated at \$1.5 billion (1975 dollars), will not be forthcoming and that Senator Gravel's proposal for national legislation that would indemnify the State in the highest risk portion of such a project, that is during the planning and preconstruction phase, appears to be the most viable way for the State to proceed. Further, after having reviewed House Bill 779, we believe it to be a viable entity making a long step toward solving many of the power needs for the various communities throughout the State of Alaska.

By separate correspondence, we are forwarding to the House Finance Committee, at their request, a fiscal note on House Bill 779.

If I can be of further assistance, please do not hesitate to call.

# MEMORANDUM

# State of Alaska

TO: The Honorable Jay S. Hammond  
Devil Canyon Task Force  
Energy Working Group

DATE: March 29, 1976

FILE NO:

TELEPHONE NO:

FROM: Langhorne A. Motley *LAM*  
Commissioner  
Department of Commerce and  
Economic Development

SUBJECT: (1) Devil Canyon  
(2) Gravel's Proposal  
(3) HB 779 (Alaska Power  
Authority)

The above three mentioned subjects are separate items, yet they may interrelate with each other. The pace of discussions on "Power Development" has picked up considerably, especially in Congressional and legislative circles. I believe that my recent memos to the above mentioned addressees adequately covered those discussions and the postures we have taken. I think it appropriate to briefly recap the current posture and either recommend or reaffirm the Administration's position regarding these subjects. This becomes very timely because Sterling Gallagher and myself have been asked to testify Wednesday, March 31st before the House Finance Committee regarding HB 779. I've been assured that the discussion will also cover Devil Canyon and Gravel's proposal. Listed below, then, are either reaffirmations of the Administration's position or refinements of such to date. I will not be present at the Cabinet meeting on Tuesday, and should there be need to discuss those matters, Sterling Gallagher, among others, is fully versed in all three subjects. Therefore, subject to any modification at the Cabinet meeting, these will be the Administration's current position; *assuming Gov Hammond's Approval. jam*

## I. Devil Canyon

- A. Status. The task force has submitted, and Governor Hammond has adopted, the report of February 18 regarding Devil Canyon. This report endorses the Corps' application for Congressional authorization for further preconstruction planning funds subject to inclusion of our stipulations and conditions listed in the report. This State position assumed the "traditional" federal funding throughout the project. The potential absence of such funding - at this stage - does not affect our basic decision nor the stipulations and conditions. Obviously, the four year preconstruction planning following Congressional authorization will allow the State an opportunity to see if the financing vehicle envisioned produces an acceptable economic assessment.
- B. Administration's Position. Reaffirmed as above. Financing vehicle to be dealt with as it develops.
- C. References. Task Force Report, February 18, 1976.

March 29, 1976

## II. Senator Gravel's Proposal

A. Status. Senator Gravel delivered his proposal to the Legislature in the form of a speech before a Joint Session. Basically his proposal is as follows:

1. Traditional federal funding of hydroelectric projects will not be forthcoming.
2. Gravel plans to introduce legislation to authorize the Devil Canyon Project.
3. Gravel plans to introduce the "Hydroelectric Power Development Act of 1976." This act would do two things: (a) provide "front end" money from a federal revolving loan fund to get initial feasibility studies done for hydroelectric projects. If they prove unfeasible, the loan would not have to be paid back, and (b) provide federal indemnification of State funds (or authority bonds) used to plan and construct - with the Corps of Engineers as the construction manager/supervisors - hydroelectric projects. Basically the State (or Power Authority) would enter into a contractual arrangement with the Corps for a turnkey project. At the completion of that project, any delay, cost overrun, etc., would be borne by the Federal Government. Further, if the project, once under construction, were stopped or abandoned, (for any reason other than State action or inaction) all funds expended by the State would be reimbursed by the Feds.

It is important to note that this legislation is national in scope, and while tailored to fit Devil Canyon, it could be used for many other smaller hydroelectric projects in the State, and as such could help solve the financial problems of the other power needs of the State. The advantage to the Feds is that they would not have to - on a nationwide scale - raise enormous amounts of cash. They would simply stand ready to pay for their mistakes. The concept is innovative, workable from the Alaskan point of view and simple.

B. Administration's Position. To date, Governor Hammond has issued a press release (3-26-76) acknowledging the innovative proposal of Senator Gravel's, and the Administration's efforts in developing it. He further acknowledged that the solution to meeting the State's power needs will require close coordination between the Legislature,

March 29, 1976

Executive Branch and the Congressional Delegation. Next Wednesday, I'm going to be asked what the Administration's position is, (among other items addressed here) on Gravel's proposal. I recommend that the Administration's position be in support of Gravel's proposal. Such a proposal, if enacted into law, would provide a financing vehicle with a minimum of risk to the State during the highest risk period - that of preconstruction planning and construction. Such a position will in no way alter the Governor's present position on Devil Canyon, nor remove any of his options. It simply backs a workable concept. Each hydroelectric project would still have to stand on its own merits following the State's comprehensive examination of the environmental and economic assessments.

- C. References.
- Gravel's speech, 3-26-76
  - Governor's press release, 3-26-76
  - Motley's memo of 3-23-76 regarding 3-20-76 meeting with Gravel and Gravel's proposed bill (redrafted)
  - Motley's memo 3-15-76 regarding 3-12-76 meeting of Governor Hammond and Senator Gravel including Gravel memo to Governor Hammond.
  - Motley's memo 3-1-76 regarding 3-23-76 meeting of Governor Hammond, Senator Gravel and Motley.
  - Motley's letter of 3-1-76 to Senator Gravel.

III. HB 779 - Creating an Alaska Power Authority.

- A. Status. The bill is currently in the House Finance Committee, having passed out of House State Affairs. It would create an Alaska Power Authority as a public corporation of the State to engage in feasibility studies, financing, construction and operation of hydroelectric projects. Sterling Gallagher and I, (at the request of the sponsor, Jim Duncan) had considerable input to the bill. Further, we brought in Eric Wohlforth, State Bond Counsel, and Kidder, Peabody & Co., a large New York investment banking firm that handles many electric utility bond offerings. The bill has three basic features:
1. Provision for using Revenue Bonds to fund construction of hydroelectric projects. Said bonds would not carry the full faith and credit, nor moral obligation of the State; therefore, would not seriously impact upon the State's bonding posture.

Memo to the Honorable  
Jay S. Hammond, Devil Canyon  
Task Force, and the Energy  
Working Group

-4-

March 29, 1976

2. Provisions for working with existing and future rural, municipal, cooperatives, and regional electric authorities.
3. Provisions for funding and monitoring front-end feasibility studies to meet various power needs.
4. Provision for more definite accountability and governmental (Executive and Legislative) input than any other public corporation. The proposed power authority would solicit and receive all requests for power projects. It would then identify, examine, and quantify (\$'s) the worthwhile proposed projects and submit them to the Department of Commerce and Economic Development for review. The Department of Commerce and Economic Development, as lead agency, would call on other State agencies to join in an assessment and Administrative position. That recommendation/position (be it positive or negative) is then submitted to the Legislature. The Legislature must then approve the requested authorization of bonds. This method, though cumbersome, does in fact demand a wider governmental participation than past public corporations and provides for a good check and balance.

The fiscal requirement for gearing up to form Alaska Power Administration is uncertain. Obviously, in the long run, it is expected to be able to handle its overhead from bond proceeds. In the beginning it will, like the municipal bond bank and other public corporations, need seed money. The final configuration of the authority and its scope of responsibility will dictate this first year's gear up cost. At this time the fiscal note calls for \$300,000. The bill also requires some expertise for reviewing the financial and economical aspects of power production and transmission in the Department of Commerce and Economic Development. That requirement basically can be met by the \$179,000 agency request for the power development section. I understand that by separate correspondence the Energy Working Group will be making such a recommendation completely apart from the consideration of HB 779.

- B. Administration's Position. Sterling Gallagher and I testified before the House State Affairs Committee as my memos to you indicated. We favored the intent/attempt to solve some of the financial and management problems of

Memo to the Honorable  
Jay S. Hammond, Devil Canyon  
Task Force, and the Energy  
Working Group

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March 29, 1976

meeting power needs and reserved the Administration's position regarding HB 779. The bill provides a good structure to help solve some of the power needs in the State. In its amended form it will give communities the option to use it or go on their own. The Legislature is going to do something about power this session. This bill provides us as flexible a vehicle as we've seen. We should support it.

- C. References. - HB 779  
- Motley's memos dated 3-2-76

In summary, I think the various efforts in the arena of power development are coming together. The Legislature is going to take some action. The various working groups associated with these matters have maintained relatively good coordination, given the pace of deliberations. It's hopeful that this memo allows all of us to read "off the same sheet of music."

February 18, 1976

Honorable Jay S. Hammond  
Governor of Alaska  
Pouch A  
Juneau, Alaska 99811

Dear Governor Hammond:

As Chairman of the Devil Canyon Task Force you appointed last year, I am pleased to submit to you the first phase recommendation of the task force. It is the unanimous conclusion of the task force to recommend that the State endorse the Corps of Engineers' request of Congress for authorization of the project and their subsequent request for further pre-construction planning funds. This endorsement is predicated upon a number of stipulations and conditions that deal with questions and issues about which the members felt answers and data were deficient. This is not to cast aspersions on the Corps of Engineers - in fact, they have done a thorough job to date - but rather to point out the need for further inquiry in various areas as this project proceeds forward.

Your directive to the task force, dated November 5, 1975, was translated by the group into a two-fold mission:

- A. A recommendation for the Corps proposal before Congress this year.
- B. A continuing monitorship and reaffirmation or disapproval of the project as it proceeded through its various steps.

This report completes the first part of our mission.

As you pointed out in your letter, a "Devil Canyon Project" has been under consideration for some time and, as you can imagine, extensive studies have been done. I will attempt to re-cap for you the methodology and depth of your task force's steps in arriving at our recommendation.

The task force was provided with a bibliography of the available data in Devil Canyon so that they could review any information they might have missed. As most members had responded to the State's clearinghouse submittals on several occasions, the Corps was invited - and accepted - to brief the task force on their latest findings. This took place on December 12. The Corps brought specialists in all areas, power production, economic and environmental matters. A lengthy dialogue between the groups followed. In order to better categorize and organize the questions and answers, the Corps consolidated all the points raised in previous clearinghouse documents with these discussed in the joint meeting in one report. This was a mission of considerable undertaking by the Corps and not actually required by their regulations, but certainly within the fine spirit of cooperation demonstrated throughout by the Corps. The questions and answers ran some 209 pages and are available for your review.

After having digested the Corps responses, the task force then submitted to me individual conditions and stipulations they deemed necessary for endorsement of the proposal. The combined and categorized conditions and stipulations are at Attachment B.

It should be noted that a normal chain of events for such a project goes through five basic steps:

- A. Initial and final study and draft EIS
- B. Project authorization (Congressional)
- C. Pre-construction planning funding (every 2 years) and updated EIS
- D. Final EIS and construction authorization
- E. Construction and completion.

The following timetable would be the most optimistic:

- 1976 -- Authorization and pre-construction planning funding
- 1977-1980 -- EIS update and further planning
- 1981 -- Final EIS, construction authorization
- 1981-1986 -- Watana Dam -- construction and completion
- 1990 -- Devil Canyon Dam completed

A key concern raised in your letter has been the possible creation of a significant imbalance in the supply of power over its demand. The demand for power has been forecasted by the Alaska Power Administration at high, mid, and low levels in a 1974 survey. Compared with data since this forecast, these projections have been characterized as conservative estimates of future power demands. Based on the mid-range forecast of demand, the Devil Canyon - Watana project does not have a significant pool of surplus power after meeting estimated demand. The chart at Attachment A further amplifies the point.

Governor Jay S. Hammond

-2-

February 18, 1976

In summary, After reviewing all the available data, the task force felt that the Corps proposal is a viable alternative to meet the projected power demands in the post 1986 timeframe in the railbelt area and that consideration of its conditions and stipulations will insure that all possible mitigating measures will be explored and taken if necessary.

With your concurrence, the task force intends to closely monitor the progress of the project and to make the State's decisions and feelings known at every step.

Sincerely,

Langhorne A. Motley  
Commissioner

Attachments (A and B)

## I. Administrative

### Department of Environmental Conservation

- A. Request the Corps of Engineers and the Alaska Power Administration to develop a mechanism by which appropriate State, Federal, and local government agencies can participate in the design, conduct and review of the investigations designed to generate the information necessary to answer the questions below.

## II. Biological and Environmental

### Department of Fish and Game

#### A. General

1. The proposed impoundment(s) of the Susitna River will inundate 50,500 acres of the river basin, destroying fish and game habitats both upstream and downstream of the project through either flooding, drainage alterations, or flow modifications. Important moose winter range and caribou migration routes will be affected in addition to the more obvious damage to fish habitats. However, the specific impacts of the project cannot be forecast without considerable study to assess losses and benefits to fish and wildlife resources due to the project. Once this information has been gathered, then steps may be taken to replace those values which have been lost, and the project may be modified to keep those losses to a minimum.
2. In order to perform the necessary studies, a team of resource specialists representing various scientific disciplines will be assembled and employed for field studies in habitat assessment. The studies will be conducted at a number of distinct locations in the basin to determine baseline conditions as well as over the basin as a whole, to determine the general interrelationship of the baseline sites.
3. Baseline site studies will include physical measurements of stream stage, water temperature, bottom life, forage, turbidity, species present, and other important factors. The information gathered will vary depending upon the site location.
4. General studies will include migration and habitat utilization patterns of the various fish and wildlife species. Baseline stream flow and water quality data must be collected during the time of the habitat studies to provide a basis for relating the habitat studies to the projected power project operation and to allow post-construction monitoring of the project operation for fish and wildlife management purposes.

5. The required preconstruction studies must be conducted over a period of three to five years, assuming an adequately funded effort. Less than three years data will not provide sufficient information from which a sound assessment of project efforts can be determined. More than five years data, will probably not improve the preconstruction assessment significantly. Post-construction/operation studies may run to ten years after project start-up.

B. Investigations which should be undertaken as soon as possible include:

1. Fisheries

- a) Salmon escapement and migration to the Susitna River, to include a determination of the significance of various patterns of migration behavior and possible requirements for expansion of portions of the study in subsequent years to more critically examine phenomena not presently understood.
- b) Determination of distribution and habitat requirements of resident fish species in the mainstream Susitna and tributaries (particularly winter studies) that will be affected by the project.
- c) Determination of the distribution and habitat requirements of anadromous species rearing in the Susitna Basin with emphasis on the mainstream Susitna.
- d) Invertebrate and benthic studies to determine specific distribution and abundance, seasonal availability, etc., as related to stream flow.
- e) Continuation of ongoing spawning and rearing studies.
- f) Determination of extent of potential loss of irreplaceable habitat above the project site.
- g) Establishment of baseline habitat/species data collection station at six key locations on the mainstream Susitna and collection of pertinent hydrologic data.

2. Wildlife

- a) Identify moose populations utilizing impacted areas, determine their seasonal ranges, migration patterns, and degree of dependence on the affected areas.
- b) Determine the impact of altered water flow on moose browse species and on the habitats of aquatic and wetland dwelling species of small game and furbearers.
- c) Determine timing and location of caribou migrations across proposed impoundment areas.

- d) Determine the extent of use of impacted areas by wolves and bears and determine the importance of these areas of wolf and bear populations in the Susitna Basin.
- e) Determine the magnitude of recreational and commercial use of small game and furbearers in areas of potential impact and establish baseline levels of abundance of key species.
- f) Determine the size of seasonal ranges of mountain sheep inhabiting areas adjacent to dam sites to provide a basis for restricting human disturbance.

C. The approximate costs of the above investigative projects are:

1. Fisheries:	<u>FY-77</u>	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>
Salmon enumeration	\$74,800	74,800	74,800	74,800	74,800
Winter residency st.	29,500	29,500	29,500	29,500	29,500
Invertebrate studies	18,500	18,500			
Fishery hydrologic	18,000	14,000	14,000		
Spawning & rearing st.	13,000	10,000	10,000	10,000	10,000
Impound & upper basin	34,500	32,000	25,000		
Personnel costs-total	277,100	277,100	255,400	201,400	201,400
TOTAL	\$465,400	544,900	408,700	315,700	315,700

2. Wildlife:	<u>FY-77</u>	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>
Moose studies	\$159,000	174,000	204,000	154,000	154,000
Caribou studies	8,000	8,000	8,000	8,000	
Wolf studies	60,000	60,000	50,000	35,000	
Bear	30,000	30,000	20,000	15,000	
Furbearers	5,000	6,000	4,000		
Sheep	4,000				
Personnel services	108,000	105,500	105,500	99,000	45,000
TOTAL	\$374,000	383,500	391,500	311,000	199,000

In addition to the above, certain measures which must be taken to replace habitats, population and associated values lost to the development of the Devil Canyon Project can already be foreseen.

Loss of fish populations, habitats, recreation, commercial and subsistence values, would be offset by hatchery/rearing facilities for Coho and Chinook Salmon and Rainbow trout. If a harvestable fishery for these species is to be maintained, facilities costing in excess of 15 million dollars must be constructed. Operational costs would be at least 1.5 million per year.

Loss of moose browse, blockage of caribou migrations and resulting habitat loss may be offset by creating moose browse in suitable adjacent areas through crushing of vegetation. This will involve acquisition of lands from State, Borough and private owners. Providing alternate browse areas will be a continual process which will cost approximately 3.5 million dollars for the first six years of the program.

Department of Environmental Conservation

A. General

1. A series of water quality and quantity investigations that would, through appropriate modeling techniques, enable prediction of the effects of selected construction scenarios on the water resources. These studies should include the effect of flow management on the ground water aquifers in the entire area, including the already taxed Anchorage area, which is not encountering saline intrusions. Thermal, oxygen, sediment, and chemical studies are also essential. Rate of water loss due to evaporation from the reservoir must also be understood.
2. Changes in the biological regime both in the impounded areas and downstream must be developed based upon changes in water chemistry and physics. The ultimate primary productivity of the affected ecosystems must be predicted, as well as resultant effects on aquatic fauna of all types, fishes, and invertebrates.
3. Physical processes altered by this project must also be understood. Sedimentation changes are critical here, both in the impounded area and downstream. Changes in sedimentation rate due to quiescence, as well as temperature changes, must be explored. Effects of clearing and inundation of permafrost areas on groundwater recharge rates must be examined.

B. Specific questions are as follows:

1. Sources of construction materials, and nature of impacts associated with their removal and transport.
2. Reservoir basin vegetation removal and/or basin conditioning prior to inundation needs further study, particularly with regard to disposal.
3. Studies to modes reservoir thermal regimes, similar to the studies of Montana's Lake Kocanusa, are needed to determine such factors as distribution of fish species and populations; appropriate depths within the reservoir for withdrawal of water to maintain optimum temperatures in downstream waters and to avoid high fish mortality in turbines.
4. Studies of probable ice conditions in the reservoir to determine availability of dissolved O<sub>2</sub> to resident fish during winter.
5. Comparative modeling for the Susitna River below the damsite should be established to determine the effects that may result from decreased sediment load. Particular attention should be given to the potential for enhanced algal development due to

the loss of flood scouring action and determining if algal growths would be desirable in terms of char or salmonid habitat and their food. Attention should also be given to potential for changes in bedload and subsequent stream channel and bank erosion.

6. Develop dam design criteria to mitigate the nitrogen supersaturation problem. Establish susceptibility of resident fish species to gas bubble disease under varying conditions.
7. Considering probable upstream migration by salmon to previously inaccessible areas, investigations in to the feasibility of fish ladders or other means of passing migrating fish over the dam would seem warranted.
8. Assess the impact of reduced flow and more seasonally constant temperatures on anadromous and resident fish moving upstream into the calmer waters of the reservoir.
9. Development of a turbine intake design that would preclude mortality to migrating or resident fish fry.
10. Determine accessibility of reservoir feeder streams with regard to fish habitat and spawning needs at various reservoir levels.
11. Studies of habitat available for displaced wildlife in areas adjacent to the impoundment, along with estimates of carrying capacity and suitability of alternate habitat.
12. Studies of wildlife distribution and utilization along various proposed transmission line corridors, including locations of dens, browse and calving areas, and critical winter range.
13. Modeling to predict extent and characteristics of exposed lands during reservoir drawdown, including wind transport of dust particles.
14. Effects of ice action, freeze-thaw, and wave action on and along reservoir shoreline.
15. Research is needed to determine the distribution and potential behavior of permafrost in the reservoir basin. Objectives should include determination of thermal conductivity of the inundated and saturated soils and substratae which would be in contact with reservoir water at various depths and temperatures and modeling of potential subaqueous and consequent subaerial landsliding resulting from saturation of conditionally unstable slopes underlain by permafrost.
16. Studies to estimate potential for catastrophic waves generated by subaerial landslides.

17. Substantiating evidence is needed to validate the claim that the concrete and earthfill dams will withstand all manifestations of seismic activity of the magnitude that can be expected during the next 100 plus years in this area.
18. Assess secondary impacts on the environmental setting resulting from construction of support facilities, residences and possible new industrial growth in the area.

Department of Natural Resources

- A. Conduct a study of the geologic "fault traces" along the Susitna River, and most particularly at the dam sites.

III. Socioeconomic

Department of Environmental Conservation

- A. Corps of Engineers/Alaska Power Administration studies:
  1. A thorough feasibility cost/benefit ratio, including complete energy as well as economic costs of construction and maintenance of the project balanced against with the energy outputs. Energy costs should be "discounted" at a reasonable rate. Similar economic costs should also be required. Included in this analysis should be a cost range based upon the Corps' history of cost overruns on initial project estimates. From these figures, an energy as well as economic cost/benefit ratio should develop. Both cost rates should be critically examined to assure that all applicable costs and benefits are included.
  2. A thorough review and comparison, including an energy/economic cost/benefit ratio analysis, of all alternate energy sources with the hydroelectric power generation proposal must be developed. The United States is currently conducting a major research and development effort for new energy sources, primarily through the Energy Research and Development Administration and the Federal Research Administration. As the production date of the proposed hydroelectric facility is quite far in the future, exotic new energy sources may prove feasible at that time, so an analysis of potential future options is also required. In addition, technological improvements in existing energy sources may significantly alter the economic basis of the hydroelectric proposal. An analysis, therefore, of such potential changes in energy production methods must also be undertaken.
  3. The above projects, and others, will lead to understanding upon which mitigating measures can be based, if the project's construction is undertaken. More importantly, however, the appropriate government agencies, the public, and the Congress will be able to make rational decisions as to the implementation of the project.

B. State conducted or sponsored efforts.

1. The State must, either through in-house or an independent contractor, develop its own analysis of the population projections, industrial growth, and energy demand for the Railbelt area. This would include a complete review and evaluation of all of the assumptions made by the Alaska Power Administration and the Corps of Engineers in developing the power demand projections upon which the hydroelectric power project is predicated. The State, with the assistance of the local communities involved, must develop its own reasonable, responsible community growth and development projections, and the energy projections based upon them.
2. The State must continue its efforts to forecast the environmental and socioeconomic implications of the proposed project, and to require mitigation of those efforts.
3. The State must maintain a dialogue with its Congressional Delegation concerning the proposed project.

Department of Natural Resources

- A. During the preconstruction planning phase of this proposed project, this department believes the Corps of Engineers should accomplish the following in cooperation and conjunction with the State of Alaska:
1. Utilize the Alaska Railroad with an off-on ramp on Gold Creek rather than an access road from the Parks Highway to the proposed dam sites; plan the road access system for the dam construction phase and the permanent system following. Define procedures and regulations for construction and use of access roads.
  2. Study and plan the ultimate recreational uses for the area.
  3. Conduct a survey of the present high water mark of the affected streams before dam construction to preclude legal description and ownership problems after dam construction.
  4. Specify the exact location and design of the double circuit power lines which will run from the dam sites to Fairbanks and Anchorage.
  5. Specify the location of the gravel borrow pits to be used in the construction phase.

Department of Community and Regional Affairs

A. Contingency plans for the proposed pioneer road, reflecting the possibility that the hydroelectric project may not be built.

In the Interim Feasibility Report on the Upper Susitna Hydroelectric Project, the Corps of Engineers recommended that "authority for construction of necessary access roads to the projects be provided for in the authorization for advanced engineering and design. Such roads, estimated to cost \$22.3 million, will provide necessary access for detailed preconstruction site investigations and facilitate timely construction of the projects." The proposed road will extend 52 miles from the Parks Highway to the project site. Although the \$22.3 million road is described as a "pioneer road," it will most likely coincide with any permanent access road and will be constructed so as to provide good, year-round access.

As a rule, if the construction of the project were not authorized, the disposition of the road would be determined by Congressional mandate. If the road were to be dismantled, Congress would have to authorize the action and appropriate the necessary funds. Without such Congressional action, the road would either be abandoned or incorporated into the State highway system.

In order to avoid the penetration of an unwanted single-purpose road into a wilderness area (a road that may lose its primary purpose), it is of critical importance that contingency plans for the pioneer road be developed before funds for its construction be authorized.

Such contingency plans would necessarily involve the Corps of Engineers, the Alaska Departments of Highways and Community and Regional Affairs, the State Division of Parks and Recreation and, perhaps, other State agencies and the Matanuska-Susitna Borough. For each alternative plan, the incidence and magnitude of public costs and the impact on Alaska's highway and recreational systems and local communities should be determined.

B. Socioeconomic impact studies.

Two factors establish the critical importance of conducting thorough socioeconomic impact studies: first, the magnitude of the project and, second, the extremely low populations of communities in the vicinity of the project site. Although the commitment of materials, manpower and dollars to the construction of the Susitna project appears to be minor in comparison with the trans-Alaska pipeline, the Susitna project would constitute the seventh largest hydroelectric project ever built in the United States in terms of power production.

The project site is located in Matanuska-Susitna Borough. In 1975, the population of Matanuska-Susitna Borough was estimated at 9,600. The greatest proportion of the Borough's population is concentrated in the southern part of the Borough, more than 100 miles southwest of the dam sites. In 1970, only 894 persons lived in the portion of Matanuska-Susitna Borough that lies beyond the more populated Palmer-Wasilla area. Not much growth has taken place in this outlying area over the past five years.

A socioeconomic impact analysis should be sponsored by the Corps of Engineers. The analysis should address the full range of employment activities and related effects of the project: material extraction (particularly gravel and limestone), construction, powerplant operation and recreational use. For each activity, the analysis should assess:

1. Labor requirements for each year of the project, including total number, occupational distribution and availability of qualified Alaskan workers;
2. Requirements for additional housing units and expanded public services;
3. Increased public costs;
4. Income differentials between project-related employees and local residents and concomitant pressures on housing and other resources;
5. Local multiplier effects; and
6. Environmental stresses due to increased human settlement.

C. Analysis of methods to ameliorate adverse socioeconomic impacts resulting from the Susitna Hydroelectric Project.

To date, only three measures have been put forth as ways to reduce adverse socioeconomic impacts or to meet the public costs that will be incurred by the Susitna project: (1) contractor-supplied facilities near the project site; (2) revenue from private income tax, license fees and business tax; and (3) impact funds. Of these three alternatives, only revenues from taxes and fees are assured. The degree to which revenues generated from taxes and fees would offset increases in public costs would depend upon their amount, timing and allocation in relation to community impacts.

The other two measures are not guaranteed and for that reason give neither the State nor the Borough any secure basis for future planning.

In light of the above, an analysis of various methods of ameliorating adverse impacts resulting from the Susitna project should be sponsored by the Corps. Forthcoming from the analysis should be firm recommendations that are

legally and procedurally feasible and also assure that the project compensates, in a timely fashion, for the impacts it generates. These recommendations should be incorporated into the Corps of Engineers' subsequent request for authorization to construct the project.

- D. In order to insure that adequate financial resources are available to the Corps of Engineers to undertake the studies described under Sections 2 and 3 above, we recommend that the Corps of Engineers allocate a minimum of \$100,000 for completion of these studies during the preconstruction planning phase.
- E. If the capital city is not relocated to the Railbelt, to whom would the projected power needs (44 billion kwh in 1980; 133 billion kwh in 1990; and 307 billion kwh in 2000) be allocated, particularly during the 1990 to 1996 period of excess energy?

Department of Environmental Conservation

A. Study recommendations

- 1. Objective study to determine the recreational value of the project area in view of anticipated water management and other considerations.
- 2. Scenario of higher order impacts resulting from supplying low-cost power in this area.

Department of Commerce and Economic Development

- A. Given the protracted time period through which the proposed Devil Canyon project will produce electricity and presumably generate sufficient revenue to cover operating costs and Federal Government repayment obligations, it appears sensible to examine the determinants of the projected increase in demand for electricity. Of pertinence are factors such as the price and income elasticities of demand for electricity and the rate of change in the per capita consumption of electricity.

DEVIL CANYON-WATANA POWER PROJECT

	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995
1. Available Firm Energy Production* (100%=6.1 billion KWH)	33.1%	50.5%	50.5%	50.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2. Total Output Needed to Meet the Demand for Hydro Power**	172.0%	121.0%	129.0%	138.0%	75.0%	80.0%	85.0%	90.0%	96.0%	102.0%
3. Surplus Hydro Power (Line 1 minus Line 2)	0	0	0	0	25.0%	20.0%	15.0%	10.0%	2.0%	0
4. Surplus as a Percent of Total Alaskan Power Load Demanded					2.7%	1.8%	1.4%	.9%	.4%	0
(Millions of KWH)					1,517	1,197	907	537	257	0

\* This assumes that project construction will begin in 1981 and that Watana Dam will be completed in 1986 and Devil Canyon in 1990.

\*\*The hydroelectric power demand is assumed to be 75% of the total railbelt load. This load is based on the mid-level forecast of demand by the Alaska Power Administration (industrial and military loads are assumed to be served by generating facilities exclusive of the proposed hydro power project). In only five years, (1990 to 1995) will production of power exceed demand. The important aspect is that as a percent of total load this surplus is very small, as well as being a short-run effect.

ATTACHMENT B

Devil Canyon Task Force Report, Phase I

Conditions and stipulations upon which the Task Force predicated its recommendation that the State support the U.S. Army Corps of Engineers' proposal to Congress are listed below. The conditions and stipulations have been segregated into three broadly defined categories; administrative, biological and environmental, and socioeconomic.

# MEMORANDUM

# State of Alaska

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT

TO: Senate Finance Committee  
ATTN: Jim Fennel

DATE: April 9, 1976

FILE NO:

TELEPHONE NO:

FROM: Langhorne A. Motley   
Commissioner

SUBJECT: Devil Canyon/Request for  
Fiscal Information on Senate  
Bill 282

Attached you will find a copy of Governor Hammond's task force report and recommendations on Devil Canyon as proposed by the Corps of Engineers. I have also attached a more recent memo as sent to Governor Hammond, which he has subsequently approved, regarding Devil Canyon, House Bill 779 (Alaska Power Authority), and Senator Gravel's proposal as outlined before a joint session of the Legislature recently. I think you will see from reviewing these documents that the Administration supports the Corps' proposal for further preconstruction planning funding. Further, the Administration feels that traditional federal funding for the entire Devil Canyon project, estimated at \$1.5 billion (1975 dollars), will not be forthcoming and that Senator Gravel's proposal for national legislation that would indemnify the State in the highest risk portion of such a project, that is during the planning and preconstruction phase, appears to be the most viable way for the State to proceed. Further, after having reviewed House Bill 779, we believe it to be a viable entity making a long step toward solving many of the power needs for the various communities throughout the State of Alaska.

By separate correspondence, we are forwarding to the House Finance Committee, at their request, a fiscal note on House Bill 779.

If I can be of further assistance, please do not hesitate to call.

# MEMORANDUM

# State of Alaska

TO: The Honorable Jay S. Hammond  
Devil Canyon Task Force  
Energy Working Group

DATE: March 29, 1976

FILE NO:

TELEPHONE NO:

FROM: Langhorne A. Motley *LAM*  
Commissioner  
Department of Commerce and  
Economic Development

SUBJECT: (1) Devil Canyon  
(2) Gravel's Proposal  
(3) HB 779 (Alaska Power  
Authority)

The above three mentioned subjects are separate items, yet they may interrelate with each other. The pace of discussions on "Power Development" has picked up considerably, especially in Congressional and legislative circles. I believe that my recent memos to the above mentioned addressees adequately covered those discussions and the postures we have taken. I think it appropriate to briefly recap the current posture and either recommend or reaffirm the Administration's position regarding these subjects. This becomes very timely because Sterling Gallagher and myself have been asked to testify Wednesday, March 31st before the House Finance Committee regarding HB 779. I've been assured that the discussion will also cover Devil Canyon and Gravel's proposal. Listed below, then, are either reaffirmations of the Administration's position or refinements of such to date. I will not be present at the Cabinet meeting on Tuesday, and should there be need to discuss those matters, Sterling Gallagher, among others, is fully versed in all three subjects. Therefore, subject to any modification at the Cabinet meeting, these will be the Administration's current position; *assuming Gov Hammond's Approval. jmm*

## I. Devil Canyon

- A. Status. The task force has submitted, and Governor Hammond has adopted, the report of February 18 regarding Devil Canyon. This report endorses the Corps' application for Congressional authorization for further preconstruction planning funds subject to inclusion of our stipulations and conditions listed in the report. This State position assumed the "traditional" federal funding throughout the project. The potential absence of such funding - at this stage - does not affect our basic decision nor the stipulations and conditions. Obviously, the four year preconstruction planning following Congressional authorization will allow the State an opportunity to see if the financing vehicle envisioned produces an acceptable economic assessment.
- B. Administration's Position. Reaffirmed as above. Financing vehicle to be dealt with as it develops.
- C. References. Task Force Report, February 18, 1976.

March 29, 1976

## II. Senator Gravel's Proposal

A. Status. Senator Gravel delivered his proposal to the Legislature in the form of a speech before a Joint Session. Basically his proposal is as follows:

1. Traditional federal funding of hydroelectric projects will not be forthcoming.
2. Gravel plans to introduce legislation to authorize the Devil Canyon Project.
3. Gravel plans to introduce the "Hydroelectric Power Development Act of 1976." This act would do two things: (a) provide "front end" money from a federal revolving loan fund to get initial feasibility studies done for hydroelectric projects. If they prove unfeasible, the loan would not have to be paid back, and (b) provide federal indemnification of State funds (or authority bonds) used to plan and construct - with the Corps of Engineers as the construction manager/supervisors - hydroelectric projects. Basically the State (or Power Authority) would enter into a contractual arrangement with the Corps for a turnkey project. At the completion of that project, any delay, cost overrun, etc., would be borne by the Federal Government. Further, if the project, once under construction, were stopped or abandoned, (for any reason other than State action or inaction) all funds expended by the State would be reimbursed by the Feds.

It is important to note that this legislation is national in scope, and while tailored to fit Devil Canyon, it could be used for many other smaller hydroelectric projects in the State, and as such could help solve the financial problems of the other power needs of the State. The advantage to the Feds is that they would not have to - on a nationwide scale - raise enormous amounts of cash. They would simply stand ready to pay for their mistakes. The concept is innovative, workable from the Alaskan point of view and simple.

B. Administration's Position. To date, Governor Hammond has issued a press release (3-26-76) acknowledging the innovative proposal of Senator Gravel's, and the Administration's efforts in developing it. He further acknowledged that the solution to meeting the State's power needs will require close coordination between the Legislature,

March 29, 1976

Executive Branch and the Congressional Delegation. Next Wednesday, I'm going to be asked what the Administration's position is, (among other items addressed here) on Gravel's proposal. I recommend that the Administration's position be in support of Gravel's proposal. Such a proposal, if enacted into law, would provide a financing vehicle with a minimum of risk to the State during the highest risk period - that of preconstruction planning and construction. Such a position will in no way alter the Governor's present position on Devil Canyon, nor remove any of his options. It simply backs a workable concept. Each hydroelectric project would still have to stand on its own merits following the State's comprehensive examination of the environmental and economic assessments.

- C. References.
- Gravel's speech, 3-26-76
  - Governor's press release, 3-26-76
  - Motley's memo of 3-23-76 regarding 3-20-76 meeting with Gravel and Gravel's proposed bill (redrafted)
  - Motley's memo 3-15-76 regarding 3-12-76 meeting of Governor Hammond and Senator Gravel including Gravel memo to Governor Hammond.
  - Motley's memo 3-1-76 regarding 3-23-76 meeting of Governor Hammond, Senator Gravel and Motley.
  - Motley's letter of 3-1-76 to Senator Gravel.

III. HB 779 - Creating an Alaska Power Authority.

- A. Status. The bill is currently in the House Finance Committee, having passed out of House State Affairs. It would create an Alaska Power Authority as a public corporation of the State to engage in feasibility studies, financing, construction and operation of hydroelectric projects. Sterling Gallagher and I, (at the request of the sponsor, Jim Duncan) had considerable input to the bill. Further, we brought in Eric Wohlforth, State Bond Counsel, and Kidder, Peabody & Co., a large New York investment banking firm that handles many electric utility bond offerings. The bill has three basic features:
1. Provision for using Revenue Bonds to fund construction of hydroelectric projects. Said bonds would not carry the full faith and credit, nor moral obligation of the State; therefore, would not seriously impact upon the State's bonding posture.

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March 29, 1976

2. Provisions for working with existing and future rural, municipal, cooperatives, and regional electric authorities.
3. Provisions for funding and monitoring front-end feasibility studies to meet various power needs.
4. Provision for more definite accountability and governmental (Executive and Legislative) input than any other public corporation. The proposed power authority would solicit and receive all requests for power projects. It would then identify, examine, and quantify (\$'s) the worthwhile proposed projects and submit them to the Department of Commerce and Economic Development for review. The Department of Commerce and Economic Development, as lead agency, would call on other State agencies to join in an assessment and Administrative position. That recommendation/position (be it positive or negative) is then submitted to the Legislature. The Legislature must then approve the requested authorization of bonds. This method, though cumbersome, does in fact demand a wider governmental participation than past public corporations and provides for a good check and balance.

The fiscal requirement for gearing up to form Alaska Power Administration is uncertain. Obviously, in the long run, it is expected to be able to handle its overhead from bond proceeds. In the beginning it will, like the municipal bond bank and other public corporations, need seed money. The final configuration of the authority and its scope of responsibility will dictate this first year's gear up cost. At this time the fiscal note calls for \$300,000. The bill also requires some expertise for reviewing the financial and economical aspects of power production and transmission in the Department of Commerce and Economic Development. That requirement basically can be met by the \$179,000 agency request for the power development section. I understand that by separate correspondence the Energy Working Group will be making such a recommendation completely apart from the consideration of HB 779.

- B. Administration's Position. Sterling Gallagher and I testified before the House State Affairs Committee as my memos to you indicated. We favored the intent/attempt to solve some of the financial and management problems of

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meeting power needs and reserved the Administration's position regarding HB 779. The bill provides a good structure to help solve some of the power needs in the State. In its amended form it will give communities the option to use it or go on their own. The Legislature is going to do something about power this session. This bill provides us as flexible a vehicle as we've seen. We should support it.

- C. References. - HB 779  
- Motley's memos dated 3-2-76

In summary, I think the various efforts in the arena of power development are coming together. The Legislature is going to take some action. The various working groups associated with these matters have maintained relatively good coordination, given the pace of deliberations. It's hopeful that this memo allows all of us to read "off the same sheet of music."

February 18, 1976

Honorable Jay S. Hammond  
Governor of Alaska  
Pouch A  
Juneau, Alaska 99811

Dear Governor Hammond:

As Chairman of the Devil Canyon Task Force you appointed last year, I am pleased to submit to you the first phase recommendation of the task force. It is the unanimous conclusion of the task force to recommend that the State endorse the Corps of Engineers' request of Congress for authorization of the project and their subsequent request for further pre-construction planning funds. This endorsement is predicated upon a number of stipulations and conditions that deal with questions and issues about which the members felt answers and data were deficient. This is not to cast aspersions on the Corps of Engineers - in fact, they have done a thorough job to date - but rather to point out the need for further inquiry in various areas as this project proceeds forward.

Your directive to the task force, dated November 5, 1975, was translated by the group into a two-fold mission:

- A. A recommendation for the Corps proposal before Congress this year.
- B. A continuing monitorship and reaffirmation or disapproval of the project as it proceeded through its various steps.

This report completes the first part of our mission.

As you pointed out in your letter, a "Devil Canyon Project" has been under consideration for some time and, as you can imagine, extensive studies have been done. I will attempt to re-cap for you the methodology and depth of your task force's steps in arriving at our recommendation.

The task force was provided with a bibliography of the available data in Devil Canyon so that they could review any information they might have missed. As most members had responded to the State's clearinghouse submittals on several occasions, the Corps was invited - and accepted - to brief the task force on their latest findings. This took place on December 12. The Corps brought specialists in all areas, power production, economic and environmental matters. A lengthy dialogue between the groups followed. In order to better categorize and organize the questions and answers, the Corps consolidated all the points raised in previous clearinghouse documents with those discussed in the joint meeting in one report. This was a mission of considerable undertaking by the Corps and not actually required by their regulations, but certainly within the fine spirit of cooperation demonstrated throughout by the Corps. The questions and answers ran some 209 pages and are available for your review.

After having digested the Corps responses, the task force then submitted to me individual conditions and stipulations they deemed necessary for endorsement of the proposal. The combined and categorized conditions and stipulations are at Attachment B.

It should be noted that a normal chain of events for such a project goes through five basic steps:

- A. Initial and final study and draft EIS
- B. Project authorization (Congressional)
- C. Pre-construction planning funding (every 2 years) and updated EIS
- D. Final EIS and construction authorization
- E. Construction and completion.

The following timetable would be the most optimistic:

- 1976 -- Authorization and pre-construction planning funding
- 1977-1980 -- EIS update and further planning
- 1981 -- Final EIS, construction authorization
- 1981-1986 -- Watana Dam -- construction and completion
- 1990 -- Devil Canyon Dam completed

A key concern raised in your letter has been the possible creation of a significant imbalance in the supply of power over its demand. The demand for power has been forecasted by the Alaska Power Administration at high, mid, and low levels in a 1974 survey. Compared with data since this forecast, these projections have been characterized as conservative estimates of future power demands. Based on the mid-range forecast of demand, the Devil Canyon - Watana project does not have a significant pool of surplus power after meeting estimated demand. The chart at Attachment A further amplifies the point.

February 18, 1976

In summary, After reviewing all the available data, the task force felt that the Corps proposal is a viable alternative to meet the projected power demands in the post 1936 timeframe in the railbelt area and that consideration of its conditions and stipulations will insure that all possible mitigating measures will be explored and taken if necessary.

With your concurrence, the task force intends to closely monitor the progress of the project and to make the State's decisions and feelings known at every step.

Sincerely,

Langhorne A. Motley  
Commissioner

Attachments (A and B)

## I. Administrative

### Department of Environmental Conservation

- A. Request the Corps of Engineers and the Alaska Power Administration to develop a mechanism by which appropriate State, Federal, and local government agencies can participate in the design, conduct and review of the investigations designed to generate the information necessary to answer the questions below.

## II. Biological and Environmental

### Department of Fish and Game

#### A. General

1. The proposed impoundment(s) of the Susitna River will inundate 50,500 acres of the river basin, destroying fish and game habitats both upstream and downstream of the project through either flooding, drainage alterations, or flow modifications. Important moose winter range and caribou migration routes will be affected in addition to the more obvious damage to fish habitats. However, the specific impacts of the project cannot be forecast without considerable study to assess losses and benefits to fish and wildlife resources due to the project. Once this information has been gathered, then steps may be taken to replace those values which have been lost, and the project may be modified to keep those losses to a minimum.
2. In order to perform the necessary studies, a team of resource specialists representing various scientific disciplines will be assembled and employed for field studies in habitat assessment. The studies will be conducted at a number of distinct locations in the basin to determine baseline conditions as well as over the basin as a whole, to determine the general interrelationship of the baseline sites.
3. Baseline site studies will include physical measurements of stream stage, water temperature, bottom life, forage, turbidity, species present, and other important factors. The information gathered will vary depending upon the site location.
4. General studies will include migration and habitat utilization patterns of the various fish and wildlife species. Baseline stream flow and water quality data must be collected during the time of the habitat studies to provide a basis for relating the habitat studies to the projected power project operation and to allow post-construction monitoring of the project operation for fish and wildlife management purposes.

5. The required preconstruction studies must be conducted over a period of three to five years, assuming an adequately funded effort. Less than three years data will not provide sufficient information from which a sound assessment of project efforts can be determined. More than five years data, will probably not improve the preconstruction assessment significantly. Post-construction/operation studies may run to ten years after project start-up.

B. Investigations which should be undertaken as soon as possible include:

1. Fisheries

- a) Salmon escapement and migration to the Susitna River, to include a determination of the significance of various patterns of migration behavior and possible requirements for expansion of portions of the study in subsequent years to more critically examine phenomena not presently understood.
- b) Determination of distribution and habitat requirements of resident fish species in the mainstream Susitna and tributaries (particularly winter studies) that will be affected by the project.
- c) Determination of the distribution and habitat requirements of anadromous species rearing in the Susitna Basin with emphasis on the mainstream Susitna.
- d) Invertebrate and benthic studies to determine specific distribution and abundance, seasonal availability, etc., as related to stream flow.
- e) Continuation of ongoing spawning and rearing studies.
- f) Determination of extent of potential loss of irreplaceable habitat above the project site.
- g) Establishment of baseline habitat/species data collection station at six key locations on the mainstream Susitna and collection of pertinent hydrologic data.

2. Wildlife

- a) Identify moose populations utilizing impacted areas, determine their seasonal ranges, migration patterns, and degree of dependence on the affected areas.
- b) Determine the impact of altered water flow on moose browse species and on the habitats of aquatic and wetland dwelling species of small game and furbearers.
- c) Determine timing and location of caribou migrations across proposed impoundment areas.

- d) Determine the extent of use of impacted areas by wolves and bears and determine the importance of these areas of wolf and bear populations in the Susitna Basin.
- e) Determine the magnitude of recreational and commercial use of small game and furbearers in areas of potential impact and establish baseline levels of abundance of key species.
- f) Determine the size of seasonal ranges of mountain sheep inhabiting areas adjacent to dam sites to provide a basis for restricting human disturbance.

C. The approximate costs of the above investigative projects are:

1. Fisheries:	<u>FY-77</u>	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>
Salmon enumeration	\$74,800	74,800	74,800	74,800	74,800
Winter residency st.	29,500	29,500	29,500	29,500	29,500
Invertebrate studies	18,500	18,500			
Fishery hydrologic	18,000	14,000	14,000		
Spawning & rearing st.	13,000	10,000	10,000	10,000	10,000
Impound & upper basin	34,500	32,000	25,000		
Personnel costs-total	277,100	277,100	255,400	201,400	201,400
<b>TOTAL</b>	<b>\$465,400</b>	<b>544,900</b>	<b>408,700</b>	<b>315,700</b>	<b>315,700</b>

2. Wildlife:	<u>FY-77</u>	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>
Moose studies	\$159,000	174,000	204,000	154,000	154,000
Caribou studies	8,000	8,000	8,000	8,000	
Wolf studies	60,000	60,000	50,000	35,000	
Bear	30,000	30,000	20,000	15,000	
Furbearers	5,000	6,000	4,000		
Sheep	4,000				
Personnel services	108,000	105,500	105,500	99,000	45,000
<b>TOTAL</b>	<b>\$374,000</b>	<b>383,500</b>	<b>391,500</b>	<b>311,000</b>	<b>199,000</b>

In addition to the above, certain measures which must be taken to replace habitats, population and associated values lost to the development of the Devil Canyon Project can already be foreseen.

Loss of fish populations, habitats, recreation, commercial and subsistence values, would be offset by hatchery/rearing facilities for Coho and Chinook Salmon and Rainbow trout. If a harvestable fishery for these species is to be maintained, facilities costing in excess of 15 million dollars must be constructed. Operational costs would be at least 1.5 million per year.

Loss of moose browse, blockage of caribou migrations and resulting habitat loss may be offset by creating moose browse in suitable adjacent areas through crushing of vegetation. This will involve acquisition of lands from State, Borough and private owners. Providing alternate browse areas will be a continual process which will cost approximately 3.5 million dollars for the first six years of the program.

## Department of Environmental Conservation

### A. General

1. A series of water quality and quantity investigations that would, through appropriate modeling techniques, enable prediction of the effects of selected construction scenarios on the water resources. These studies should include the effect of flow management on the ground water aquifers in the entire area, including the already taxed Anchorage area, which is not encountering saline intrusions. Thermal, oxygen, sediment, and chemical studies are also essential. Rate of water loss due to evaporation from the reservoir must also be understood.
2. Changes in the biological regime both in the impounded areas and downstream must be developed based upon changes in water chemistry and physics. The ultimate primary productivity of the affected ecosystems must be predicted, as well as resultant effects on aquatic fauna of all types, fishes, and invertebrates.
3. Physical processes altered by this project must also be understood. Sedimentation changes are critical here, both in the impounded area and downstream. Changes in sedimentation rate due to quiescence, as well as temperature changes, must be explored. Effects of clearing and inundation of permafrost areas on groundwater recharge rates must be examined.

### B. Specific questions are as follows:

1. Sources of construction materials, and nature of impacts associated with their removal and transport.
2. Reservoir basin vegetation removal and/or basin conditioning prior to inundation needs further study, particularly with regard to disposal.
3. Studies to modes reservoir thermal regimes, similar to the studies of Montana's Lake Koochanusa, are needed to determine such factors as distribution of fish species and populations; appropriate depths within the reservoir for withdrawal of water to maintain optimum temperatures in downstream waters and to avoid high fish mortality in turbines.
4. Studies of probable ice conditions in the reservoir to determine availability of dissolved  $O_2$  to resident fish during winter.
5. Comparative modeling for the Susitna River below the damsite should be established to determine the effects that may result from decreased sediment load. Particular attention should be given to the potential for enhanced algal development due to

the loss of flood scouring action and determining if algal growths would be desirable in terms of char or salmonid habitat and their food. Attention should also be given to potential for changes in bedload and subsequent stream channel and bank erosion.

6. Develop dam design criteria to migrate the nitrogen supersaturation problem. Establish susceptibility of resident fish species to gas bubble disease under varying conditions.
7. Considering probable upstream migration by salmon to previously inaccessible areas, investigations in to the feasibility of fish ladders or other means of passing migrating fish over the dam would seem warranted.
8. Assess the impact of reduced flow and more seasonally constant temperatures on anadromous and resident fish moving upstream into the calmer waters of the reservoir.
9. Development of a turbine intake design that would preclude mortality to migrating or resident fish fry.
10. Determine accessibility of reservoir feeder streams with regard to fish habitat and spawning needs at various reservoir levels.
11. Studies of habitat available for displaced wildlife in areas adjacent to the impoundment, along with estimates of carrying capacity and suitability of alternate habitat.
12. Studies of wildlife distribution and utilization along various proposed transmission line corridors, including locations of dens, browse and calving areas, and critical winter range.
13. Modeling to predict extent and characteristics of exposed lands during reservoir drawdown, including wind transport of dust particles.
14. Effects of ice action, freeze-thaw, and wave action on and along reservoir shoreline.
15. Research is needed to determine the distribution and potential behavior of permafrost in the reservoir basin. Objectives should include determination of thermal conductivity of the inundated and saturated soils and substratae which would be in contact with reservoir water at various depths and temperatures, and modeling of potential subaqueous and consequent subaerial landsliding resulting from saturation of conditionally unstable slopes underlain by permafrost.
16. Studies to estimate potential for catastrophic waves generated by subaerial landslides.

17. Substantiating evidence is needed to validate the claim that the concrete and earthfill dams will withstand all manifestations of seismic activity of the magnitude that can be expected during the next 100 plus years in this area.
18. Assess secondary impacts on the environmental setting resulting from construction of support facilities, residences and possible new industrial growth in the area.

Department of Natural Resources

- A. Conduct a study of the geologic "fault traces" along the Susitna River, and most particularly at the dam sites.

III. Socioeconomic

Department of Environmental Conservation

- A. Corps of Engineers/Alaska Power Administration studies:
  1. A thorough feasibility cost/benefit ratio, including complete energy as well as economic costs of construction and maintenance of the project balanced against with the energy outputs. Energy costs should be "discounted" at a reasonable rate. Similar economic costs should also be required. Included in this analysis should be a cost range based upon the Corps' history of cost overruns on initial project estimates. From these figures, an energy as well as economic cost/benefit ratio should develop. Both cost rates should be critically examined to assure that all applicable costs and benefits are included.
  2. A thorough review and comparison, including an energy/economic cost/benefit ratio analysis, of all alternate energy sources with the hydroelectric power generation proposal must be developed. The United States is currently conducting a major research and development effort for new energy sources, primarily through the Energy Research and Development Administration and the Federal Research Administration. As the production date of the proposed hydroelectric facility is quite far in the future, exotic new energy sources may prove feasible at that time, so an analysis of potential future options is also required. In addition, technological improvements in existing energy sources may significantly alter the economic basis of the hydroelectric proposal. An analysis, therefore, of such potential changes in energy production methods must also be undertaken.
  3. The above projects, and others, will lead to understanding upon which mitigating measures can be based, if the project's construction is undertaken. More importantly, however, the appropriate government agencies, the public, and the Congress will be able to make rational decisions as to the implementation of the project.

B. State conducted or sponsored efforts.

1. The State must, either through in-house or an independent contractor, develop its own analysis of the population projections, industrial growth, and energy demand for the Railbelt area. This would include a complete review and evaluation of all of the assumptions made by the Alaska Power Administration and the Corps of Engineers in developing the power demand projections upon which the hydroelectric power project is predicated. The State, with the assistance of the local communities involved, must develop its own reasonable, responsible community growth and development projections, and the energy projections based upon them.
2. The State must continue its efforts to forecast the environmental and socioeconomic implications of the proposed project, and to require mitigation of those efforts.
3. The State must maintain a dialogue with its Congressional Delegation concerning the proposed project.

Department of Natural Resources

- A. During the preconstruction planning phase of this proposed project, this department believes the Corps of Engineers should accomplish the following in cooperation and conjunction with the State of Alaska:
1. Utilize the Alaska Railroad with an off-on ramp on Gold Creek rather than an access road from the Parks Highway to the proposed dam sites; plan the road access system for the dam construction phase and the permanent system following. Define procedures and regulations for construction and use of access roads.
  2. Study and plan the ultimate recreational uses for the area.
  3. Conduct a survey of the present high water mark of the affected streams before dam construction to preclude legal description and ownership problems after dam construction.
  4. Specify the exact location and design of the double circuit power lines which will run from the dam sites to Fairbanks and Anchorage.
  5. Specify the location of the gravel borrow pits to be used in the construction phase.

Department of Community and Regional Affairs

A. Contingency plans for the proposed pioneer road, reflecting the possibility that the hydroelectric project may not be built.

In the Interim Feasibility Report on the Upper Susitna Hydroelectric Project, the Corps of Engineers recommended that "authority for construction of necessary access roads to the projects be provided for in the authorization for advanced engineering and design. Such roads, estimated to cost \$22.3 million, will provide necessary access for detailed preconstruction site investigations and facilitate timely construction of the projects." The proposed road will extend 52 miles from the Parks Highway to the project site. Although the \$22.3 million road is described as a "pioneer road," it will most likely coincide with any permanent access road and will be constructed so as to provide good, year-round access.

As a rule, if the construction of the project were not authorized, the disposition of the road would be determined by Congressional mandate. If the road were to be dismantled, Congress would have to authorize the action and appropriate the necessary funds. Without such Congressional action, the road would either be abandoned or incorporated into the State highway system.

In order to avoid the penetration of an unwanted single-purpose road into a wilderness area (a road that may lose its primary purpose), it is of critical importance that contingency plans for the pioneer road be developed before funds for its construction be authorized.

Such contingency plans would necessarily involve the Corps of Engineers, the Alaska Departments of Highways and Community and Regional Affairs, the State Division of Parks and Recreation and, perhaps, other State agencies and the Matanuska-Susitna Borough. For each alternative plan, the incidence and magnitude of public costs and the impact on Alaska's highway and recreational systems and local communities should be determined.

B. Socioeconomic impact studies.

Two factors establish the critical importance of conducting thorough socioeconomic impact studies: first, the magnitude of the project and, second, the extremely low populations of communities in the vicinity of the project site. Although the commitment of materials, manpower and dollars to the construction of the Susitna project appears to be minor in comparison with the trans-Alaska pipeline, the Susitna project would constitute the seventh largest hydroelectric project ever built in the United States in terms of power production.

The project site is located in Matanuska-Susitna Borough. In 1975, the population of Matanuska-Susitna Borough was estimated at 9,600. The greatest proportion of the Borough's population is concentrated in the southern part of the Borough, more than 100 miles southwest of the dam sites. In 1970, only 894 persons lived in the portion of Matanuska-Susitna Borough that lies beyond the more populated Palmer-Wasilla area. Not much growth has taken place in this outlying area over the past five years.

A socioeconomic impact analysis should be sponsored by the Corps of Engineers. The analysis should address the full range of employment activities and related effects of the project: material extraction (particularly gravel and limestone), construction, powerplant operation and recreational use. For each activity, the analysis should assess:

1. Labor requirements for each year of the project, including total number, occupational distribution and availability of qualified Alaskan workers;
2. Requirements for additional housing units and expanded public services;
3. Increased public costs;
4. Income differentials between project-related employees and local residents and concomitant pressures on housing and other resources;
5. Local multiplier effects; and
6. Environmental stresses due to increased human settlement.

C. Analysis of methods to ameliorate adverse socioeconomic impacts resulting from the Susitna Hydroelectric Project.

To date, only three measures have been put forth as ways to reduce adverse socioeconomic impacts or to meet the public costs that will be incurred by the Susitna project: (1) contractor-supplied facilities near the project site; (2) revenue from private income tax, license fees and business tax; and (3) impact funds. Of these three alternatives, only revenues from taxes and fees are assured. The degree to which revenues generated from taxes and fees would offset increases in public costs would depend upon their amount, timing and allocation in relation to community impacts.

The other two measures are not guaranteed and for that reason give neither the State nor the Borough any secure basis for future planning.

In light of the above, an analysis of various methods of ameliorating adverse impacts resulting from the Susitna project should be sponsored by the Corps. Forthcoming from the analysis should be firm recommendations that are

legally and procedurally feasible and also assure that the project compensates, in a timely fashion, for the impacts it generates. These recommendations should be incorporated into the Corps of Engineers' subsequent request for authorization to construct the project.

- D. In order to insure that adequate financial resources are available to the Corps of Engineers to undertake the studies described under Sections 2 and 3 above, we recommend that the Corps of Engineers allocate a minimum of \$100,000 for completion of these studies during the preconstruction planning phase.
- E. If the capital city is not relocated to the Railbelt, to whom would the projected power needs (44 billion kwh in 1980; 133 billion kwh in 1990; and 307 billion kwh in 2000) be allocated, particularly during the 1990 to 1996 period of excess energy?

Department of Environmental Conservation

A. Study recommendations

1. Objective study to determine the recreational value of the project area in view of anticipated water management and other considerations.
2. Scenario of higher order impacts resulting from supplying low-cost power in this area.

Department of Commerce and Economic Development

- A. Given the protracted time period through which the proposed Devil Canyon project will produce electricity and presumably generate sufficient revenue to cover operating costs and Federal Government repayment obligations, it appears sensible to examine the determinants of the projected increase in demand for electricity. Of pertinence are factors such as the price and income elasticities of demand for electricity and the rate of change in the per capita consumption of electricity.

DEVIL CANYON-WATANA POWER PROJECT

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
1. Available Firm Energy Production* (100% = 1 billion KWH)	33.1%	50.5%	50.5%	50.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
2. Total Output Needed to Meet the Demand for Hydro Power**	172.0%	121.0%	129.0%	138.0%	75.0%	80.0%	85.0%	90.0%	99.0%	102.0%	
3. Surplus Hydro Power (Line 1 minus Line 2)	0	0	0	0	25.0%	20.0%	15.0%	10.0%	2.0%	0	
4. Surplus as a Percent of Total Alaskan Power Load Demanded					2.7%	1.8%	1.4%	.9%	.4%	0	
					(Millions of KWH)	1,517	1,197	907	587	257	0

\* This assumes that project construction will begin in 1981 and that Watana Dam will be completed in 1986 and Devil Canyon in 1990.

\*\*The hydroelectric power demand is assumed to be 75% of the total railbelt load. This load is based on the mid-level forecast of demand by the Alaska Power Administration (industrial and military loads are assumed to be served by generating facilities exclusive of the proposed hydro power project). In only five years, (1990 to 1995) will production of power exceed demand. The important aspect is that as a percent of total load this surplus is very small, as well as being a short-run effect.

ATTACHMENT B

Devil Canyon Task Force Report, Phase I

Conditions and stipulations upon which the Task Force predicated its recommendation that the State support the U.S. Army Corps of Engineers' proposal to Congress are listed below. The conditions and stipulations have been segregated into three broadly defined categories; administrative, biological and environmental, and socioeconomic.

# MEMORANDUM

# State of Alaska

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT

TO: Senate Finance Committee  
ATTN: Jim Fennel

DATE: April 9, 1976

FILE NO:

TELEPHONE NO:

FROM: Langhorne A. Motley  
Commissioner

SUBJECT: Devil Canyon/Request for  
Fiscal Information on Senate  
Bill 282

Attached you will find a copy of Governor Hammond's task force report and recommendations on Devil Canyon as proposed by the Corps of Engineers. I have also attached a more recent memo as sent to Governor Hammond, which he has subsequently approved, regarding Devil Canyon House Bill 779 (Alaska Power Authority), and Senator Gravel's proposal as outlined before a joint session of the Legislature recently. I think you will see from reviewing these documents that the Administration supports the Corps' proposal for further preconstruction planning funding. Further, the Administration feels that traditional federal funding for the entire Devil Canyon project, estimated at \$1.5 billion (1975 dollars), will not be forthcoming and that Senator Gravel's proposal for national legislation that would indemnify the State in the highest risk portion of such a project, that is during the planning and preconstruction phase, appears to be the most viable way for the State to proceed. Further, after having reviewed House Bill 779, we believe it to be a viable entity making a long step toward solving many of the power needs for the various communities throughout the State of Alaska.

By separate correspondence, we are forwarding to the House Finance Committee, at their request, a fiscal note on House Bill 779.

If I can be of further assistance, please do not hesitate to call.

# MEMORANDUM

# State of Alaska

TO: The Honorable Jay S. Hammond  
Devil Canyon Task Force  
Energy Working Group

DATE: March 29, 1976

FILE NO:

TELEPHONE NO:

FROM: Langhorne A. Motley *LM*  
Commissioner  
Department of Commerce and  
Economic Development

SUBJECT: (1) Devil Canyon  
(2) Gravel's Proposal  
(3) HB 779 (Alaska Power  
Authority)

The above three mentioned subjects are separate items, yet they may interrelate with each other. The pace of discussions on "Power Development" has picked up considerably, especially in Congressional and legislative circles. I believe that my recent memos to the above mentioned addressees adequately covered those discussions and the postures we have taken. I think it appropriate to briefly recap the current posture and either recommend or reaffirm the Administration's position regarding these subjects. This becomes very timely because Sterling Gallagher and myself have been asked to testify Wednesday, March 31st before the House Finance Committee regarding HB 779. I've been assured that the discussion will also cover Devil Canyon and Gravel's proposal. Listed below, then, are either reaffirmations of the Administration's position or refinements of such to date. I will not be present at the Cabinet meeting on Tuesday, and should there be need to discuss those matters, Sterling Gallagher, among others, is fully versed in all three subjects. Therefore, subject to any modification at the Cabinet meeting, these will be the Administration's current position, *assuming Gov Hammond's Approval.*

## I. Devil Canyon

- A. Status. The task force has submitted, and Governor Hammond has adopted, the report of February 18 regarding Devil Canyon. This report endorses the Corps' application for Congressional authorization for further preconstruction planning funds subject to inclusion of our stipulations and conditions listed in the report. This State position assumed the "traditional" federal funding throughout the project. The potential absence of such funding - at this stage - does not affect our basic decision nor the stipulations and conditions. Obviously, the four year preconstruction planning following Congressional authorization will allow the State an opportunity to see if the financing vehicle envisioned produces an acceptable economic assessment.
- B. Administration's Position. Reaffirmed as above. Financing vehicle to be dealt with as it develops.
- C. References. Task Force Report, February 18, 1976.

March 29, 1976

## II. Senator Gravel's Proposal

A. Status. Senator Gravel delivered his proposal to the Legislature in the form of a speech before a Joint Session. Basically his proposal is as follows:

1. Traditional federal funding of hydroelectric projects will not be forthcoming.
2. Gravel plans to introduce legislation to authorize the Devil Canyon Project.
3. Gravel plans to introduce the "Hydroelectric Power Development Act of 1976." This act would do two things: (a) provide "front end" money from a federal revolving loan fund to get initial feasibility studies done for hydroelectric projects. If they prove unfeasible, the loan would not have to be paid back, and (b) provide federal indemnification of State funds (or authority bonds) used to plan and construct - with the Corps of Engineers as the construction manager/supervisors - hydroelectric projects. Basically the State (or Power Authority) would enter into a contractual arrangement with the Corps for a turnkey project. At the completion of that project, any delay, cost overrun, etc., would be borne by the Federal Government. Further, if the project, once under construction, were stopped or abandoned, (for any reason other than State action or inaction) all funds expended by the State would be reimbursed by the Feds.

It is important to note that this legislation is national in scope, and while tailored to fit Devil Canyon, it could be used for many other smaller hydroelectric projects in the State, and as such could help solve the financial problems of the other power needs of the State. The advantage to the Feds is that they would not have to - on a nationwide scale - raise enormous amounts of cash. They would simply stand ready to pay for their mistakes. The concept is innovative, workable from the Alaskan point of view and simple.

B. Administration's Position. To date, Governor Hammond has issued a press release (3-26-76) acknowledging the innovative proposal of Senator Gravel's, and the Administration's efforts in developing it. He further acknowledged that the solution to meeting the State's power needs will require close coordination between the Legislature,

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Executive Branch and the Congressional Delegation. Next Wednesday, I'm going to be asked what the Administration's position is, (among other items addressed here) on Gravel's proposal. I recommend that the Administration's position be in support of Gravel's proposal. Such a proposal, if enacted into law, would provide a financing vehicle with a minimum of risk to the State during the highest risk period - that of preconstruction planning and construction. Such a position will in no way alter the Governor's present position on Devil Canyon, nor remove any of his options. It simply backs a workable concept. Each hydroelectric project would still have to stand on its own merits following the State's comprehensive examination of the environmental and economic assessments.

- C. References.
- Gravel's speech, 3-26-76
  - Governor's press release, 3-26-76
  - Motley's memo of 3-23-76 regarding  
3-20-76 meeting with Gravel and Gravel's  
proposed bill (redrafted)
  - Motley's memo 3-15-76 regarding 3-12-76  
meeting of Governor Hammond and Senator  
Gravel including Gravel memo to Governor  
Hammond.
  - Motley's memo 3-1-76 regarding 3-23-76  
meeting of Governor Hammond, Senator  
Gravel and Motley.
  - Motley's letter of 3-1-76 to Senator  
Gravel.

III. HB 779 - Creating an Alaska Power Authority.

- A. Status. The bill is currently in the House Finance Committee, having passed out of House State Affairs. It would create an Alaska Power Authority as a public corporation of the State to engage in feasibility studies, financing, construction and operation of hydroelectric projects. Sterling Gallagher and I, (at the request of the sponsor, Jim Duncan) had considerable input to the bill. Further, we brought in Eric Wohlforth, State Bond Counsel, and Kidder, Peabody & Co., a large New York investment banking firm that handles many electric utility bond offerings. The bill has three basic features:
1. Provision for using Revenue Bonds to fund construction of hydroelectric projects. Said bonds would not carry the full faith and credit, nor moral obligation of the State; therefore, would not seriously impact upon the State's bonding posture.

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2. Provisions for working with existing and future rural, municipal, cooperatives, and regional electric authorities.
3. Provisions for funding and monitoring front-end feasibility studies to meet various power needs.
4. Provision for more definite accountability and governmental (Executive and Legislative) input than any other public corporation. The proposed power authority would solicit and receive all requests for power projects. It would then identify, examine, and quantify (\$'s) the worthwhile proposed projects and submit them to the Department of Commerce and Economic Development for review. The Department of Commerce and Economic Development, as lead agency, would call on other State agencies to join in an assessment and Administrative position. That recommendation/position (be it positive or negative) is then submitted to the Legislature. The Legislature must then approve the requested authorization of bonds. This method, though cumbersome, does in fact demand a wider governmental participation than past public corporations and provides for a good check and balance.

The fiscal requirement for gearing up to form Alaska Power Administration is uncertain. Obviously, in the long run, it is expected to be able to handle its overhead from bond proceeds. In the beginning it will, like the municipal bond bank and other public corporations, need seed money. The final configuration of the authority and its scope of responsibility will dictate this first year's gear up cost. At this time the fiscal note calls for \$300,000. The bill also requires some expertise for reviewing the financial and economical aspects of power production and transmission in the Department of Commerce and Economic Development. That requirement basically can be met by the \$179,000 agency request for the power development section. I understand that by separate correspondence the Energy Working Group will be making such a recommendation completely apart from the consideration of HB 779.

- B. Administration's Position. Sterling Gallagher and I testified before the House State Affairs Committee as my memos to you indicated. We favored the intent/attempt to solve some of the financial and management problems of

Memo to the Honorable  
Jay S. Hammond, Devil Canyon  
Task Force, and the Energy  
Working Group

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meeting power needs and reserved the Administration's position regarding HB 779. The bill provides a good structure to help solve some of the power needs in the State. In its amended form it will give communities the option to use it or go on their own. The Legislature is going to do something about power this session. This bill provides us as flexible a vehicle as we've seen. We should support it.

- C. References. - HB 779  
- Motley's memos dated 3-2-76

In summary, I think the various efforts in the arena of power development are coming together. The Legislature is going to take some action. The various working groups associated with these matters have maintained relatively good coordination, given the pace of deliberations. It's hopeful that this memo allows all of us to read "off the same sheet of music."

February 18, 1976

Honorable Jay S. Hammond  
Governor of Alaska  
Pouch A  
Juneau, Alaska 99811

Dear Governor Hammond:

As Chairman of the Devil Canyon Task Force you appointed last year, I am pleased to submit to you the first phase recommendation of the task force. It is the unanimous conclusion of the task force to recommend that the State endorse the Corps of Engineers' request of Congress for authorization of the project and their subsequent request for further pre-construction planning funds. This endorsement is predicated upon a number of stipulations and conditions that deal with questions and issues about which the members felt answers and data were deficient. This is not to cast aspersions on the Corps of Engineers - in fact, they have done a thorough job to date - but rather to point out the need for further inquiry in various areas as this project proceeds forward.

Your directive to the task force, dated November 5, 1975, was translated by the group into a two-fold mission:

- A. A recommendation for the Corps proposal before Congress this year.
- B. A continuing monitorship and reaffirmation or disapproval of the project as it proceeded through its various steps.

This report completes the first part of our mission.

As you pointed out in your letter, a "Devil Canyon Project" has been under consideration for some time and, as you can imagine, extensive studies have been done. I will attempt to re-cap for you the methodology and depth of your task force's steps in arriving at our recommendation.

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The task force was provided with a bibliography of the available data in Devil Canyon so that they could review any information they might have missed. As most members had responded to the State's clearinghouse submittals on several occasions, the Corps was invited - and accepted - to brief the task force on their latest findings. This took place on December 12. The Corps brought specialists in all areas, power production, economic and environmental matters. A lengthy dialogue between the groups followed. In order to better categorize and organize the questions and answers, the Corps consolidated all the points raised in previous clearinghouse documents with these discussed in the joint meeting in one report. This was a mission of considerable undertaking by the Corps and not actually required by their regulations, but certainly within the fine spirit of cooperation demonstrated throughout by the Corps. The questions and answers ran some 209 pages and are available for your review.

After having digested the Corps responses, the task force then submitted to me individual conditions and stipulations they deemed necessary for endorsement of the proposal. The combined and categorized conditions and stipulations are at Attachment B.

It should be noted that a normal chain of events for such a project goes through five basic steps:

- A. Initial and final study and draft EIS
- B. Project authorization (Congressional)
- C. Pre-construction planning funding (every 2 years) and updated EIS
- D. Final EIS and construction authorization
- E. Construction and completion.

The following timetable would be the most optimistic:

- 1976 -- Authorization and pre-construction planning funding
- 1977-1980 -- EIS update and further planning
- 1981 -- Final EIS, construction authorization
- 1981-1986 -- Watana Dam -- construction and completion
- 1990 -- Devil Canyon Dam completed

A key concern raised in your letter has been the possible creation of a significant imbalance in the supply of power over its demand. The demand for power has been forecasted by the Alaska Power Administration at high, mid, and low levels in a 1974 survey. Compared with data since this forecast, these projections have been characterized as conservative estimates of future power demands. Based on the mid-range forecast of demand, the Devil Canyon - Watana project does not have a significant pool of surplus power after meeting estimated demand. The chart at Attachment A further amplifies the point.

Governor Jay S. Hammond

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February 18, 1976

In summary, After reviewing all the available data, the task force felt that the Corps proposal is a viable alternative to meet the projected power demands in the post 1936 timeframe in the railbelt area and that consideration of its conditions and stipulations will insure that all possible mitigating measures will be explored and taken if necessary.

With your concurrence, the task force intends to closely monitor the progress of the project and to make the State's decisions and feelings known at every step.

Sincerely,

Langhorne A. Motley  
Commissioner

Attachments (A and B)

## I. Administrative

### Department of Environmental Conservation

- A. Request the Corps of Engineers and the Alaska Power Administration to develop a mechanism by which appropriate State, Federal, and local government agencies can participate in the design, conduct and review of the investigations designed to generate the information necessary to answer the questions below.

## II. Biological and Environmental

### Department of Fish and Game

#### A. General

1. The proposed impoundment(s) of the Susitna River will inundate 50,500 acres of the river basin, destroying fish and game habitats both upstream and downstream of the project through either flooding, drainage alterations, or flow modifications. Important moose winter range and caribou migration routes will be affected in addition to the more obvious damage to fish habitats. However, the specific impacts of the project cannot be forecast without considerable study to assess losses and benefits to fish and wildlife resources due to the project. Once this information has been gathered, then steps may be taken to replace those values which have been lost, and the project may be modified to keep those losses to a minimum.
2. In order to perform the necessary studies, a team of resource specialists representing various scientific disciplines will be assembled and employed for field studies in habitat assessment. The studies will be conducted at a number of distinct locations in the basin to determine baseline conditions as well as over the basin as a whole, to determine the general interrelationship of the baseline sites.
3. Baseline site studies will include physical measurements of stream stage, water temperature, bottom life, forage, turbidity, species present, and other important factors. The information gathered will vary depending upon the site location.
4. General studies will include migration and habitat utilization patterns of the various fish and wildlife species. Baseline stream flow and water quality data must be collected during the time of the habitat studies to provide a basis for relating the habitat studies to the projected power project operation and to allow post-construction monitoring of the project operation for fish and wildlife management purposes.

5. The required preconstruction studies must be conducted over a period of three to five years, assuming an adequately funded effort. Less than three years data will not provide sufficient information from which a sound assessment of project efforts can be determined. More than five years data, will probably not improve the preconstruction assessment significantly. Post-construction/operation studies may run to ten years after project start-up.

B. Investigations which should be undertaken as soon as possible include:

1. Fisheries

- a) Salmon escapement and migration to the Susitna River, to include a determination of the significance of various patterns of migration behavior and possible requirements for expansion of portions of the study in subsequent years to more critically examine phenomena not presently understood.
- b) Determination of distribution and habitat requirements of resident fish species in the mainstream Susitna and tributaries (particularly winter studies) that will be affected by the project.
- c) Determination of the distribution and habitat requirements of anadromous species rearing in the Susitna Basin with emphasis on the mainstream Susitna.
- d) Invertebrate and benthic studies to determine specific distribution and abundance, seasonal availability, etc., as related to stream flow.
- e) Continuation of ongoing spawning and rearing studies.
- f) Determination of extent of potential loss of irreplaceable habitat above the project site.
- g) Establishment of baseline habitat/species data collection station at six key locations on the mainstream Susitna and collection of pertinent hydrologic data.

2. Wildlife

- a) Identify moose populations utilizing impacted areas, determine their seasonal ranges, migration patterns, and degree of dependence on the affected areas.
- b) Determine the impact of altered water flow on moose browse species and on the habitats of aquatic and wetland dwelling species of small game and furbearers.
- c) Determine timing and location of caribou migrations across proposed impoundment areas.

- d) Determine the extent of use of impacted areas by wolves and bears and determine the importance of these areas of wolf and bear populations in the Susitna Basin.
- e) Determine the magnitude of recreational and commercial use of small game and furbearers in areas of potential impact and establish baseline levels of abundance of key species.
- f) Determine the size of seasonal ranges of mountain sheep inhabiting areas adjacent to dam sites to provide a basis for restricting human disturbance.

C. The approximate costs of the above investigative projects are:

1. Fisheries:	<u>FY-77</u>	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>
Salmon enumeration	\$74,800	74,800	74,800	74,800	74,800
Winter residency st.	29,500	29,500	29,500	29,500	29,500
Invertebrate studies	18,500	18,500			
Fishery hydrologic	18,000	14,000	14,000		
Spawning & rearing st.	13,000	10,000	10,000	10,000	10,000
Impound & upper basin	34,500	32,000	25,000		
Personnel costs-total	277,100	277,100	255,400	201,400	201,400
<b>TOTAL</b>	<b>\$465,400</b>	<b>544,900</b>	<b>408,700</b>	<b>315,700</b>	<b>315,700</b>

2. Wildlife:	<u>FY-77</u>	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>
Moose studies	\$159,000	174,000	204,000	154,000	154,000
Caribou studies	8,000	8,000	8,000	8,000	
Wolf studies	60,000	60,000	50,000	35,000	
Bear	30,000	30,000	20,000	15,000	
Furbearers	5,000	6,000	4,000		
Sheep	4,000				
Personnel services	108,000	105,500	105,500	99,000	45,000
<b>TOTAL</b>	<b>\$374,000</b>	<b>383,500</b>	<b>391,500</b>	<b>311,000</b>	<b>199,000</b>

In addition to the above, certain measures which must be taken to replace habitats, population and associated values lost to the development of the Devil Canyon Project can already be foreseen.

Loss of fish populations, habitats, recreation, commercial and subsistence values, would be offset by hatchery/rearing facilities for Coho and Chinook Salmon and Rainbow trout. If a harvestable fishery for these species is to be maintained, facilities costing in excess of 15 million dollars must be constructed. Operational costs would be at least 1.5 million per year.

Loss of moose browse, blockage of caribou migrations and resultant habitat loss may be offset by creating moose browse in suitable adjacent areas through crushing of vegetation. This will involve acquisition of lands from State, Borough and private owners. Providing alternate browse areas will be a continual process which will cost approximately 3.5 million dollars for the first six years of the program.

## Department of Environmental Conservation

### A. General

1. A series of water quality and quantity investigations that would, through appropriate modeling techniques, enable prediction of the effects of selected construction scenarios on the water resources. These studies should include the effect of flow management on the ground water aquifers in the entire area, including the already taxed Anchorage area, which is not encountering saline intrusions. Thermal, oxygen, sediment, and chemical studies are also essential. Rate of water loss due to evaporation from the reservoir must also be understood.
2. Changes in the biological regime both in the impounded areas and downstream must be developed based upon changes in water chemistry and physics. The ultimate primary productivity of the affected ecosystems must be predicted, as well as resultant effects on aquatic fauna of all types, fishes, and invertebrates.
3. Physical processes altered by this project must also be understood. Sedimentation changes are critical here, both in the impounded area and downstream. Changes in sedimentation rate due to quiescence, as well as temperature changes, must be explored. Effects of clearing and inundation of permafrost areas on groundwater recharge rates must be examined.

### B. Specific questions are as follows:

1. Sources of construction materials, and nature of impacts associated with their removal and transport.
2. Reservoir basin vegetation removal and/or basin conditioning prior to inundation needs further study, particularly with regard to disposal.
3. Studies to modes reservoir thermal regimes, similar to the studies of Montana's Lake Koocanusa, are needed to determine such factors as distribution of fish species and populations; appropriate depths within the reservoir for withdrawal of water to maintain optimum temperatures in downstream waters and to avoid high fish mortality in turbines.
4. Studies of probable ice conditions in the reservoir to determine availability of dissolved  $O_2$  to resident fish during winter.
5. Comparative modeling for the Susitna River below the damsite should be established to determine the effects that may result from decreased sediment load. Particular attention should be given to the potential for enhanced algal development due to

the loss of flood scouring action and determining if algal growths would be desirable in terms of char or salmonid habitat and their food. Attention should also be given to potential for changes in bedload and subsequent stream channels and bank erosion.

6. Develop dam design criteria to mitigate the nitrogen supersaturation problem. Establish susceptibility of resident fish species to gas bubble disease under varying conditions.
7. Considering probable upstream migration by salmon to previously inaccessible areas, investigations into the feasibility of fish ladders or other means of passing migrating fish over the dam would seem warranted.
8. Assess the impact of reduced flow and more seasonally constant temperatures on anadromous and resident fish moving upstream into the calmer waters of the reservoir.
9. Development of a turbine intake design that would preclude mortality to migrating or resident fish fry.
10. Determine accessibility of reservoir feeder streams with regard to fish habitat and spawning needs at various reservoir levels.
11. Studies of habitat available for displaced wildlife in areas adjacent to the impoundment, along with estimates of carrying capacity and suitability of alternate habitat.
12. Studies of wildlife distribution and utilization along various proposed transmission line corridors, including locations of dens, browse and calving areas, and critical winter range.
13. Modeling to predict extent and characteristics of exposed lands during reservoir drawdown, including wind transport of dust particles.
14. Effects of ice action, freeze-thaw, and wave action on and along reservoir shoreline.
15. Research is needed to determine the distribution and potential behavior of permafrost in the reservoir basin. Objectives should include determination of thermal conductivity of the inundated and saturated soils and substratae which would be in contact with reservoir water at various depths and temperatures, and modeling of potential subaqueous and consequent subaerial landsliding resulting from saturation of conditionally unstable slopes underlain by permafrost.
16. Studies to estimate potential for catastrophic waves generated by subaerial landslides.

17. Substantiating evidence is needed to validate the claim that the concrete and earthfill dams will withstand all manifestations of seismic activity of the magnitude that can be expected during the next 100 plus years in this area.
18. Assess secondary impacts on the environmental setting resulting from construction of support facilities, residences and possible new industrial growth in the area.

Department of Natural Resources

- A. Conduct a study of the geologic "fault traces" along the Susitna River, and most particularly at the dam sites.

III. Socioeconomic

Department of Environmental Conservation

- A. Corps of Engineers/Alaska Power Administration studies:

1. A thorough feasibility cost/benefit ratio, including complete energy as well as economic costs of construction and maintenance of the project balanced against with the energy outputs. Energy costs should be "discounted" at a reasonable rate. Similar economic costs should also be required. Included in this analysis should be a cost range based upon the Corps' history of cost overruns on initial project estimates. From these figures, an energy as well as economic cost/benefit ratio should develop. Both cost rates should be critically examined to assure that all applicable costs and benefits are included.
2. A thorough review and comparison, including an energy/economic cost/benefit ratio analysis, of all alternate energy sources with the hydroelectric power generation proposal must be developed. The United States is currently conducting a major research and development effort for new energy sources, primarily through the Energy Research and Development Administration and the Federal Research Administration. As the production date of the proposed hydroelectric facility is quite far in the future, exotic new energy sources may prove feasible at that time, so an analysis of potential future options is also required. In addition, technological improvements in existing energy sources may significantly alter the economic basis of the hydroelectric proposal. An analysis, therefore, of such potential changes in energy production methods must also be undertaken.
3. The above projects, and others, will lead to understanding upon which mitigating measures can be based, if the project's construction is undertaken. More importantly, however, the appropriate government agencies, the public, and the Congress will be able to make rational decisions as to the implementation of the project.

B. State conducted or sponsored efforts.

1. The State must, either through in-house or an independent contractor, develop its own analysis of the population projections, industrial growth, and energy demand for the Railbelt area. This would include a complete review and evaluation of all of the assumptions made by the Alaska Power Administration and the Corps of Engineers in developing the power demand projections upon which the hydroelectric power project is predicated. The State, with the assistance of the local communities involved, must develop its own reasonable, responsible community growth and development projections, and the energy projections based upon them.
2. The State must continue its efforts to forecast the environmental and socioeconomic implications of the proposed project, and to require mitigation of those efforts.
3. The State must maintain a dialogue with its Congressional Delegation concerning the proposed project.

Department of Natural Resources

- A. During the preconstruction planning phase of this proposed project, this department believes the Corps of Engineers should accomplish the following in cooperation and conjunction with the State of Alaska:
1. Utilize the Alaska Railroad with an off-on ramp on Gold Creek rather than an access road from the Parks Highway to the proposed dam sites; plan the road access system for the dam construction phase and the permanent system-following. Define procedures and regulations for construction and use of access roads.
  2. Study and plan the ultimate recreational uses for the area.
  3. Conduct a survey of the present high water mark of the affected streams before dam construction to preclude legal description and ownership problems after dam construction.
  4. Specify the exact location and design of the double circuit power lines which will run from the dam sites to Fairbanks and Anchorage.
  5. Specify the location of the gravel borrow pits to be used in the construction phase.

Department of Community and Regional Affairs

A. Contingency plans for the proposed pioneer road, reflecting the possibility that the hydroelectric project may not be built.

In the Interim Feasibility Report on the Upper Susitna Hydroelectric Project, the Corps of Engineers recommended that "authority for construction of necessary access roads to the projects be provided for in the authorization for advanced engineering and design. Such roads, estimated to cost \$22.3 million, will provide necessary access for detailed preconstruction site investigations and facilitate timely construction of the projects." The proposed road will extend 52 miles from the Parks Highway to the project site. Although the \$22.3 million road is described as a "pioneer road," it will most likely coincide with any permanent access road and will be constructed so as to provide good, year-round access.

As a rule, if the construction of the project were not authorized, the disposition of the road would be determined by Congressional mandate. If the road were to be dismantled, Congress would have to authorize the action and appropriate the necessary funds. Without such Congressional action, the road would either be abandoned or incorporated into the State highway system.

In order to avoid the penetration of an unwanted single-purpose road into a wilderness area (a road that may lose its primary purpose), it is of critical importance that contingency plans for the pioneer road be developed before funds for its construction be authorized.

Such contingency plans would necessarily involve the Corps of Engineers, the Alaska Departments of Highways and Community and Regional Affairs, the State Division of Parks and Recreation, and, perhaps, other State agencies and the Matanuska-Susitna Borough. For each alternative plan, the incidence and magnitude of public costs and the impact on Alaska's highway and recreational systems and local communities should be determined.

B. Socioeconomic impact studies.

Two factors establish the critical importance of conducting thorough socioeconomic impact studies: first, the magnitude of the project and, second, the extremely low populations of communities in the vicinity of the project site. Although the commitment of materials, manpower and dollars to the construction of the Susitna project appears to be minor in comparison with the trans-Alaska pipeline, the Susitna project would constitute the seventh largest hydroelectric project ever built in the United States in terms of power production.

The project site is located in Matanuska-Susitna Borough. In 1975, the population of Matanuska-Susitna Borough was estimated at 9,600. The greatest proportion of the Borough's population is concentrated in the southern part of the Borough, more than 100 miles southwest of the dam sites. In 1970, only 894 persons lived in the portion of Matanuska-Susitna Borough that lies beyond the more populated Palmer-Wasilla area. Not much growth has taken place in this outlying area over the past five years.

A socioeconomic impact analysis should be sponsored by the Corps of Engineers. The analysis should address the full range of employment activities and related effects of the project: material extraction (particularly gravel and limestone), construction, powerplant operation and recreational use. For each activity, the analysis should assess:

1. Labor requirements for each year of the project, including total number, occupational distribution and availability of qualified Alaskan workers;
2. Requirements for additional housing units and expanded public services;
3. Increased public costs;
4. Income differentials between project-related employees and local residents and concomitant pressures on housing and other resources;
5. Local multiplier effects; and
6. Environmental stresses due to increased human settlement.

C. Analysis of methods to ameliorate adverse socioeconomic impacts resulting from the Susitna Hydroelectric Project.

To date, only three measures have been put forth as ways to reduce adverse socioeconomic impacts or to meet the public costs that will be incurred by the Susitna project: (1) contractor-supplied facilities near the project site; (2) revenue from private income tax, license fees and business tax; and (3) impact funds. Of these three alternatives, only revenues from taxes and fees are assured. The degree to which revenues generated from taxes and fees would offset increases in public costs would depend upon their amount, timing and allocation in relation to community impacts.

The other two measures are not guaranteed and for that reason give neither the State nor the Borough any secure basis for future planning.

In light of the above, an analysis of various methods of ameliorating adverse impacts resulting from the Susitna project should be sponsored by the Corps. Forthcoming from the analysis should be firm recommendations that are

legally and procedurally feasible and also assure that the project compensates, in a timely fashion, for the impacts it generates. These recommendations should be incorporated into the Corps of Engineers' subsequent request for authorization to construct the project.

- D. In order to insure that adequate financial resources are available to the Corps of Engineers to undertake the studies described under Sections 2 and 3 above, we recommend that the Corps of Engineers allocate a minimum of \$100,000 for completion of these studies during the preconstruction planning phase.
- E. If the capital city is not relocated to the Railbelt, to whom would the projected power needs (44 billion kwh in 1980; 133 billion kwh in 1990; and 307 billion kwh in 2000) be allocated, particularly during the 1990 to 1996 period of excess energy?

#### Department of Environmental Conservation

##### A. Study recommendations

1. Objective study to determine the recreational value of the project area in view of anticipated water management and other considerations.
2. Scenario of higher order impacts resulting from supplying low-cost power in this area.

#### Department of Commerce and Economic Development

- A. Given the protracted time period through which the proposed Devil Canyon project will produce electricity and presumably generate sufficient revenue to cover operating costs and Federal Government repayment obligations, it appears sensible to examine the determinants of the projected increase in demand for electricity. Of pertinence are factors such as the price and income elasticities of demand for electricity and the rate of change in the per capita consumption of electricity.

DEVIL CANYON-WATANA POWER PROJECT

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1. Available Firm Energy Production* (100%=6.1 billion KWH)	33.1%	50.5%	50.5%	50.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2. Total Output Needed to Meet the Demand for Hydro Power**	172.0%	121.0%	129.0%	138.0%	75.0%	80.0%	85.0%	90.0%	98.0%	102.0%
3. Surplus Hydro Power (Line 1 minus Line 2)	0	0	0	0	25.0%	20.0%	15.0%	10.0%	2.0%	0
4. Surplus as a Percent of Total Alaskan Power Load Demanded					2.7%	1.8%	1.4%	.9%	.4%	0
(Millions of KWH)					1,517	1,197	907	567	257	0

\* This assumes that project construction will begin in 1981 and that Watana Dam will be completed in 1986 and Devil Canyon in 1990.

\*\*The hydroelectric power demand is assumed to be 75% of the total railbelt load. This load is based on the mid-level forecast of demand by the Alaska Power Administration (industrial and military loads are assumed to be served by generating facilities exclusive of the proposed hydro power project). In only five years, (1990 to 1995) will production of power exceed demand. The important aspect is that as a percent of total load this surplus is very small, as well as being a short-run effect.

ATTACHMENT B

Devil Canyon Task Force Report, Phase I

Conditions and stipulations upon which the Task Force predicated its recommendation that the State support the U.S. Army Corps of Engineers' proposal to Congress are listed below. The conditions and stipulations have been segregated into three broadly defined categories; administrative, biological and environmental, and socioeconomic.

Introduced: 3/18/75  
Referred: State Affairs and  
Finance

1 IN THE SENATE

BY KERTTULA

2 SENATE BILL NO. 282

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 NINTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act authorizing construction of the Devil's Canyon  
7 Dam, the issuance of revenue bonds for the project;  
8 and creating a division of hydroelectric power and  
9 dams within the Department of Public Works."

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

11 \* Section 1. AS 35.05 is amended by adding a new section to read:

12 Sec. 35.05.035. DIVISION OF HYDROELECTRIC POWER AND DAMS CREATED.

13 There is created within the Department of Public Works the hydroelectric  
14 power and dams division.

15 \* Sec. 2. AS 35.25.010 is amended to read:

16 Sec. 35.25.010. PURPOSE AND INTENT. The purpose of this title  
17 is to establish a public works department capable of carrying out a  
18 public works planning and construction program which will provide public  
19 buildings necessary to efficient government, and boat harbors, jetties,  
20 dikes, dams and breakwaters necessary to the economy of Alaska communi-  
21 ties, all of which is to the advantage and benefit of the general welfare  
22 of the public.

23 \* Sec. 3. AS 37.15 is amended by adding new sections to read:

24 ARTICLE 4. DEVIL'S CANYON DAM REVENUE BONDS.

25 Sec. 37.15.570. BOND AUTHORIZATION. For the purpose of providing  
26 part or all of the money to be used, with or without any grants or other  
27 money which may become available, the issuance and sale of revenue bonds  
28 of the state in the total principal sum of not to exceed \$800,000,000 is  
29 authorized to acquire, equip, and construct the dam and any additions,

1 improvements, and facilities authorized by sec. 670 of this chapter.  
2 The principal of and interest on these bonds shall be paid out of and  
3 secured by the gross revenues derived by the state from the ownership,  
4 lease, use and operation of the dam, and of all the facilities and out  
5 of any other revenues or money which the state legislature may provide  
6 exclusive of any state tax or license.

7 Sec. 37.15.580. CONSTRUCTION FUND. (a) There is a special fund  
8 of the state known as the "Devil's Canyon Dam Construction Fund," into  
9 which shall be paid the proceeds of the sale of the bonds (except any  
10 accrued interest paid on them, which shall be paid into the bond redemp-  
11 tion fund) and any grant or other money which is legally provided for  
12 the same purposes for which the bonds are authorized. The money in the  
13 construction fund shall be used to pay the costs of acquiring, equip-  
14 ping, and constructing the dam and any additions and improvements,  
15 including costs of the authorization, issuance and sale of the bonds.  
16 To the extent provided in the bond resolution, money in the construction  
17 fund may also be used for the payment of interest on the bonds during  
18 the period of actual construction, and for such further period, not  
19 exceeding one year after the period of construction, as may be provided  
20 in the bond resolution. Money in the construction fund may also be  
21 transferred to the bond redemption fund, to the extent provided in the  
22 bond resolution, to establish a reserve for the payment of the principal  
23 of and interest on the bonds.

24 (b) The bond resolution may provide for the investment of money in  
25 the construction fund in such manner as the committee may determine.  
26 The interest earned upon or any profits derived from the sale of this  
27 investment shall be deposited in and become a part of the construction  
28 fund.

29 Sec. 37.15.590. REVENUE FUND. (a) There is another special fund

1 of the state, known as the "Devil's Canyon Dam Revenue Fund," which  
2 shall be completely segregated and set apart from all other funds of the  
3 state, which is a trust fund for the uses and purposes provided in  
4 secs. 570 - 710 of this chapter, and into which shall be paid all  
5 revenues, fees, and charges derived by the state from the ownership, use  
6 and operation of the dam and all of its facilities and improvements and  
7 facilities and improvements used in connection with it. The money in  
8 the revenue fund shall only be used for the purpose of paying or securing  
9 the payment of the principal of and interest on the bonds and of and on  
10 any other revenue bonds issued by authorization of the legislature to  
11 provide funds for construction and to acquire, equip, construct and  
12 install additions and improvements to the dam and to be payable out of  
13 the revenue fund, the purpose of paying the normal and necessary costs  
14 of maintaining and operating the dam and all of its improvements and  
15 facilities, the purpose of paying the costs of replacements and extra-  
16 ordinary repairs to the dam and all its improvements and facilities, the  
17 purpose of redeeming before their fixed maturities any and all revenue  
18 bonds issued for the purposes of the dam, the purpose of providing  
19 funds to acquire, construct and install necessary additions and improve-  
20 ments to and facilities for the dam and all its facilities, and the  
21 purpose of providing funds to pay any and all other costs relating to the  
22 ownership, use and operation of the dam.

23 (b) The investment of money in the revenue fund may be made in  
24 such manner as the committee may determine. The interest earned upon  
25 or any profits derived from the sale of this investment shall be de-  
26 posited in and become a part of the revenue fund.

27 Sec. 37.15.600. REDEMPTION FUND. There is another special fund  
28 of the state, known as the "Devil's Canyon Dam Revenue Bond Redemption  
29 Fund," which is a trust fund for paying and securing the payment of the

1 principal of and interest and redemption premium, if any, on the bonds  
2 and which shall be at all times completely segregated and set apart from  
3 all other funds of the state. The committee, on behalf of the state,  
4 shall obligate and bind the state to set aside and pay into the bond  
5 redemption fund any part or parts of, or all of, or a fixed proportion  
6 of, or a fixed amount of the money in the revenue fund sufficient to  
7 pay the principal of and interest and redemption premium, if any, on the  
8 bonds as the payments become due and, if it considers it necessary, to  
9 set aside and maintain reserves for this purpose. The bond redemption  
10 fund shall be drawn upon for the purpose of paying the principal of and  
11 interest and redemption premium, if any, on the bonds, and the bonds do  
12 not constitute a general obligation of the state.

13 Sec. 37.15.610. BOND TERMS. (a) The bonds shall be sold in such  
14 amounts or series and at such time or times as determined by the com-  
15 mittee. Before selling a series of bonds, the committee shall give  
16 notice inviting sealed bids in such manner as it may prescribe. If  
17 satisfactory bids are received, the bonds offered for sale shall be  
18 awarded to the highest responsible bidder. If the committee determines  
19 that the bids received are not satisfactory as to price or responsi-  
20 bility of the bidders, it may reject all bids received. Interest shall  
21 be payable annually or semiannually.

22 (b) The bonds shall mature at such time or times as fixed by the  
23 committee. The bonds may be subject to redemption before their fixed  
24 maturities as determined by the committee and with such premium or premi-  
25 ums as fixed by the committee, but no bond may be subject to redemption  
26 before its fixed maturity date unless the right so to redeem that bond  
27 is expressly mentioned on the face of the bond. The bonds may be in  
28 denominations determined by the committee; may be issued in coupon form  
29 or in fully registered form, and may be registrable as to principal or

1 both principal and interest, all under such regulations and conditions  
2 as the committee shall provide; shall be payable as to principal and  
3 interest at such place or places as may be determined by the committee;  
4 shall be signed on behalf of the state by the governor and shall be  
5 attested by the lieutenant governor, both of which signatures may be  
6 facsimile signatures; shall have the seal of the state impressed, printed  
7 or lithographed on them, and each of the interest coupons attached to  
8 them shall be signed by the facsimile signatures of these officials;  
9 shall be issued under and subject to such terms, conditions and covenants  
10 providing for the payment of the principal of them and interest on them  
11 and such other terms, conditions, covenants and protective features  
12 safeguarding this payment and relating to the maintenance, operation  
13 and improvement of the dam as found necessary by the committee, which  
14 covenants may include a provision requiring the setting aside and maintenance  
15 of certain reserves to secure the payment of this principal and  
16 interest. The committee may provide that any additional bonds authorized  
17 (after the effective date of this Act) by the legislature to be payable  
18 out of the same source or sources as the bonds authorized as of that  
19 date may later be issued on a parity with the bonds authorized as of that  
20 date upon compliance with any conditions which the committee may pre-  
21 scribe.

22 (c) If found reasonably necessary, the committee may select a  
23 trustee or trustees for the holders of the bonds or any series of them,  
24 for the safeguarding and disbursement of any of the money in any of the  
25 funds created by secs. 580, 590 and 600 of this chapter, or for such  
26 duties with respect to the authenticator, delivery and registration  
27 of the bonds as the committee may determine, and shall fix the rights,  
28 duties, powers and obligations of the trustee or trustees.

29 (d) In its determination of all of the matters and questions

1 relating to the issuance and sale of the bonds and the fixing of the  
2 maturities, terms, conditions and covenants of them as provided in (a),  
3 (b) and (c) of this section, the decisions of the committee shall be  
4 those found to be reasonably necessary for the best interests of the  
5 state and its inhabitants, and those which will accomplish the most  
6 advantageous sale of the bonds, with due regard, however, to necessary  
7 or normal costs of maintenance, operation, and repairs to the dam and  
8 to all its improvements and facilities owned, used, or operated in  
9 connection with it. Any such decisions of the committee, as expressed  
10 in any bond resolution, are final and conclusive when any bonds have  
11 been issued pursuant to the bond resolution.

12 (e) A bond resolution may provide that the bonds issued shall  
13 contain a recital that they are issued under secs. 570 - 710 of this  
14 chapter, and any such bonds containing this recital shall be conclusively  
15 considered to be valid and to have been issued in conformity with secs.  
16 570 - 710 of this chapter.

17 (f) The validity of the authorization and issuance of bonds is not  
18 affected by any proceedings for the acquisition or construction of the  
19 additions, improvements, extensions or facilities for which the bonds  
20 have been issued or by any contracts in connection with the acquisition  
21 or construction.

22 Sec. 37.15.620. BOND RESOLUTION. The committee is authorized and  
23 directed to adopt the bond resolution and prepare all other documents  
24 and proceedings necessary for the issuance, sale and delivery of the  
25 bonds or any part or series of them. The bond resolution shall fix the  
26 principal amount, denomination, date, maturities, place or places of  
27 payment, rights of redemption, if any, terms, form, conditions and  
28 covenants of the bonds or each series of them. The committee shall also  
29 determine and provide for the date and manner of sale of the bonds, and

1 shall provide whether the notice of sale is to be published elsewhere in  
2 addition to the publication required by sec. 610 of this chapter.

3 Sec. 37.15.630. ENFORCEMENT BY HOLDER. The holder of any bonds  
4 or the trustee for the holders of the bonds or any series of them, may  
5 by appropriate proceedings in the courts of record of the state, require  
6 and compel the transfer, setting aside and payment of money and the  
7 enforcement of all of the terms, conditions and covenants as required  
8 and provided in secs. 570 - 710 of this chapter and in the bond resolu-  
9 tion.

10 Sec. 37.15.640. AMOUNTS REQUIRED FOR PAYMENTS. The committee  
11 shall before December 31 of each year, commencing with the year in which  
12 the bonds are issued, certify to the commissioners of revenue and public  
13 works the amounts required in the next ensuing calendar year by the bond  
14 resolution or resolutions to be paid out of the revenue fund into the  
15 bond redemption fund and to be paid into and maintained in any reserve  
16 fund or account or any other fund or account created by the bond resolu-  
17 tion or resolutions, and shall also certify to the commissioners the  
18 last date or dates upon which payments may be made.

19 Sec. 37.15.650. BOND NEGOTIABILITY. The bonds and the coupons  
20 attached to them are fully negotiable instruments under the laws of the  
21 state.

22 Sec. 37.15.660. ELECTRICITY CHARGES. The commissioner of public  
23 works shall fix and collect, subject to the approval of the Public  
24 Utilities Commission, such fees and charges derived by the state from  
25 the ownership, use and operation of the dam and all of its facilities  
26 and improvements as will provide revenues sufficient to comply with all  
27 of the covenants of the bond resolution.

28 Sec. 37.15.670. STATE IMPROVEMENTS TO DAM. The state is authorized  
29 to acquire, equip and construct the dam and to install additions and

1           Sec. 37.15.690. BONDS AS LEGAL INVESTMENTS. The bonds are legal  
2 investments for all banks, trust companies, savings banks, savings and  
3 loan associations and other persons carrying on a banking business, all  
4 insurance companies and other persons carrying on an insurance business,  
5 and all executors, administrators, trustees and other fiduciaries. The  
6 bonds may be accepted as security for deposits of all funds of the state  
7 and its political subdivisions.

8           Sec. 37.15.700. STATUTORY CONSTRUCTION. Sections 570 - 710 of  
9 this chapter shall be liberally construed in order to carry out the  
10 purposes for which they were enacted, and all existing laws in conflict  
11 with any of these sections are superseded insofar as necessary to accom-  
12 plish the purposes of and carry out the provisions of these sections.

13           Sec. 37.15.710. DEFINITIONS. As used in secs. 570 - 710 of this  
14 chapter, unless the context otherwise requires:

15           (1) "bond redemption fund" means the Devil's Canyon Dam  
16 Revenue Bond Redemption Fund created by sec. 600 of this chapter, includ-  
17 ing any accounts which are created in that fund after the effective date  
18 of this Act;

19           (2) "bond resolution" means the resolution or resolutions  
20 authorizing the issuance of bonds, adopted by the committee under sec.  
21 620 of this chapter;

22           (3) "bonds" means the Devil's Canyon Dam revenue bonds author-  
23 ized by secs. 570 - 710 of this chapter;

24           (4) "commissioner of public works" means the principal execu-  
25 tive officer of the Department of Public Works of the state as provided  
26 in AS 44.43.010, or his successor;

27           (5) "commissioner of revenue" means the principal executive  
28 officer of the Department of Revenue of the state as provided in AS 44.-  
29 25.010, or his successor;

1 (6) "committee" means the state bond committee created by  
2 sec. 110 of this chapter, or any other committee, body, department or  
3 officer of the state which or who succeeds to the rights, powers, duties  
4 and obligations of the state bond committee by lawful Act of the legis-  
5 lature;

6 (7) "construction fund" means the Devil's Canyon Dam Construc-  
7 tion Fund created by sec. 580 of this chapter;

8 (8) "dam" means the dam across the Susitna River at Devil's  
9 Canyon;

10 (9) "revenue fund" means the Devil's Canyon Dam Revenue Fund  
11 created by sec. 590 of this chapter.

12 \* Sec. 4. For the purpose of carrying out the provisions of AS 37.15.570 -  
13 37.15.710, there is appropriated from the Devil's Canyon Dam Construction  
14 Fund the sum of \$800,000,000.  
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Introduced: 3/18/75  
Referred: State Affairs and  
Finance

1 IN THE SENATE

BY KERTTULA

2 SENATE BILL NO. 262

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 NINTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act authorizing construction of the Devil's Canyon  
7 Dam, the issuance of revenue bonds for the project;  
8 and creating a division of hydroelectric power and  
9 dams within the Department of Public Works."

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

11 \* Section 1. AS 35.05 is amended by adding a new section to read:

12 Sec. 35.05.035. DIVISION OF HYDROELECTRIC POWER AND DAMS CREATED.

13 There is created within the Department of Public Works the hydroelectric  
14 power and dams division.

15 \* Sec. 2. AS 35.25.010 is amended to read:

16 Sec. 35.25.010. PURPOSE AND INTENT. The purpose of this title

17 is to establish a public works department capable of carrying out a  
18 public works planning and construction program which will provide public  
19 buildings necessary to efficient government, and boat harbors, jetties,  
20 dikes, dams and breakwaters necessary to the economy of Alaska communi-  
21 ties, all of which is to the advantage and benefit of the general welfare  
22 of the public.

23 \* Sec. 3. AS 37.15 is amended by adding new sections to read:

24 ARTICLE 4. DEVIL'S CANYON DAM REVENUE BONDS.

25 Sec. 37.15.570. BOND AUTHORIZATION. For the purpose of providing  
26 part or all of the money to be used, with or without any grants or other  
27 money which may become available, the issuance and sale of revenue bonds  
28 of the state in the total principal sum of not to exceed \$800,000,000 is  
29 authorized to acquire, equip, and construct the dam and any additions,

1 improvements, and facilities authorized by sec. 670 of this chapter.  
2 The principal of and interest on these bonds shall be paid out of and  
3 secured by the gross revenues derived by the state from the ownership,  
4 lease, use and operation of the dam, and of all the facilities and out  
5 of any other revenues or money which the state legislature may provide  
6 exclusive of any state tax or license.

7 Sec. 37.15.580. CONSTRUCTION FUND. (a) There is a special fund  
8 of the state known as the "Devil's Canyon Dam Construction Fund," into  
9 which shall be paid the proceeds of the sale of the bonds (except any  
10 accrued interest paid on them, which shall be paid into the bond redemp-  
11 tion fund) and any grant or other money which is legally provided for  
12 the same purposes for which the bonds are authorized. The money in the  
13 construction fund shall be used to pay the costs of acquiring, equip-  
14 ping, and constructing the dam and any additions and improvements,  
15 including costs of the authorization, issuance and sale of the bonds.  
16 To the extent provided in the bond resolution, money in the construction  
17 fund may also be used for the payment of interest on the bonds during  
18 the period of actual construction, and for such further period, not  
19 exceeding one year after the period of constructio may be provided  
20 in the bond resolution. Money in the construction fund may also be  
21 transferred to the bond redemption fund, to the extent provided in the  
22 bond resolution, to establish a reserve for the payment of the principal  
23 of and interest on the bonds.

24 (b) The bond resolution may provide for the investment of money in  
25 the construction fund in such manner as the committee may determine.  
26 The interest earned upon or any profits derived from the sale of this  
27 investment shall be deposited in and become a part of the construction  
28 fund.

29 Sec. 37.15.590. REVENUE FUND. (a) There is another special fund

1 of the state, known as the "Devil's Canyon Dam Revenue Fund," which  
2 shall be completely segregated and set apart from all other funds of the  
3 state, which is a trust fund for the uses and purposes provided in  
4 secs. 570 - 710 of this chapter, and into which shall be paid all  
5 revenues, fees, and charges derived by the state from the ownership, use  
6 and operation of the dam and all of its facilities and improvements and  
7 facilities and improvements used in connection with it. The money in  
8 the revenue fund shall only be used for the purpose of paying or securing  
9 the payment of the principal of and interest on the bonds and of and on  
10 any other revenue bonds issued by authorization of the legislature to  
11 provide funds for construction and to acquire, equip, construct and  
12 install additions and improvements to the dam and to be payable out of  
13 the revenue fund, the purpose of paying the normal and necessary costs  
14 of maintaining and operating the dam and all of its improvements and  
15 facilities, the purpose of paying the costs of replacements and extra-  
16 ordinary repairs to the dam and all its improvements and facilities, the  
17 purpose of redeeming before their fixed maturities any and all revenue  
18 bonds issued for the purposes of the dam, the purpose of providing  
19 funds to acquire, construct and install necessary additions and improve-  
20 ments to and facilities for the dam and all its facilities, and the  
21 purpose of providing funds to pay any and all other costs relating to the  
22 ownership, use and operation of the dam.

23 (b) The investment of money in the revenue fund may be made in  
24 such manner as the committee may determine. The interest earned upon  
25 or any profits derived from the sale of this investment shall be de-  
26 posited in and become a part of the revenue fund.

27 Sec. 37.15.600. REDEMPTION FUND. There is another special fund  
28 of the state, known as the "Devil's Canyon Dam Revenue Bond Redemption  
29 Fund," which is a trust fund for paying and securing the payment of the

1 principal of and interest and redemption premium, if any, on the bonds  
2 and which shall be at all times completely segregated and set apart from  
3 all other funds of the state. The committee, on behalf of the state,  
4 shall obligate and bind the state to set aside and pay into the bond  
5 redemption fund any part or parts of, or all of, or a fixed proportion  
6 of, or a fixed amount of the money in the revenue fund sufficient to  
7 pay the principal of and interest and redemption premium, if any, on the  
8 bonds as the payments become due and, if it considers it necessary, to  
9 set aside and maintain reserves for this purpose. The bond redemption  
10 fund shall be drawn upon for the purpose of paying the principal of and  
11 interest and redemption premium, if any, on the bonds, and the bonds do  
12 not constitute a general obligation of the state.

13 Sec. 37.15.610. BOND TERMS. (a) The bonds shall be sold in such  
14 amounts or series and at such time or times as determined by the com-  
15 mittee. Before selling a series of bonds, the committee shall give  
16 notice inviting sealed bids in such manner as it may prescribe. If  
17 satisfactory bids are received, the bonds offered for sale shall be  
18 awarded to the highest responsible bidder. If the committee determines  
19 that the bids received are not satisfactory as to price or responsi-  
20 bility of the bidders, it may reject all bids received. Interest shall  
21 be payable annually or semiannually.

22 (b) The bonds shall mature at such time or times as fixed by the  
23 committee. The bonds may be subject to redemption before their fixed  
24 maturities as determined by the committee and with such premium or premi-  
25 ums as fixed by the committee, but no bond may be subject to redemption  
26 before its fixed maturity date unless the right so to redeem that bond  
27 is expressly mentioned on the face of the bond. The bonds may be in  
28 denominations determined by the committee; may be issued in coupon form  
29 or in fully registered form, and may be registrable as to principal or

1 both principal and interest, all under such regulations and conditions  
2 as the committee shall provide; shall be payable as to principal and  
3 interest at such place or places as may be determined by the committee;  
4 shall be signed on behalf of the state by the governor and shall be  
5 attested by the lieutenant governor, both of which signatures may be  
6 facsimile signatures; shall have the seal of the state impressed, printed  
7 or lithographed on them, and each of the interest coupons attached to  
8 them shall be signed by the facsimile signatures of these officials;  
9 shall be issued under and subject to such terms, conditions and covenants  
10 providing for the payment of the principal of them and interest on them  
11 and such other terms, conditions, covenants and protective features  
12 safeguarding this payment and relating to the maintenance, operation  
13 and improvement of the dam as found necessary by the committee, which  
14 covenants may include a provision requiring the setting aside and maintenance  
15 of certain reserves to secure the payment of this principal and  
16 interest. The committee may provide that any additional bonds authorized  
17 (after the effective date of this Act) by the legislature to be payable  
18 out of the same source or sources as the bonds authorized as of that  
19 date may later be issued on a parity with the bonds authorized as of that  
20 date upon compliance with any conditions which the committee may pre-  
21 scribe.

22 (c) If found reasonably necessary, the committee may select a  
23 trustee or trustees for the holders of the bonds or any series of them,  
24 for the safeguarding and disbursement of any of the money in any of the  
25 funds created by secs. 580, 590 and 600 of this chapter, or for such  
26 duties with respect to the authentication, delivery and registration  
27 of the bonds as the committee may determine, and shall fix the rights,  
28 duties, powers and obligations of the trustee or trustees.

29 (d) In its determination of all of the matters and questions

1 relating to the issuance and sale of the bonds and the fixing of the  
2 maturities, terms, conditions and covenants of them as provided in (a),  
3 (b) and (c) of this section, the decisions of the committee shall be  
4 those found to be reasonably necessary for the best interests of the  
5 state and its inhabitants, and those which will accomplish the most  
6 advantageous sale of the bonds, with due regard, however, to necessary  
7 or normal costs of maintenance, operation, and repairs to the dam and  
8 to all its improvements and facilities owned, used, or operated in  
9 connection with it. Any such decisions of the committee, as expressed  
10 in any bond resolution, are final and conclusive when any bonds have  
11 been issued pursuant to the bond resolution.

12 (e) A bond resolution may provide that the bonds issued shall  
13 contain a recital that they are issued under secs. 570 - 710 of this  
14 chapter, and any such bonds containing this recital shall be conclusively  
15 considered to be valid and to have been issued in conformity with secs.  
16 570 - 710 of this chapter.

17 (f) The validity of the authorization and issuance of bonds is not  
18 affected by any proceedings for the acquisition or construction of the  
19 additions, improvements, extensions or facilities for which the bonds  
20 have been issued or by any contracts in connection with the acquisition  
21 or construction.

22 Sec. 37.15.620. BOND RESOLUTION. The committee is authorized and  
23 directed to adopt the bond resolution and prepare all other documents  
24 and proceedings necessary for the issuance, sale and delivery of the  
25 bonds or any part or series of them. The bond resolution shall fix the  
26 principal amount, denomination, date, maturities, place or places of  
27 payment, rights of redemption, if any, terms, form, conditions and  
28 covenants of the bonds or each series of them. The committee shall also  
29 determine and provide for the date and manner of sale of the bonds, and

1 shall provide whether the notice of sale is to be published elsewhere in  
2 addition to the publication required by sec. 610 of this chapter.

3 Sec. 37.15.630. ENFORCEMENT BY HOLDER. The holder of any bonds  
4 or the trustee for the holders of the bonds or any series of them, may  
5 by appropriate proceedings in the courts of record of the state, require  
6 and compel the transfer, setting aside and payment of money and the  
7 enforcement of all of the terms, conditions and covenants as required  
8 and provided in secs. 570 - 710 of this chapter and in the bond resolu-  
9 tion.

10 Sec. 37.15.640. AMOUNTS REQUIRED FOR PAYMENTS. The committee  
11 shall before December 31 of each year, commencing with the year in which  
12 the bonds are issued, certify to the commissioners of revenue and public  
13 works the amounts required in the next ensuing calendar year by the bond  
14 resolution or resolutions to be paid out of the revenue fund into the  
15 bond redemption fund and to be paid into and maintained in any reserve  
16 fund or account or any other fund or account created by the bond resolu-  
17 tion or resolutions, and shall also certify to the commissioners the  
18 last date or dates upon which payments may be made.

19 Sec. 37.15.650. BOND NEGOTIABILITY. The bonds and the coupons  
20 attached to them are fully negotiable instruments under the laws of the  
21 state.

22 Sec. 37.15.660. ELECTRICITY CHARGES. The commissioner of public  
23 works shall fix and collect, subject to the approval of the Public  
24 Utilities Commission, such fees and charges derived by the state from  
25 the ownership, use and operation of the dam and all of its facilities  
26 and improvements as will provide revenues sufficient to comply with all  
27 of the covenants of the bond resolution.

28 Sec. 37.15.670. STATE IMPROVEMENTS TO DAM. The state is authorized  
29 to acquire, equip and construct the dam and to install additions and

1 improvements to the dam, as found to be necessary by the commissioner of  
2 public works.

3 Sec. 37.15.680. REFUNDING. (a) The bonds or any part of them may  
4 be refunded at or before their maturity by the issuance of refunding  
5 revenue bonds of the state if in the opinion of the committee refunding  
6 is advantageous to and in the best interests of the state and its inhabi-  
7 tants.

8 (b) The issuance of refunding bonds need not be authorized by an  
9 Act of the legislature, and the committee is authorized and directed to  
10 adopt the resolution or resolutions and prepare all other documents and  
11 proceedings necessary for the issuance, exchange or sale, and delivery  
12 of such bonds. All provisions of secs. 570 - 710 of this chapter appli-  
13 cable to revenue bonds are applicable to the refunding bonds and to the  
14 issuance, sale or exchange of them, except as otherwise provided in this  
15 section.

16 (c) Refunding bonds may be issued in a principal amount sufficient  
17 to provide funds for the payment of all bonds to be refunded by them,  
18 and, in addition, for the payment of all expenses incident to the  
19 calling, retiring or paying of the outstanding bonds, and the issuance  
20 of the refunding bonds. These expenses include the difference in amount  
21 between the par value of the refunding bonds and any amount less than  
22 par for which the refunding bonds are sold, any amount necessary to be  
23 made available for the payment of interest upon the refunding bonds  
24 from the date of sale of them to the date of payment of the bonds to be  
25 refunded or to the date upon which the bonds to be refunded will be  
26 paid pursuant to the call of them or agreement with the holders of them,  
27 and the premium, if any, necessary to be paid in order to call or retire  
28 the outstanding bonds and the interest accruing on them to the date of  
29 the call or retirement.

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Sec. 37.15.690. BONDS AS LEGAL INVESTMENTS. The bonds are legal investments for all banks, trust companies, savings banks, savings and loan associations and other persons carrying on a banking business, all insurance companies and other persons carrying on an insurance business, and all executors, administrators, trustees and other fiduciaries. The bonds may be accepted as security for deposits of all funds of the state and its political subdivisions.

Sec. 37.15.700. STATUTORY CONSTRUCTION. Sections 570 - 710 of this chapter shall be liberally construed in order to carry out the purposes for which they were enacted, and all existing laws in conflict with any of these sections are superseded insofar as necessary to accomplish the purposes of and carry out the provisions of these sections.

Sec. 37.15.710. DEFINITIONS. As used in secs. 570 - 710 of this chapter, unless the context otherwise requires:

(1) "bond redemption fund" means the Devil's Canyon Dam Revenue Bond Redemption Fund created by sec. 600 of this chapter, including any accounts which are created in that fund after the effective date of this Act;

(2) "bond resolution" means the resolution or resolutions authorizing the issuance of bonds, adopted by the committee under sec. 620 of this chapter;

(3) "bonds" means the Devil's Canyon Dam revenue bonds authorized by secs. 570 - 710 of this chapter;

(4) "commissioner of public works" means the principal executive officer of the Department of Public Works of the state as provided in AS 44.43.010, or his successor;

(5) "commissioner of revenue" means the principal executive officer of the Department of Revenue of the state as provided in AS 44.-25.010, or his successor;

1 (6) "committee" means the state bond committee created by  
2 sec. 110 of this chapter, or any other committee, body, department or  
3 officer of the state which or who succeeds to the rights, powers, duties  
4 and obligations of the state bond committee by lawful Act of the legis-  
5 lature;

6 (7) "construction fund" means the Devil's Canyon Dam Construc-  
7 tion Fund created by sec. 580 of this chapter;

8 (8) "dam" means the dam across the Susitna River at Devil's  
9 Canyon;

10 (9) "revenue fund" means the Devil's Canyon Dam Revenue Fund  
11 created by sec. 590 of this chapter.

12 \* Sec. 4. For the purpose of carrying out the provisions of AS 37.15.570 -  
13 37.15.710, there is appropriated from the Devil's Canyon Dam Construction  
14 Fund the sum of \$800,000,000.