

H B

94

TESTIMONY ON HB 94
HOUSE RESOURCES COMMITTEE

March 11, 1983

Presented by Gregory F. Cook
Faulkner, Banfield, Doogan & Holmes
P.O. Box 1150
Juneau, Alaska 99802
(907) 586-2210

HB 94 seeks to amend existing law relating to seizure and forfeiture of items used in fish and game violations. The bill is a good start, but in my opinion, it needs significant amendments before it should be adopted.

Seizure and forfeiture of equipment used to commit violations of fish and game laws are critical enforcement tools. These tools are needed to conserve fishery and wildlife resources. At the same time, however, it is important for the State to recognize the rights of innocent owners. The bill as it now stands does not recognize these basic, constitutional rights known generally as "due process" requirements.

The Alaska Supreme Court and the United States Supreme Court have each addressed the need to protect the rights of innocent (and non-negligent) owners of property used by a "third person" for the commission of a crime. All persons must be presumed innocent until proven guilty. A seizure of nets, a vessel, or an airplane occurs before a trial showing guilt or


innocence. Due process of law guarantees the following rights to everybody whose equipment is seized under AS 16.05.190:

- (1) judicial review of specific facts supporting the seizure before the seizure happens;
- (2) reasonable notice to the owner that a seizure has occurred;
- (3) the right of the owner to a prompt, meaningful, post-seizure judicial hearing;
- (4) the right to petition for "remission" or "mitigation" of the seizure;
- (5) the opportunity to post a bond and secure release of the item seized.

Seizures and forfeitures are complex areas of law. Drafting a bill that meets the requirements of the Alaska Constitution and the United States Constitution will require significant additional drafting work. I respectfully call the attention of the Resources Committee members to this fact, and suggest that the Judiciary Committee could be the proper forum to make those corrective amendments. I stand ready to assist both committees, and legislative counsel in this matter.

Thank you for your time and attention.

Respectfully submitted,


Gregory F. Cook
March 10, 1983

STATE OF ALASKA
PRELIMINARY STATEMENT OF FISCAL IMPACT

Bill No: CSHB 94 (RES) Date on Bill: 2-8-83
 Title: "An Act relating to the seizure of items used in or in aid of fish and game violations."
 Sponsor: Representative Bettisworth
 Requestor: Legislative Budget Review Committee

RECEIVED
 3-4-83

1. Estimated fiscal impacts on:

a. Expenditures:

(Thousands of Dollars)

			FY 83	FY 84	FY 85	FY 86	
Capital							
Operative			-	173.9	188.6	199.9	
Total							

b. Revenues:

Revenue							
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2. Source of funds to offset fiscal impact of bill:

No information provided

3. ASSUMPTIONS: This bill would have a significant negative impact upon the Department of Law's efforts to prosecute violations of the state fish and game laws. It allows seizure of items used in violations of the law only if the seizure is necessary to preserve items of evidence. A defendant who disagrees with this judgment on the officer's part may be expected to sue to regain possession, and this would have to be litigated. The bill would require the commitment of additional attorney time to attend the hearings which must be held within seven days after charges are filed in order to extend a seizure. All items, even those which are clearly evidentiary in nature, must be returned to the defendant unless the department obtains a court order allowing the police to keep it. This is a change in criminal procedure which is not found in any other area of criminal law; it would significantly impair our ability to prosecute these cases. In situations where there were multiple defendants, one defendant could request and obtain the return of his property, the other defendants could move to dismiss their charges because the state had not retained possession of the evidence.

4. Disclaimer:

This statement has not been reviewed by the OMB in the Office of the Governor. It therefore does not represent the final estimate of fiscal impact.

Prepared By: Daniel W. Hickey, Chief Prosecutor

Phone: 465-3428

Division: Department of Law/ Criminal Division

Date: 3-3-83

Approved by Commissioner: Richard L. Bono / Lee / Norman C. Gorsuch, Attorney General

Date: 3/3/83

Department: Department of Law

5. Distribution:

- Original to Legislative Finance
- Copy to OMB
- Copy to Sponsor
- Copy to Requestor

2/15/83

THE LEGISLATURE OF THE STATE OF ALASKA
THIRTEENTH LEGISLATURE

H.R.
RECEIVED

FEB 7 1983

FISCAL NOTE

I. REQUEST
 Bill/Resolution No. HB 94 LEGISLATIVE FINANCE
 Title An Act relating to the seizure of items used in or in aid of F & G violations.
 Requested by House Resources Committee Date 1/31/83

II. FISCAL DETAIL
 Agency Affected Department of Fish and Game
 Program Category Affected Natural Resources Management & Environmental Conservation
 BRU, Program, Or Subprogram(s) Affected Commercial Fisheries, Game & Sport Fish
 (Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL	-0-	-0-	-0-			

FUNDING (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS

FULL TIME						
PART TIME						
TEMPORARY						

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

IV. DATE January 31, 1983 PREPARED BY Beverly D. Reaume
 AGENCY Department of Fish and Game
 PHONE 465-4120
 Original: Legislative Finance
 cc: Budget and Management
 Prime Sponsor (First Legislator Named)
 33-001 (Rev. 12/82)
 OMB Reviewed by: Eric Laschever

CSHB 94 ANALYSIS

Section 1

Authorizes the seizure of items discovered under a valid search if the person making the search determines that the items in question should be held as evidence of a fish and game violation. Parts of fish or game nests or eggs of birds taken, transported, or possessed may also be seized.

Disposal of fish and game, or their parts that have been seized, is left up to the court if the person they have been seized from is convicted. If the court sees fit to sell the fish and game used as evidence proceeds shall, by way of the proper state officer, be deposited in the general fund.

Items seized having an individual value of \$2500 or more cannot be held beyond 7 days after charges are filed in court for the associated violation, unless an extension is approved by court order for cause shown.

Policy Question

Should citizens who have had items valued at \$2500 or more seized in an alleged fish and game violation be afforded the opportunity to have the court ascertain within 7 days after charges are filed whether or not the items seized should be held as evidence in the case.

Possible Considerations

- 1) Remedies that are now available without this proposed change in law.
- 2) Costs of implementing this law
- 3) Costs to citizens under present system, should they be found innocent

MAR 4 1983

STATE OF ALASKA
PRELIMINARY STATEMENT OF FISCAL IMPACT

Bill No: HB 94 Date on Bill: 1 - 20 - 83
Title: An Act relating to the seizure of items used in or in aid of F & G violations
Sponsor: Rep. Bettisworth
Requestor: House Resources

1. Estimated fiscal impacts on:

a. Expenditures:

(Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86
Capital				
Operating				
Total	-0-	-0-	-0-	-0-

b. Revenues:

Revenue				
---------	--	--	--	--

2. Source of funds to offset fiscal impact of bill:

Source of funds not identified by sponsor

3. Assumptions:

No Fiscal Impact

4. Disclaimer:

This statement has not been reviewed by the OMB in the Office of the Governor. It therefore does not represent the final estimate of fiscal impact.

Prepared By: Col. R.J. Stickles Phone: 269-5532
Division: Fish & Wildlife Protection Date: 3-2-83

Approved by Commissioner: [Signature] Date: 3-3-83
Department: [Signature] Public Safety

5. Distribution:

- Original to Legislative Finance
- Copy to OMB
- Copy to Sponsor
- Copy to Requestor

2/15/83

STATE OF ALASKA
FISCAL NOTE

Revision Date Mar. 11, 1983

I. REQUEST

Bill/Resolution No.: CS HB 94
 Title: "Seizure of items..F & G violations"
 Sponsor: Representative Bettisworth
 Requestor: House Resources Committee

II. FISCAL DETAIL

Agency Affected: FISH AND GAME
 Program Category Affected: NRMEC
 BRU, Program of Subprogram(s) Affected:
Commercial Fisheries, Game & Sport Fish

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
OPERATING						
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

III. SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

IV. ANALYSIS: Attach a separate page for any Analysis

Prepared By: Beverly Reaume *Beverly Reaume* Phone: 465-4120
 Division: Administration Date: 03/11/83
 Approved by Commissioner: Don W. Collinsworth *Don W. Collinsworth* Date: 3-11-83
 Department: Fish and Game

Distribution:

Original to Legislative Finance
 Copy to Office of Management and Budget (for Legislature introduced bills)
 Copy to Department (for Governor introduced bills)
 Copy to Sponsor
 Copy to Requestor (if different from Sponsor)

3/8/83



Alaska Sportfishing Association

3605 Arctic Blvd., Suite 800 • Anchorage, Alaska 99503

MAR 2 - 1983

February 28, 1983

Representative Dick Shultz
Co-Chairman, Natural Resources Committee
Pouch V
Juneau, AK 99811

Dear Representative Shultz:

The Alaska Sportfishing Association urgently requests your support in denying confirmation to Governor Sheffield's appointees to the Board of Fisheries until such time as two, true sportfishing representatives are appointed to the board. Please keep in mind that the Board of Fisheries meets on March 21, 1983, whether these appointees are confirmed or not. Sportfishing and tourism for 1983 and beyond will be affected by their decisions.

The appointments to the Board of Fisheries by Governor Sheffield has triggered a highly indignant response by sportfishing enthusiasts throughout Alaska. The lobbying and pressures brought by commercial-fishing interests have decreased the representation to this critical body from three to what we now consider to be effectively zero.

The Board of Fisheries has the power to allocate fish above escapement requirements to the various fishing interests. We feel that the appointments, as they currently exist, are an absolute insult to the 100,000 licensed sportfishermen in the Anchorage-bowl, and a serious threat to sportfishing interests from the Matanuska Valley to Homer. The five sportfishing associations in the Anchorage area asked for an appointment with Governor Sheffield while he was here. He did not even grant time to listen to our grievance.

We do not contend that the appointees are not highly respected and qualified people. We simply insist on true sportfishermen being placed on the Board of Fisheries to represent sportfishing and the highly valuable tourist industry when allocating fish resources.

We do question the ability of Mr. Paul Weller, the only appointee with sportfishing inclinations, to fairly represent the sportfishing side. The last time a sportfishing representative was chosen from the Kenai-Soldotna area (Dr. Fair), who truly represented the sportfishermen and acted on their behalf, was forced to resign after receiving threatening phone calls, attempted boycott of his business, chiding to his children at school, and malicious acts to his private property. Mr. Weller is backed by Lottie Ettelman, a long-time, setnet-fishing operator and commercial-fishing activist (in addition to being a top democrat in that area). In fairness to Mr. Weller, he was considerate enough to attend our general membership meeting on February 8, 1983, which displayed some interest in representing our cause, though there was a feeling he lacked knowledge of fishing issues (after four years of representation on the Kenai-Soldotna Advisory Committee).

Representative Dick Shultz
February 28, 1983
Page 2

In my earlier letter to Governor Sheffield before the appointments were made, we recommended Mr. William E. Moulton, Jr., and Ms. Toni Salmeier as two superbly-qualified individuals who have been highly involved in both the sportsfishing and tourist industry. Mr. Moulton is also a Fish and Wildlife graduate.

Additionally, your support in the speedy passage of House Bill 63 is requested. This bill would establish sportsfishing on an equal basis with subsistence fishing and would at least minimize the devisiveness of the priority subsistence issue.

These and many other actions are drawing keen interest by sportsfishers throughout Alaska. I assure you that we intend to track actions taken and to keep the public aware of the responsiveness of their legislators.

Sincerely,



Robert L. Hunter, President
Alaska Sportsfishing Association

STATE OF ALASKA
FINAL* STATEMENT OF FISCAL IMPACT

Bill No: CSHB 94 Date on Bill: 2/8/83
 Title: Seizure of items used in or in aid of fish and game violations
 Sponsor: Bettisworth and Grussendorf
 Requestor: House Resources Committee

1. Estimated fiscal impacts on:

a. Expenditures:

(Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	
Capital					-
Operating					
Total	-0-	-0-	-0-	-0-	

b. Revenues:

Revenue					
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2. Source of funds to offset fiscal impact of bill:

3. Assumptions:

*This statement has been reviewed by the OMB in the Office of the Governor.

Prepared By: Richard P. Barrier *[Signature]* Phone: 264-0545
 Division: Alaska Court System Date: 3/8/83

Approved by Commissioner: _____ Date: _____
 Department: _____

Reviewed by OMB: _____ Date: _____
 Phone: _____

5. Distribution:

- Original to Legislative Finance
- Copy to Department
- Copy to Sponsor
- Copy to Requestor

2/24/83

conducting the search for property which is taken as a result of the search. The enumeration of specific things does not limit the meaning of words of a general nature. (§ 22 art I ch 94 SLA 1959)

This section is constitutional. 1959 Op. Att'y Gen., No. 15.

This section is tailored carefully to art. I, § 14, of the Alaska Constitution and is therefore valid. 1959 Op. Att'y Gen., No. 15.

There is no constitutional requirement that all searches be with warrant. 1961 Op. Att'y Gen., No. 19.

And reasonable searches may be made without warrant. 1961 Op. Att'y Gen., No. 19.

"Reasonable search". — A reasonable search is one made (a) upon probable cause that fruits of a crime or evidence relating to the crime will be found; (b) under circumstances which would make the securing of a warrant impracticable. 1961 Op. Att'y Gen., No. 19.

The mere observation of items which are in plain view or which are open and apparent, is not a search. Consequently, evidence based on such observations is admissible so long as the observing officer was legally in the position where the observations were made. *Klockenbrink v. State*, Sup. Ct. Op. No. 631 (File No. 1149), 472 P.2d-958 (1970).

A search may be made pursuant to a valid arrest, providing that the arrest is made prior to the search. 1961 Op. Att'y Gen., No. 19.

Requirement of written signed statement objectionable but valid. — The amendment requiring a written signed statement of the reason for the search is objectionable but valid. It is objectionable because it unnecessarily ties the hands of the field agents charged with enforcement of the fish and game laws, and is a provision which is quite uncommon, if not unique. 1959 Op. Att'y Gen., No. 15.

Sec. 16.05.190. Seizure without warrant and confiscation by court. Guns, traps, nets, fishing tackle, boats, aircraft, automobiles or other vehicles, sleds, and other paraphernalia used in or in aid of a violation of this chapter, or rule or regulation of the department may be seized under a valid search, and all fish and game, or parts of fish and game, or nests or eggs of birds, taken, transported, or possessed contrary to the provisions of this chapter, or rule or regulation of the department shall be seized by any person designated in § 150 of this chapter. Upon conviction of the offender or upon judgment of the court having jurisdiction that the item was taken, transported, or possessed in

Such requirement will not validate an invalid search. — The statutory requirement that fish and game agents fill out a form stating the objects of search will not make an otherwise invalid search valid. 1961 Op. Att'y Gen., No. 19.

But it may invalidate an otherwise valid search if not complied with. 1961 Op. Att'y Gen., No. 15.

This section requires that notice be given to the person "in control" of crab pots. *Nathanson v. State*, Sup. Ct. Op. No. 1310 (File No. 2541), 554 P.2d 456 (1976).

Failure to notify owner of crab pots was not a violation of this section where officers of the Department of Fish and Game approached the crab pots to conduct a search to check the extent of compliance with a regulation providing that fishermen could place their crab pots in the water up to 72 hours prior to the opening of the season and the owner was not present, attending to his crab pots, since there being no "person in control of the property or object to be searched," the officers were unable to give him the required notice. *Nathanson v. State*, Sup. Ct. Op. No. 1310 (File No. 2541), 554 P.2d 456 (1976).

Notice required for search of vessel, building, etc. — The considerations leading to the conclusion that no notice was required for a search of crab pots would not apply to the search of a vessel, building or other effects in which the owner would have a reasonable expectation of privacy. *Nathanson v. State*, Sup. Ct. Op. No. 1310 (File No. 2541), 554 P.2d 456 (1976).

Area of vessel open to search. — In the case of a vessel, the limits of the area open to search probably include the entire vessel. 1961 Op. Att'y Gen., No. 19.

violation of th and game, or disposed of as be transmitted Guns, traps, n and other par: rule or regula court, shall b the fine, if an

A seizure is a under the provisio v. State, Sup. Ct. 391 P.2d 946 (196

Forfeiture act In case of forfeitu acts upon the th interest of all the actually appears the title of the changed, and the forfeiture travel: future progres Pollastrine, 8 Al

It divests titles necessarily dive: whether of title (the thing forfeite it should not e: lienholder equall It binds the int United States v. (1929).

Section d mandatory and — This section mandatory forfe game, birds) discretionary fo (guns, traps, a State, Sup. Ct. O 545 P.2d 629 (19

Not between c proceedings. — legislature sou contraband and mandatory and not between re forfeiture proce Sup. Ct. Op. No P.2d 629 (1976).

Sec. 16.05. fishing gear, paraphernalii regulation pr

violation of this chapter or rule or regulation of the department, all fish and game, or parts of them are forfeited to the state and shall be disposed of as directed by the court. If sold, the proceeds of the sale shall be transmitted to the proper state officer for deposit in the general fund. Guns, traps, nets, fishing tackle, boats, aircraft, or other vehicles, sleds, and other paraphernalia seized under the provisions of this chapter, or rule or regulation of the department, unless forfeited by order of the court, shall be returned, after completion of the case and payment of the fine, if any. (§ 23 art I ch 94 SLA 1959)

A seizure is a prerequisite to forfeiture under the provisions of this section. *Rubino v. State*, Sup. Ct. Op. No. 215 (File No. 395), 391 P.2d 946 (1964).

Forfeiture acts upon the thing itself. — In case of forfeiture, the decree of the court acts upon the thing itself and binds the interest of all the world, whether any party actually appears or not. If it is condemned, the title of the property is completely changed, and the new title acquired by the forfeiture travels with the thing in all its future progress. *United States v. Pollastrine*, 8 Alas. 104 (1929).

It divests titles and liens. — A forfeiture necessarily divests every existing right, whether of title or lien or other interest, in the thing forfeited. There is no reason why it should not extinguish the right of a lienholder equally with that of the owner. It binds the interests of all the world. *United States v. Pollastrine*, 8 Alas. 104 (1929).

Section distinguishes between mandatory and discretionary forfeiture. — This section distinguishes between mandatory forfeiture of contraband (fish, game, birds) upon conviction, and discretionary forfeiture of paraphernalia (guns, traps, aircraft, etc.). *Graybill v. State*, Sup. Ct. Op. No. 1234 (File No. 2386), 545 P.2d 629 (1976).

Not between criminal or civil forfeiture proceedings. — The distinction which the legislature sought to draw between contraband and paraphernalia is between mandatory and discretionary forfeiture, not between requiring criminal or civil forfeiture proceedings. *Graybill v. State*, Sup. Ct. Op. No. 1234 (File No. 2386), 545 P.2d 629 (1976).

Sec. 16.05.195. Forfeiture of equipment. (a) Guns, traps, nets, fishing gear, vessels, aircraft, other motor vehicles, sleds, and other paraphernalia or gear used in or in aid of a violation of this title, or regulation promulgated under this title, and all fish and game or parts

Forfeitures, even when civil in form, are basically criminal in nature. *Graybill v. State*, Sup. Ct. Op. No. 1234 (File No. 2386), 545 P.2d 629 (1976).

"Order of the court" may refer to orders rendered following criminal conviction. — Since the "case" and "fine" referred to in this section concern criminal proceedings, it is reasonable to interpret an "order of the court" as likewise referring to orders rendered subsequent to a criminal conviction, as well as those following a separate civil action. *Graybill v. State*, Sup. Ct. Op. No. 1234 (File No. 2386), 545 P.2d 629 (1976).

Valid forfeiture where defendant convicted under AS 16.05.920. — Where defendant was convicted under AS 16.05.920, which makes certain acts unlawful, in order to effect a valid forfeiture of defendant's aircraft, it was not necessary for the state to institute a separate civil in rem proceeding against the aircraft. *Graybill v. State*, Sup. Ct. Op. No. 1234 (File No. 2386), 545 P.2d 629 (1976).

While forfeiture is a civil remedy unless otherwise provided by statute, this section, as it applied to a defendant who was convicted under AS 16.05.920, did so provide. *Graybill v. State*, Sup. Ct. Op. No. 1234 (File No. 2386), 545 P.2d 629 (1976).

For cases construing seizure and forfeiture under the provision of ACLA 1949, § 39-2-10, see *United States v. One Fish Trap*, 7 Alas. 215 (1924); *United States v. The Pacific*, 7 Alas. (1924); *United States v. One Floating Fish Trap*, 7 Alas. 334 (1925); *The M. & M.*, 8 Alas. 17 (1928).

Cited in *Wacek v. State*, Sup. Ct. Op. No. 1108 (File No. 2166), 530 P.2d 751 (1975).

be enacted to benefit the state. It is desired that the department participate in the federal aid program on the same basis as other states. (§ 20 art I ch 94 SLA 1959)

Sec. 16.05.150. Enforcement authority. The following persons are peace officers of the state and they shall enforce this chapter:

- (1) an employee of the department authorized by the commissioner;
- (2) a police officer in the state;
- (3) any other person authorized by the commissioner. (§ 21 art I ch 94 SLA 1959)

Enforcement of fish and game laws on military reservations. — Where the military does not assign sufficient personnel to enforce fish and game laws on military reservations, state game officials as well might enforce them, possibly by deputizing state game officials as federal marshals, since 10 U.S.C. 2671(c) makes violation of state fish and game laws a federal offense. 1964 Op. Att'y Gen., No. 2.

Since state fish and game laws operate

on a federal military reservation, not only as federal law but also as state law, both the federal and state officers may enforce these laws. 1964 Op. Att'y Gen., No. 2.

State officers should have full access to military reservations in Alaska, subject to safety and military security requirements, to enforce laws and manage and harvest fish and game resources. 1964 Op. Att'y Gen., No. 2.

Sec. 16.05.160. Duty to arrest. Each person designated in § 150 of this chapter shall arrest a person violating this chapter, or any rule or regulation made under this chapter, in his presence or view, and shall take the person immediately for examination or trial before an officer or court of competent jurisdiction. (§ 21 art I ch 94 SLA 1959)

Cited in *Schuster v. State*, Sup. Ct. Op. No. 1305 (File No. 2911), 553 P.2d 925 (1976).

Sec. 16.05.170. Power to execute warrant. Each person designated in § 150 of this chapter may execute a warrant or other process issued by an officer or court of competent jurisdiction for the enforcement of this chapter, and may, with a search warrant, search any place at any time. The judge of a court having jurisdiction may, upon proper oath or affirmation showing probable cause, issue a warrant in all cases. (§ 21 art I ch 94 SLA 1959)

Sec. 16.05.180. Power to search without warrant. Each person designated in § 150 of this chapter may without a warrant search any thing or place if the search is reasonable or is not protected from searches and seizures without warrant within the meaning of § 14, art. I of the state constitution, which specifically enumerates "persons, houses and other property, papers and effects." However, before a search without warrant is made a signed written statement by the person making the search shall be submitted to the person in control of the property or object to be searched, stating the reason the search is being conducted. A written receipt shall be given by the person

AMENDMENT

To: HB 94

By Shultz

Page: 2

Line: 1

After the word after, delete the word seizure and add the language charges for the associated violation are filed with the court unless an extension is approved by the court order for cause shown.

Initial Analysis -- HB 94 "An act relating to the seizure
of items used in or in aid of
fish and game violations."

This bill would help protect the property rights of persons accused of fish and game violations in two areas. First, it would require that the state could not seize the items in the first place, unless the person making the seizure had determined that his actions were necessary to preserve evidence of a violation. Currently this determination is not necessary for the seizure to take place.

Second, the bill would place a 7-day limit on the amount of time the state may hold the confiscated items before they would have to be returned, unless the court grants an extension for cause shown.

Additionally, the bill would clean up current statutes involved in this section by removing the words "or rule" where they appear unnecessarily (four times).

STATE OF ALASKA
FISCAL NOTE

Revision Date Mar. 11, 1983

I. REQUEST

Bill/Resolution No.: CS HB 94
 Title: "Seizure of items..F & G violations"
 Sponsor: Representative Bettisworth
 Requestor: House Resources Committee

II. FISCAL DETAIL

Agency Affected: FISH AND GAME
 Program Category Affected: NRMEC
 BRU, Program of Subprogram(s) Affected:
Commercial Fisheries, Game & Sport Fish

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
OPERATING						
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

III. SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

IV. ANALYSIS: Attach a separate page for any Analysis

Prepared By: Beverly Reaume *Beverly Reaume* Phone: 465-4120
 Division: Administration Date: 03/11/83
 Approved by Commissioner: Don W. Collinsworth *Don W. Collinsworth* Date: 3-11-83
 Department: Fish and Game

Distribution:

Original to Legislative Finance
 Copy to Office of Management and Budget (for Legislature introduced bills)
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3/8/83

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF LAW

OFFICE OF THE ATTORNEY GENERAL

POUCH K-STATE CAPITOL
JUNEAU, ALASKA 99811

January 21, 1982

Pat Lawler
Administrative Assistant
House Natural Resources Committee
Alaska House of Representatives
Pouch V
Juneau AK 99811

Re: HB 231

Dear Mr. Lawler:

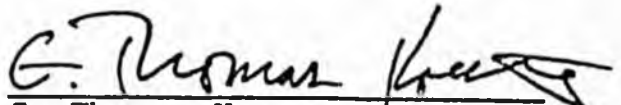
This will confirm our conversation earlier today regarding HB 231, "An Act relating to the the seizure of items used or in aid of fish and game violations."

The Department of Law supports the position expressed by the Department of Public Safety on this bill. In particular, Public Safety's comments regarding the impact of this proposal on the criminal justice system cannot be overstated. Because of the time delays inherent in pursuing fish and game violations in remote areas, and the additional time delays inherent in the criminal justice system, virtually every instance in which an item is seized would require an appearance in court to seek a judicial extension of the seven day period the bill would permit law enforcement officers to hold the item. This, in turn, would divert both field officers and district attorney resources from more substantive pursuits (i.e., the apprehension and prosecution of other criminal violations). In addition, it would further crowd already crowded court calendars.

Summarizing, it is the Department of Law's position that HB 231 would have a severe detrimental impact on the enforcement of the state's fish and game laws. Please communicate our views to the Natural Resources Committee at your convenience. Thank you.

Sincerely,

WILSON L. CONDON

by: 
G. Thomas Koester
Assistant Attorney General



STATE OF ALASKA
OFFICE OF THE GOVERNOR

BILL ANALYSIS

Department Public Safety	Sponsor (Principal) Randolph, Abood, Barnes Beirne, Bettisworth, Bvlsma, Fanning, Metcalf, and Montgomery	Bill Number HB 231
Department Position Oppose		
Division Director Colonel Robert J. Stickles	Date 03/10/81	Commissioner <i>[Signature]</i> Commissioner William R. Nix
		Date 03/10/81

GOVERNOR'S OFFICE USE

Comments:

Position Noted

By _____ Date _____

SUMMARY

1. a) Related Bills (Similar or Conflicting) None	1. b) Other Agencies Affected by Bill Court System, District Attorney's Office
2. a) Organizational Support for Bill Unknown	2. b) Organizational Opposition to Bill Unknown

3. Program Effects of Bill

The position taken on this bill reflects the conclusion that there would be a severe detrimental effect on enforcement of all fish and game laws statewide.

4. Fiscal Impact: None Fiscal Note Attached

5. Amendments Proposed:

6. Comments:

- The wording of the first added section on page 1, lines 14, 15, 16 would seem to prohibit the seizure or retention of items used in the commission of a violation, as with a weapon used to take game out of season. The weapon would not be specific evidence of a violation but an instrument used in the commission of it, pointing to the complicity of an individual in the violation. Many times, however, such an instrument of a violation is essential in prosecuting any accused party.
- The wording of the second added section, page 1, line 29, and page 2, line 1, within seven days after the seizure unless an extension is approved by court order for cause shown may lead to several problems.
 - Due to distance from the nearest court and intervening weather much evidence

could not reach a court within seven days nor could the officer(s) involved get to court to present the reasons for a court order.

- b. In the case of an aircraft or vessel seizure a complete inventory is necessary to protect the owner of the equipment and the state, and is no doubt necessary for a court order for retention, but at times an inventory could not be completed in seven days.
 - c. If an item must be returned to the owner because, through communications problems or remoteness of the site no court order has been issued in time, the evidence value of the item is, in many cases, destroyed. This can result in prosecutable violations being dismissed for lack of evidence.
 - d. Requiring the return of the evidence within a seven day period places a burden on the state possibly very difficult to meet. If a Department of Public Safety aircraft or vessel is still enroute to the location of evidence storage or a court, and a court order has not been obtained for whatever reason (difficulty in reaching a magistrate or the necessity of showing the evidence to a court official), apparently despite weather or other considerations the Department aircraft or vessel must return to locate the owner who by now may be enroute elsewhere himself. The bill, as written, makes no provision for difficulty in locating the owner or for delay due to the person attempting to return the evidence becoming engaged in investigating other violations or engaged in work of an emergency nature such as a search and rescue mission.
 - e. Failure to return the evidence in the time allotted would apparently open the state to court suit.
 - f. Return of the evidence within a fixed time may sometimes involve great expense to the state such as when crab pots must be taken many miles by a large vessel in the Bering Sea and may cause serious disruption of a planned patrol effort.
 - g. The issuance of approximately 1,000 court orders per year, at a rate of about 5 per working day, will be a considerable burden on the court system requiring much more time devoted to fish and game violations than at present. This could possibly either disrupt the administration of justice in other areas, or frustrate the proper enforcement of fish and game laws.
 - h. Return of evidence, especially in the case of large items, could frustrate any later attempts by the state to have the item forfeited after the case was completed (a position suggested in the recent Alaska Supreme Court decision in the American Eagle case).
3. The seizure of evidence or instrumentalities of a violation, and whether it can be used in any case against any defendant is presently regulated quite

rigidly by the United States Constitution, sections of Title 16 of the Alaska Statutes, and rules of court concerning both criminal and civil procedure. In addition, there are Department of Public Safety policies on seizure of evidence.

All of the above restrictions presently act in concert to prevent abuse of citizens' rights.

IDENTIFICATION	BILL NAME AN ACT RELATING TO THE SEIZURE OF ITEMS USED IN OR IN AID OF FISH & GAME VIOLATIONS.		BILL NUMBER HB 94
	SPONSOR(S) BETTISWORTH & GRUSSENDORF		DATE INTRODUCED 1/20/83
			RELATED BILLS PENDING -NONE-
INITIAL RESEARCH	INITIAL SUMMARY COMPLETED <i>J. Mandy 1/26</i>	LEGAL DIVISION SUMMARY	
	SPONSOR CONTACTED FOR BACKUP MATERIALS	DEPT OF LAW SUMMARY	
	AGENCY RESPONSE	FISCAL NOTE	
		OTHER INTERESTED LEGISLATORS NOTIFIED	
BACKGROUND RESEARCH	SIMILAR BILLS INTRODUCED IN PREVIOUS LEGISLATURES HB 231 - RANDOLPH 1981		OTHER STATE OR FEDERAL PRECEDENTS, REGULATIONS, ETC
	RESPONSES FROM INTERESTED PERSONS AND/OR GROUPS		
HEARING PREPARATION	CHAIRMAN BRIEFED	DATE & PLACE SET	
	STAFF MEMO TO COMMITTEE	TELECONFERENCE	
	BACKGROUND MATERIAL DISTRIBUTED	PSA/PRESS RELEASE	
	LIST OF WITNESSES	SUGGESTED AMENDMENTS/CS DRAFTED	



STATE OF ALASKA
OFFICE OF THE GOVERNOR

BILL ANALYSIS

Department Fish and Game	Sponsor (Principal) Resources	Bill Number CSHB 231
Department Position OPPOSE		
Division Director Ronald J. Somerville	Date 2/9/82	Commissioner's Signature <i>[Signature]</i> Date 2-10-82

GOVERNOR'S OFFICE USE

Comments:

<input type="checkbox"/> Position Noted	By	Date
-----------------------------------------	----	------

SUMMARY

1. a) Related Bills (Similar or Conflicting) Unkown	1. b) Other Agencies Affected by Bill DPS - Division of Fish and Wildlife Protection
2. a) Organizational Support for Bill Unknown	2. b) Organizational Opposition to Bill Unknown

3. Program Effects of Bill

None, except to the extent that this change might make enforcement to Fish and Game regulations less effective. It is emphasized that adequate enforcement is an integral part of a resource management program.

4. Fiscal Impact: None Fiscal Note Attached

5. Amendments Proposed:

None

6. Comments:

While law enforcement of Fish and Game regulations is the primary responsibility of DPS, Fish and Game Personnel also enforce Title 16 and Fish and Game regulations. It is our opinion that passage of this legislation would be detrimental to efficient enforcement of these statutes and regulations. Seizure of equipment used in commission of a crime serves 2 purposes: 1) to strengthen a case and substantiate how the crime was committed and 2) such seizures (or the knowledge on the part of a potential violator that equipment used is subject to seizure) acts as a very real deterrent, many cases, to the commission of a crime.

H B

99

COMMITTEE REPORT

HOUSE

FURTHER: FINANCE

2/23/83

Date: 4/27/83

Mr. Speaker:

The Committee on RESOURCES has had HB 99

An Act making a special appropriation to the Alaska Power Authority for construction of the Susitna River hydro electric project; and providing for an effective date.

under consideration and reports it back as follows:

- do pass do not pass
- do pass with attached amendments(s)
- replace with CS for HB 99 (RESOURCES) same title
 new title
- and recommends DO PASS
- AND attaches a "Letter of Intent" New Fiscal Note
- reports it back without recommendation Zero Fiscal Note Attached
- referred to the _____ Committee

**MEMBERS SIGNING
DO PASS**

**MEMBERS HAVING
OTHER RECOMMENDATIONS:**

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]
CHAIRMAN

"SUSITNA IS A HIGH RISK SOLUTION TO A NON-EXISTENT PROBLEM"

Statement by Dr. Elliot Wetzler, Ph.D., Economics, Johns Hopkins University.

(Formerly Economist, Division of Budget and Management,
Office of the Governor, State of Alaska, responsible for
AEIRS forecasts, 1981 to mid-March 1983.)

"Susitna is a high risk solution to a non-existent problem.

List of Risks:

- 1) The project is not completed because the State runs out of money, or cannot pay for Susitna and other projects. All the money invested is lost and there may be a huge state debt involved. As a result, billions of dollars may go down the drain.
- 2) The project is completed but demand for electricity is lower than forecast by APA. As a result, the price of electricity would be higher than alternatives. Either the electricity is not sold, or it is sold at higher price if the alternatives are contractually excluded.
- 3) Cost of construction is higher than forecast. This would lead to the same results as 2), that is, either the electricity is not sold or is sold at higher price.

Comments on points 2 and 3:

Past experience with APA forecasts shows that:

- a) APA demand forecasts have been too high; and
- b) APA construction forecasts have been too low.

The result has been that the price per kilowatt hour is higher than anticipated.

Regarding the second part of the statement, 'a non-existent problem':

The cost of electricity in Anchorage is among the lowest in the world. This is not true of the outlying areas, but they have a low demand for electricity. Electricity in Fairbanks is of moderate cost.

High cost of electricity indicates shortages and bottlenecks.
Low cost indicates plentiful supply.

There is natural gas (in Anchorage), coal, wood and fuel oil in abundant supply, providing alternative sources of power and heat.

So the question is: Why invest in Susitna?

The Acres feasibility study shows, with favorable assumptions, a marginal benefit to investment in Susitna, as compared to alternative energy investments.

A further question is: Can the money be invested more wisely? The answer is yes. The State should invest in the necessary infrastructure where there are bottlenecks. The primary area that should be considered is transportation where costs are high. (Roads, water or air transport, as the case may be.)

Investment in Susitna precludes investment in a lot of other worthwhile projects."

#####

Dr. Wetzler further states that Susitna will be a white elephant, just sitting there. "To build Susitna is to turn oil into cement."

#####

Statement obtained via telephone by Belle Blue, April 7, 1983.

Printed and distributed with verbal permission of Dr. Wetzler.

Alaska State Legislature

REPRESENTATIVE
BARBARA LACHER
P.O. BOX 478
PALMER, ALASKA 99645
9071376-4215



WHILE IN JUNEAU,
POUCH V
JUNEAU, ALASKA 99811
9071465-4894

House of Representatives

TO: Representative Ringstad
Chairman of House Resources Committee

FROM: Representative Lacher
Chair of House Community and Regional Affairs

DATE: April 1, 1983

RE: HB 99 - Appropriation for Susitna Hydroelectric Project.

Alaska Power Authority has requested \$47 million for FY '84 in order to continue design and studies of the Susitna Hydroelectric project. I have attached a letter from Eric Yould, Executive Director of APA, which breaks out how the appropriation will be used.

The Susitna Hydroelectric Project Draft Summary Report, prepared by APA forecasts that railbelt energy demands could double by the year 2000 ...just seventeen years from now. APA also predicts that the costs of electricity will nearly triple between 1994 and 2010, if thermal energy, which is produced by coal or gas fired plants, is selected as an alternative to hydroelectricity. This is illustrated in the attached charts and graphs, taken from APA's draft Susitna Hydroelectric Summary Report.

On the other hand, Susitna could eventually produce cost advantages as high as \$5.5 billion.

In order to continue the work necessary to receive licensing from the Federal Energy Regulatory Commission, Alaska Power Authority must complete studies of the environment, of the impact of the dams on fisheries and wildlife, and meet other licensing requirements. APA will also continue with engineering and design work.

In light of the great benefits Susitna Hydropower will bring to so many Alaskans, I strongly urge your support for House Bill 99.

ALASKA POWER AUTHORITY

334 WEST 5th AVENUE - ANCHORAGE, ALASKA 99501

Phone: (907) 277-7641
(907) 276-0001

January 27, 1983

The Honorable Barbara Lacher
House of Representatives
P.O. Box 30
Wasilla, Alaska 99687

Dear Representative Lacher:

Through your assistant you have asked for information relating to the Alaska Power Authority's \$47 million FY84 request for the Susitna project.

The basis of the estimate follows:

<u>Item</u>	<u>Amount (\$ Million)</u>
Harza-Ebasco Contract	35.5
Site explorations, logistical support, licensing support, environmental analysis, detailed engineering and design.	
Alaska Department of Fish & Game	4.0
Fish and wildlife data collection program.	
Land Analysis and Acquisition	0.3
USGS Sediment Studies	0.2
External Review	0.2
Legal Support of FERC Licensing	0.2
USF&WS Support of Environmental Program	0.1
Design Review	1.0
Construction Manager Support	2.0
Transmission Facilities Design	2.0
Power Authority Personnel and Related Costs	1.5
Total	47.0

Alaska State Legislature

REPRESENTATIVE
BARBARA LACHER
P.O. BOX 478
PALMER, ALASKA 99645
9071376-4215



WHILE IN JUNEAU
POUCH V
JUNEAU, ALASKA 99911
9071465-4884

House of Representatives

TO: Representative John Ringstad
Co-Chairman of House Resources Committee

FROM: Representative Barbara Lacher
Chair of House Community and Regional Affairs

DATE: April 5, 1983

RE: House Bill 99, Susitna Hydroelectric.

The Alaska Power Authority Board of Directors has recently revised their estimated funding requirements for FY 84 in order to continue work on Federal licensing requirements for the Susitna project.

The revised estimate is \$22,000,000, to be used in approximately the following proportions:

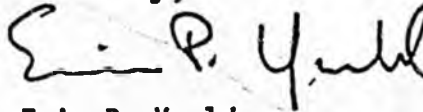
- Environmental studies and activities	55%
- Engineering	10%
- Economic analysis and fiscal impact	3%
- Licensing support and agency coordination	6%
- Program management and consultants	6%
- Alaska Power authority staff	8%
- Contingency	11%

Design work on the project will be delayed for one year at this level of funding. The above information was obtained from Robert Mohn of Eric Yould's office, Executive Director, Alaska Power Authority, on April 5, 1983.

Representative Lacher
January 27, 1983
Page 2

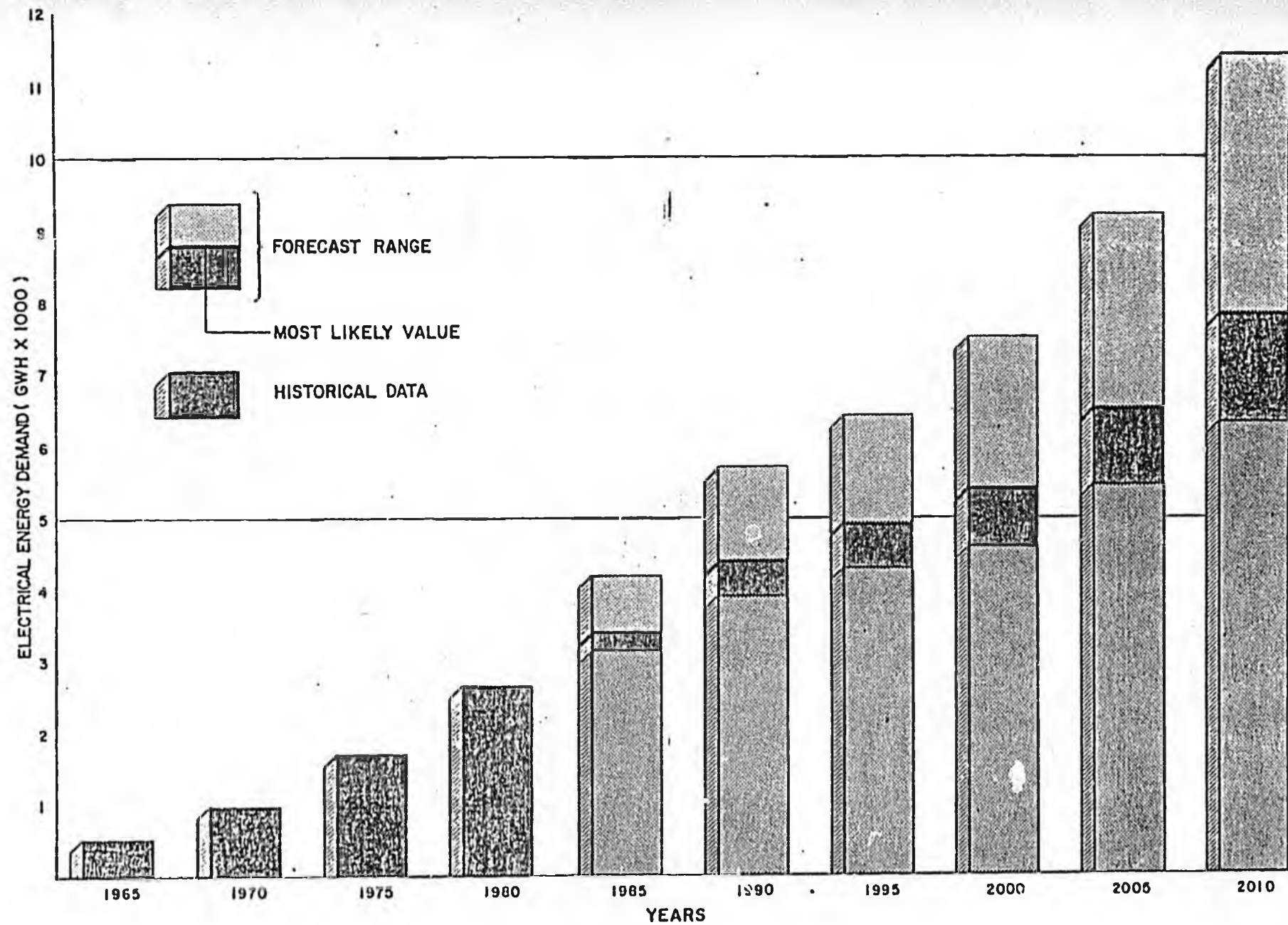
Over the next month, the basis of this estimate will be reviewed in light of the design contract presently under negotiation with Harza- . . . Ebasco and the current outlook for project licensing.

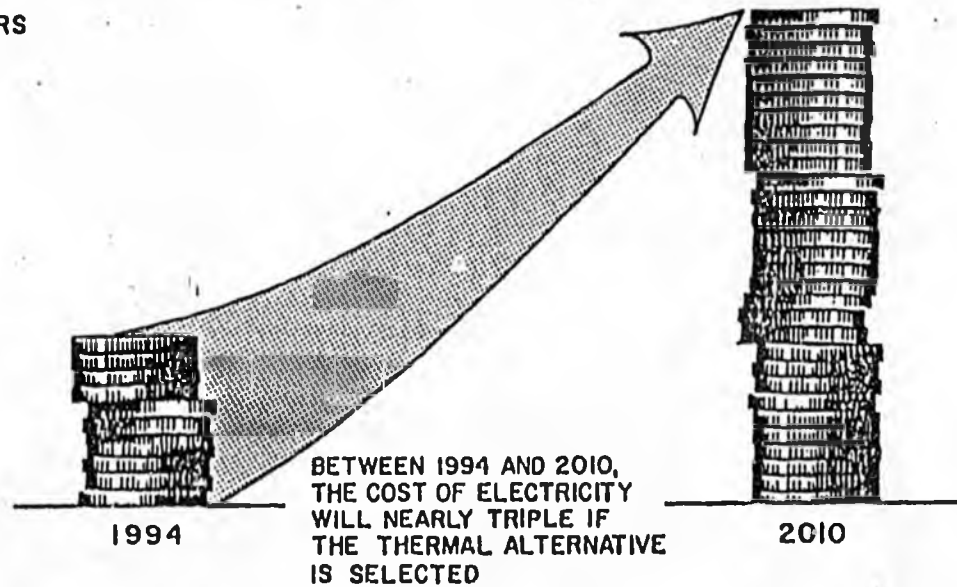
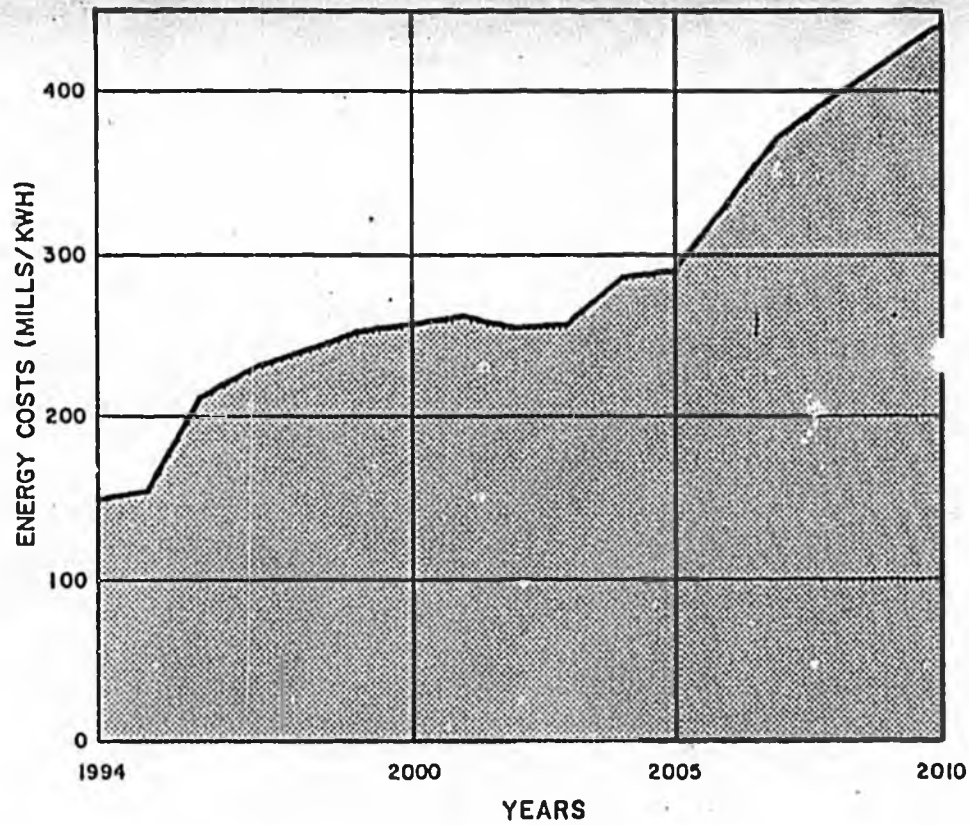
Sincerely,

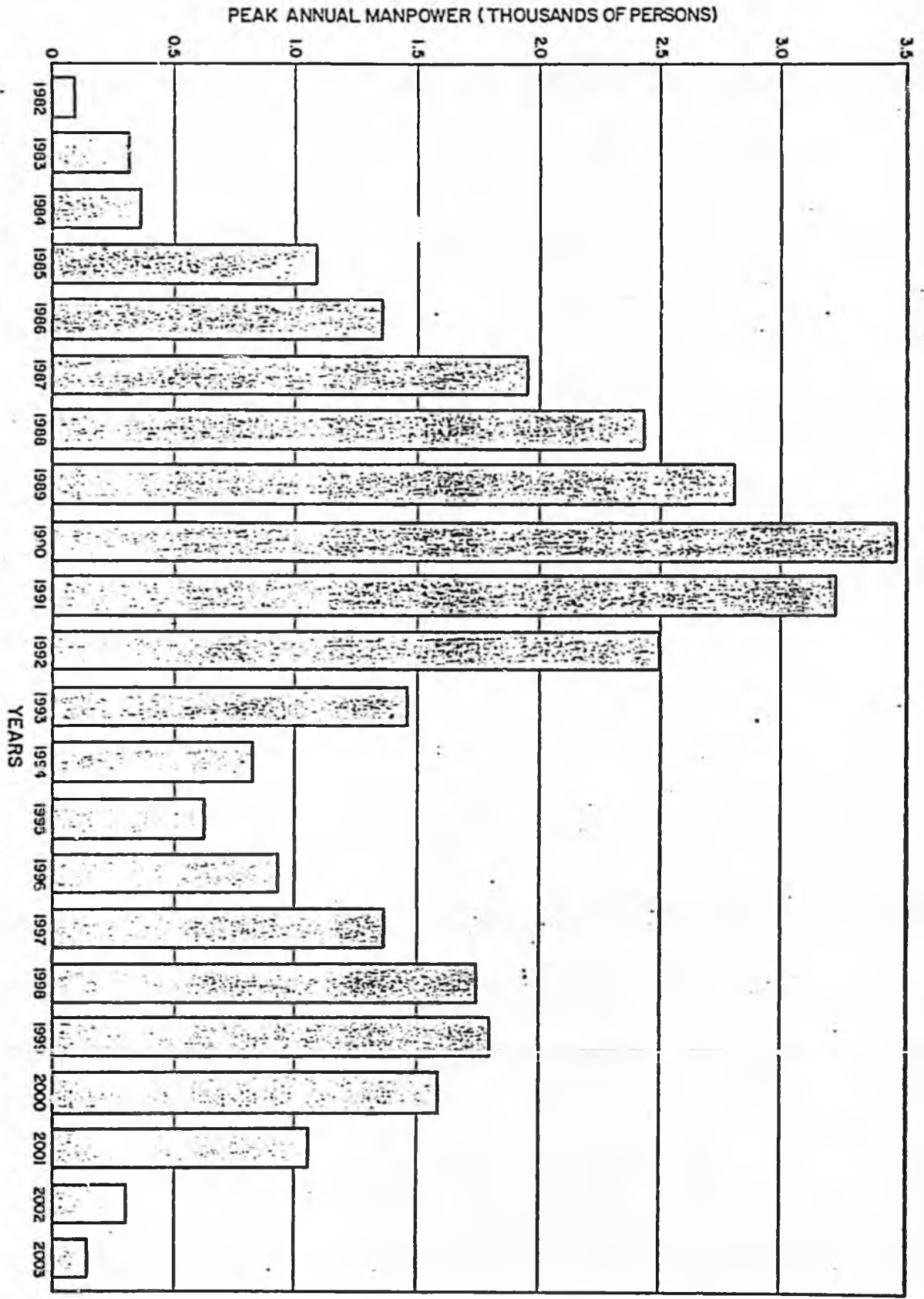


Eric P. Yould
Executive Director

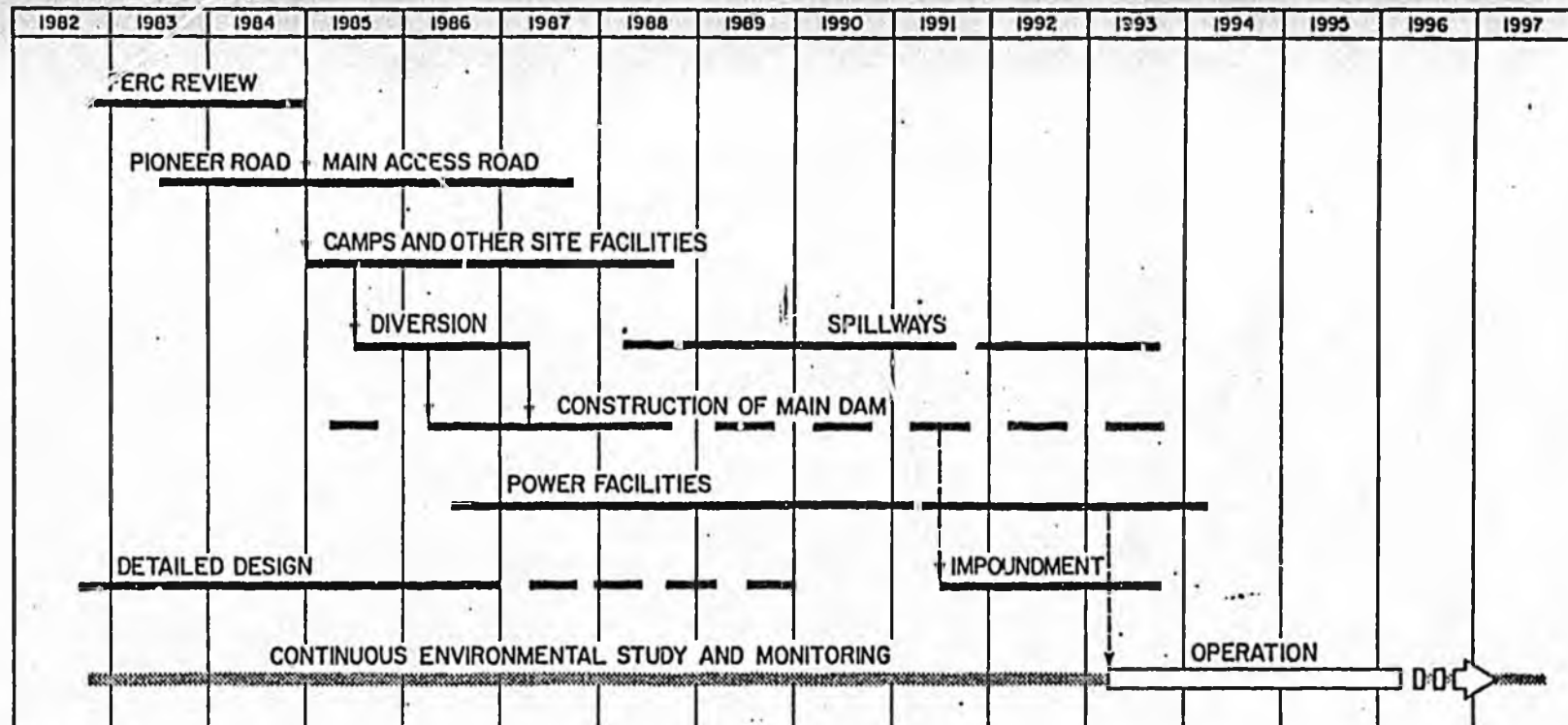
cc: Commissioner Richard Lyon
Pete McDowell
David Wozniak



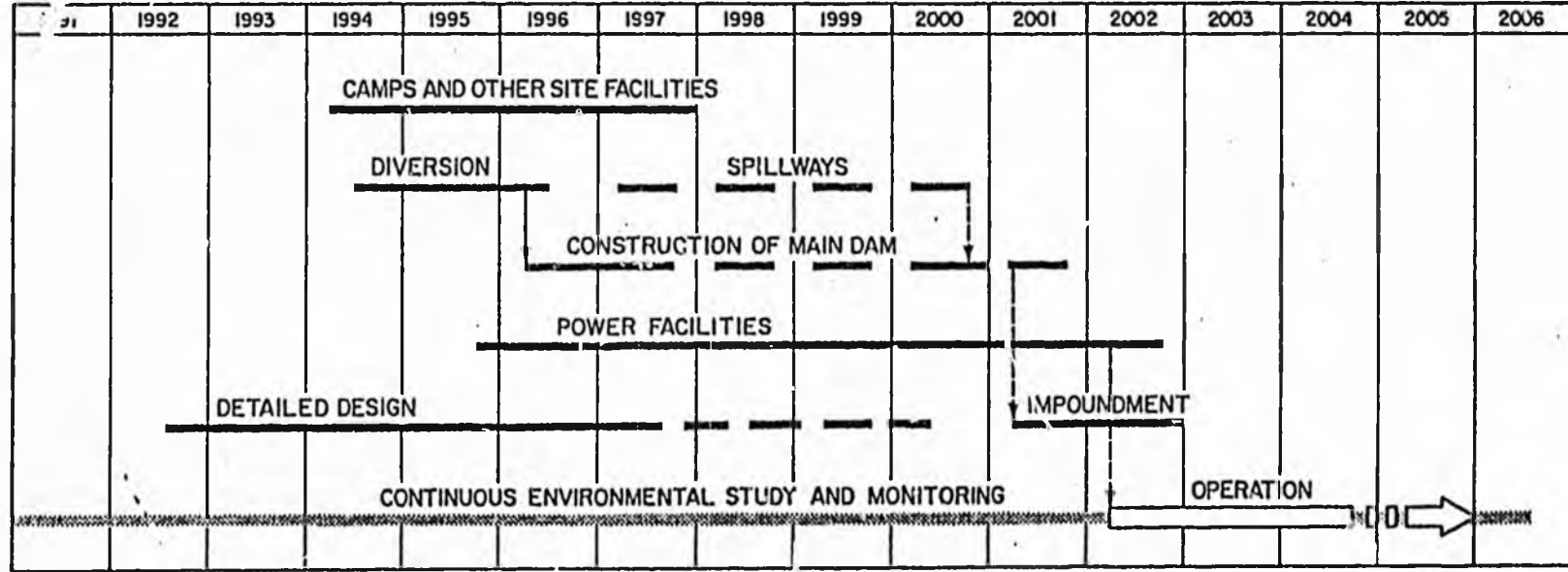


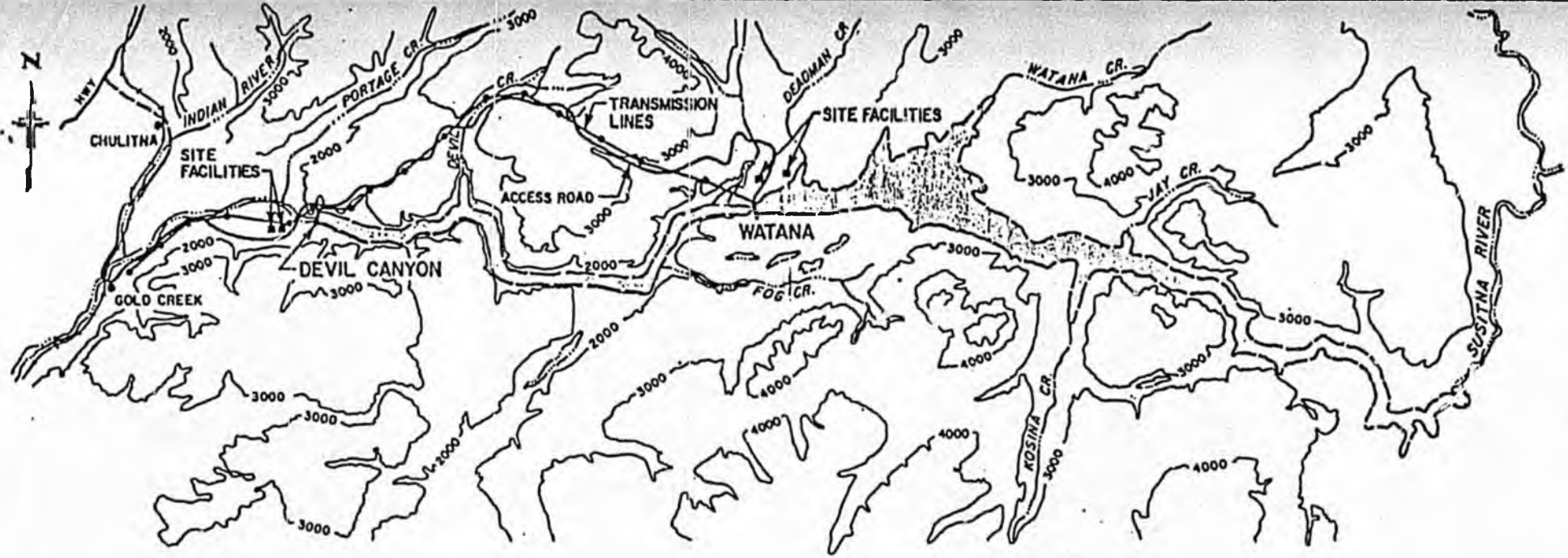


DEVIL CANYON

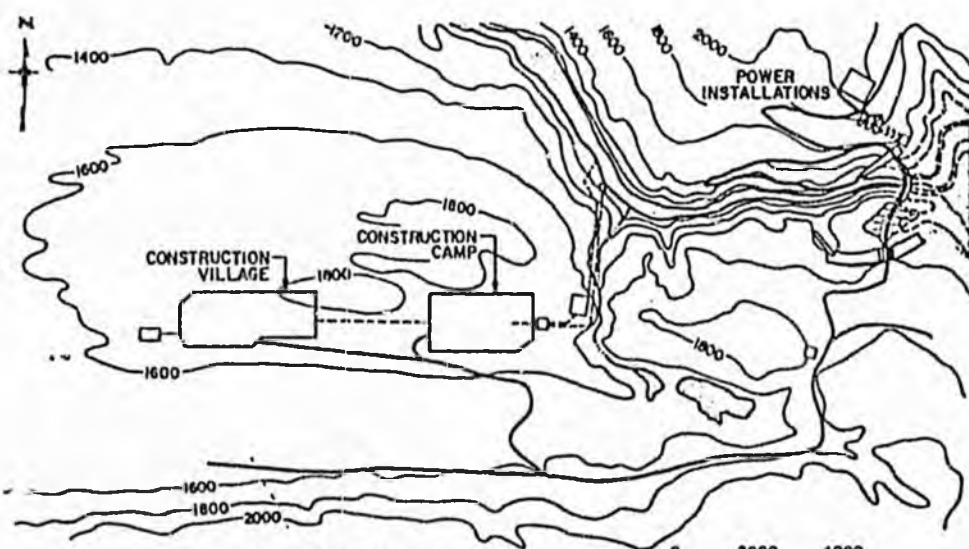


WATANA

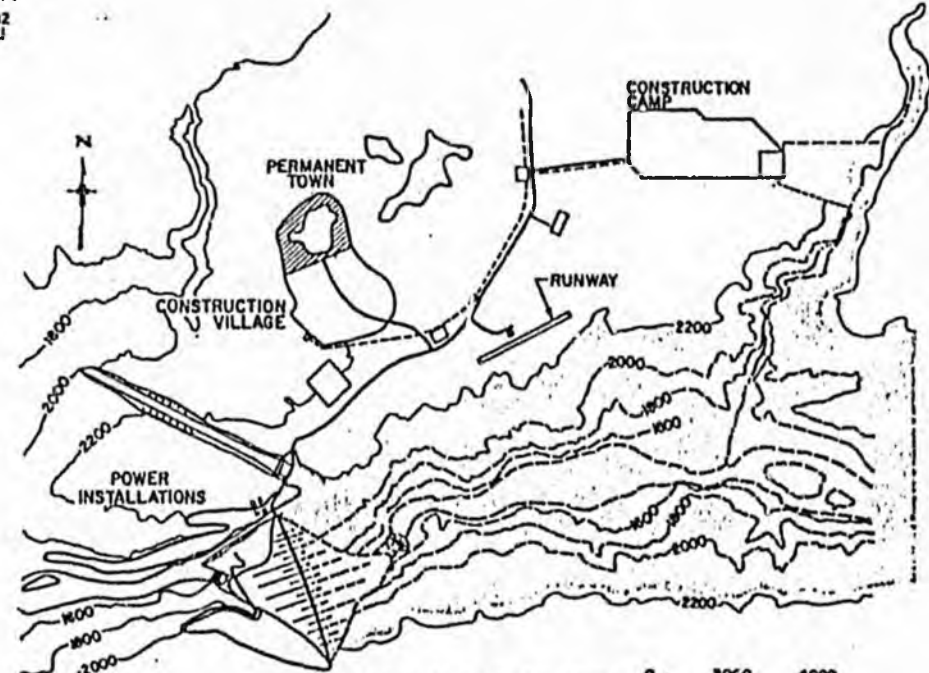




RESERVOIR PLAN



DEVIL CANYON SITE FACILITIES



WATANA SITE FACILITIES



STATUS/SCOPE OF LEGISLATION

ISSUE: HB 99 APPROP/APA/SUSITNA RIVER HYDRO PROJ

SPONSORS: LACHER, HAYES, TISCHER, LARSON, UEHLING

CURRENT STATUS: (Resources)

FISCAL IMPACT: _____

REPRESENTATIVE	A. Comm. Vote	B. Statutory/Tech.	C. Supp. -Memo	D. Opp. -Memo	E. Vote
ABOOD					
ADAMS					
BARNES					
BETTISWORTH					
BUSSEL					
CATO					
CLOCKSIN					
COWDERY	do pass				
DAVIS					
DUNCAN					
FLOOD					
FRITZ					
FULLER					
FURNACE	do pass				
GOLL					
GRUSSENDORF					
HAYES					
HERRMAN					
HURLBERT					
KOPONEN	No Rec.				
LACHER					
LARSON					
LINDAUER					
LISKA					
MALONE	do pass				
MARTN					
MCBRIDE					
MILLER					
MILLER(NP)					
PESTINGER					
PHILLIPS					
RINGSTAD	do pass				
SHULTZ					
SZYMANSKI					
TISCHER					
UEHLING	do pass				
VASKA					
WARD					
WENDTE	do pass				
ZHAROFF					

... might be interested in this letter.

March 7, 1983

Jack

Re: HB 99

Sir :

During the last few years there has been much talk, for and against the construction of the SUSITNA DAM PROJECT. If I may, reflect a few comments about dams in the past. The HOOVER DAM, completed in 1936, was in its days, considered a waste of money, a project started only to put people to work, during the hard depression of those days. The population at that time, did not require a dam of that magnitude, The battle loomed, but it was built, regardless of all the studies that indicated to the negative. Today, the lower fortyeight, cannot get along without it. The T.V.A. project was the same, and now it is all looked upon, as a place that gives forth energy, recreation, land reclamation, an increase in wild life, more fishing, than ever before, and an increase in business activities, tourism, larger intake of taxes from all the above mentioned also, one important item, a reservoir for storage of a large body of water for distribution to the communities without a worry of any shortage of water for its citizens. If Alaska is to prosper, we need that dam. One more important item that needs attention, and that is, the repayment of that project, a project of that magnitude is not repayed in fifteen years or short term notes, it is a long term note of at least fifty years amortization for which the state would reap an income for fifty years on

interest alone. therefore providing lower cost energy to the people, and a guarantee of income to the state treasury for many years ahead.

It appears to me, that these people that are hired to do studies, are a group that is suffering from TUNNEL VISION as were the consultants of the depression Era.

I cannot understand why we should leave all that energy run into the ocean without using all its potential.

Respectfully,

Nick Zerbinos
Nick Zerbinos
Box 371
Glennallen, Alaska 99588

Susitna Hydroelectric Project

LICENSING PROCESS

The Federal Energy Regulatory Commission is charged with the responsibility of fostering the comprehensive development of the Nation's waterways consistent with public safety. The Susitna River is a public resource; therefore, the Commission must ensure that any hydroelectric development on the Susitna River is in the best interest of the public.

When the Susitna Hydroelectric Project license application is filed by the Alaska Power Authority (APA), the application is first reviewed by staff to ensure that it contains all the information necessary for the Commission to assess the project. When the application is deemed acceptable for processing by the Director, Office of Electric Power Regulation, the Commission initiates a public and agency comment period. Public notice in the Federal Register and in Alaskan newspapers will invite the public to comment on and participate in the licensing process. Federal, State, and local agencies are provided copies of the application and are asked to provide comments in their respective areas of expertise.

Concurrent with the public comment period, Commission staff experts initiate a three-pronged evaluation of the Susitna Project. ~~Electrical engineers and economists will evaluate the adequacy of electrical load forecasts for Alaska and the need for Susitna Project power.~~ Geologists and civil engineers will evaluate the integrity of project structures. A team of environmental scientists will prepare an environmental impact statement assessing the project's potential impacts on the Alaskan ecosystem. Upon completion of these analyses, the staff positions on need for power, project integrity, and environmental impacts may be subjected to the scrutiny of hearings before an administrative law judge. At these hearings, intervenors in the Susitna proceeding have the opportunity to support staff's analysis or present opposing positions. At the conclusion of the hearing, the administrative law judge prepares an opinion on the issues.

After the administrative law judge has rendered an initial decision, the five Commissioners will make the final decision on whether or not to issue the license for the Susitna Project and what conditions to attach to the license, if issued. If a hearing has been held, the Office of Opinions and Review, with guidance from the Commissioners, will prepare the license document. The Commissioners will review the entire record for the Susitna Project. In order for the APA to receive a license for the Susitna Project, the record must convince a majority of the Commissioners that the project is needed, that the structures will be safe, and that the environmental impacts of construction and operation will be adequately mitigated.

April 20, 1983

SUSITNA HYDROELECTRIC PROJECT

[REDACTED]
 FOR ALTERNATIVE FUNDING LEVELS

FY 1984
 (\$000)

<u>CATEGORY</u>	<u>ALLOCATIONS</u>			<u>NOTES</u>
	<u>\$22.0M</u>	<u>\$36.0M</u>	<u>\$47.0M</u>	
Harza-Ebasco				
Project Management, cost and schedule control, and overhead (Tasks 1 and 2)	2,800	4,000	4,700	(1)
Conceptual Design (Tasks 3,7,9,40)	2,300 <i>+ 100</i>	2,400	2,400	(2)
Continuing environmental & socioeconomic studies (Task 4)	5,600 <i>+ 500</i>	6,100	6,100	(3)
Licensing and agency coordination (Task 6)	1,100	1,100	1,100	(4)
Public Participation and information (Task 8)	130	200	300	(5)
Logistics (Task 39)	2,200	5,600	8,300	(6)
Geotechnical Exploration Program (Task 5)	3.4 ---	4,000	8,800	(7)
Design of Primary Facilities (Tasks 10-37)	---	1,000	2,000	(8)
Design of Ancillary Facilities (Task 38)	---	1,000	2,000	(9)
Subtotal	<u>14,130</u>	<u>25,400</u>	<u>35,700</u>	
ADF&G				
Aquatic Studies	3,000	3,000	3,000	
Terrestrial Studies	1,000	1,000	1,000	(10)
Subtotal	<u>4,000</u>	<u>4,000</u>	<u>4,000</u>	

0296A

April 20, 1983

CATEGORY	ALLOCATIONS			NOTES
	<u>\$22.0M</u>	<u>\$36.0M</u>	<u>\$47.0M</u>	
USGS				
Hydrology Data Gathering	277	277	277	(11)
Legal Costs	232	232	232	(12)
External review	60	91	91	(13)
Alaska Power Authority				
Staff, Expenses and Overhead	1,000	1,500	1,500	
Need for Power hearings	1,000	1,000	1,000	(14)
Subtotal	<u>20,699</u>	<u>32,500</u>	<u>42,800</u>	
Contingencies	<u>1,301</u>	<u>1,700</u>	<u>1,800</u>	(15)
Subtotal	22,000	34,200	44,600	
Escalation	---	1,800	2,400	
Total	<u>22,000</u>	<u>36,000</u>	<u>47,000</u>	

NOTES:

1. The \$22M case provides a severely reduced management staff consistent with no design or geotechnical work performed in FY 1984. A minimal staff is provided to operate a manual cost and schedule control program, perform logistics and subcontract management, and fund overhead related costs such as office space, transportation, equipment, etc.

The \$36M case adds both management and support staff (as well as increased overhead related costs) to start design and operate a limited geotechnical exploration program.

The \$47M case is similar in that it responds to yet more intense design and geotechnical exploration.

2. The \$22M case funds feasibility level studies and design to confirm or reconfigure the present project proposal consistent with the Railbelt's projected demand for electricity and the State's ability to finance the project.

The \$36M and \$47M cases accommodate more extensive involvement of the technical review panel consistent with commencement of design.

April 20, 1983

3. The \$22M case continues existing environmental and socioeconomic studies at the least possible level consistent with the expedited FERC license processing schedule.

The \$36M and \$47M cases increase the FY 1984 cultural resources investigations to decrease the effort in later years. FERC has indicated a preference for this accelerated investigation regime.

4. Funds responses to supplemental information requests, coordination and consultation meetings, etc.
5. Supports public input to relevant questions (such as preferences for management of project impacts on individual communities) and responses to public/media inquiries.
6. The logistic support for the \$22 million case provides minimal facilities needed for the environmental data collection program.

The \$36 million budget provides the funding needed to expand the camp and to support the limited geotechnical investigation program and the accelerated cultural resources investigation program.

The \$47 million budget includes the funds needed to support the more extensive geotechnical investigation program.

7. The \$22M case does not accommodate any geotechnical exploration. This irrevocably precludes start of construction prior to March 31, 1986.

The \$36M case provides for a limited soils investigation program in the Relict Channel and borrow areas, and initial exploration (via core drilling) of the abutments, powerhouse location and diversion structure sites. Design cannot proceed in the absence of this data.

The \$47M case increases the intensity of the core drilling, provides for a grouting test program, installs rock mechanics instrumentation, performs pump in/pump out tests in the Relict Channel, and associated technical support. Availability of this information facilitates a more responsive (and accordingly more cost effective) design program. If deferred to FY 1985, design can still proceed, but with some impediments.

8. The \$22M program does not provide for design.

Start of design in FY 1984 facilitates a more cost effective design schedule, and accommodates a construction start in advance of March 31, 1986. The precise degree of acceleration is a function of the FY 1984, 1985 and 1986 design funding.

The \$36M case initiates design of diversion facilities.

The \$47M case also initiates design of the main structure and long lead time mechanical components.

9. The \$22M case does not accommodate any design.

The \$36M case initiates design of the access road. This permits construction of the access road to start at the earliest possible moment, a situation that would significantly decrease mobilization costs for the initial construction effort.

The \$47M case initiates design of the construction camp and logistics facilities. Again, early design permits early construction which potentially reduces the ultimate cost of construction.

10. Continues existing studies of the project environmental setting.
11. Continues hydrologic data gathering which USGS is uniquely qualified to perform.
12. Funds Washington, D.C. staff highly specialized in dealing with FERC.
13. Provides a multidiscipline project concept review by a panel of independent consultants who are pre-eminent in their field.
14. Funds Power Authority participation in hearings chaired by FERC on "need for power" aspects of project license application.
15. Project Manager's contingency for responding to FERC licensing matters, project related requirements which cannot be anticipated, and cost estimate variances.

ADF&G SUSITNA HYDROELECTRIC PROJECT BIG GAME STUDIES

The Alaska Department of Fish and Game (ADF&G) is under contract to produce information to support large mammal impact assessment and mitigation planning for the Susitna Hydroelectric Project. Moose, caribou, brown bear, black bear, wolf, wolverine, Dall sheep and belukha whales have been studied. Birds, furbearers and small mammals have been studied by the University of Alaska. Vegetation studies which are essential for predicting impacts and developing mitigation plans for some species of wildlife also have been conducted by the University of Alaska.

Sub-contractors to Acres American, initially Terrestrial Environmental Specialists (TES) and subsequently LGL Alaska Research Associates, Inc., had responsibility for preparation of the impact assessment and mitigation planning for all terrestrial resources including big game. The ADF&G staff has participated in meeting and workshops sponsored by TES and LGL to support the assessment and mitigation planning process and to integrate the design of wildlife studies with those of other disciplines, especially vegetation and hydrology.

Evolution of Studies

Studies have evolved through several stages. At first, they were general and qualitative to identify problems. ADF&G had conducted intensive studies of some species in adjacent areas, but little was known of the specific Susitna project area. Therefore, initial studies were aimed at determining what populations inhabited the area and how those populations used the area. The potential mechanisms by which the Susitna Hydroelectric project might affect those populations were then identified. Subsequent studies were directed at evaluating the seriousness of the impacts and, when possible, quantifying them. The final phase is to seek and evaluate methods for mitigating the significant moose impacts.

The study of terrestrial wildlife follows a two-pronged strategy. The management of wildlife populations (including game) uses population information, including numbers, sex, age class structure, distribution and seasonal movements. The wildlife program has gathered this information by periodic flights to determine locations and habitat use. This information has been supplemented by radio collaring animals. Radio collaring permits acquiring specific information on animals including details of movement and habitat use. When placing collars on animals, information on age, sex, and health of the animal is gathered.

An alternative effort, which compliments the population information, has been the development of carrying capacity information. The merit of this strategy is that such determinations should be independent of current population levels, and would identify the potential of the habitat to support a given species. In turn, mitigation planning based upon carrying capacity seeks to replace the lost carrying capacity. Carrying capacity studies have focused upon

vegetation assessment, mapping and quality determination and the development of models that relate game populations potential to habitat. The project is developing models on several animal species including moose, bear and beaver. The development of these models will have broad implications for game management in Alaska. ADF&G's program is supported by a vegetation mapping and browse quality assessment performed by the University of Alaska Agricultural Research Station, Palmer.

ADF&G's wildlife studies have defined the distribution, movement and abundance of major species in the project area. Models for moose and bear populations are being developed and calibrated. This information, reported in their annual reports, describes baseline conditions and identifies impact mechanisms and mitigation opportunities. Harza-Ebasco and LCL Alaska Research, Inc., used this information in preparing the Application for License which includes the Power Authority's assessment of impacts and mitigation plans.

The Department of Fish & Game's wildlife program has placed up to a dozen biologists in the field each year. A preponderance of their field activities require either fixed wing or helicopter support. As new impacts have been identified, studies have been expanded and as other impacts become adequately quantified, studies have been terminated. Some aspects have been repeated annually because potential impacts appear greater in some years than others.

Two examples of evolution of studies are moose and Dall sheep. Loss of critical moose winter range was suspected to be an important impact. Because moose migrate, this loss of winter range could affect densities over a larger area during other seasons. Moose wintering near the proposed impoundment were captured by darting from helicopters, radio-collared and periodically located throughout the year from aircraft fitted with radio receivers. These relocations allowed us to delineate the populations of moose that would be most directly impacted. Aerial surveys were conducted to estimate the numbers of moose in these populations. However, not all moose in the area would be lost to the project. It was necessary to determine how important the habitat that will be lost or altered is to the population. Loss of food during severe winters and in spring prior to calving were identified as potentially significant impacts. Ten times as many moose were in the impoundment areas in March 1983, a moderate snow year, then in March 1981, a mild snow year. Studies of moose near the impoundment during these seasons were intensified to determine which areas were most important. Vegetation studies were redesigned to determine what foods were most important and to compare the availability of these foods inside and outside the impoundments. Studies to be initiated in FY84 will be aimed at quantifying the amount of forage that will be lost. Vegetation and moose studies are being integrated to predict how the moose population will respond to that loss and to evaluate proposed mitigation measures such as enhancement of habitat outside of the impoundments. In the case of Dall sheep, the only impact expected at the beginning of the studies was disturbance during construction. Aerial surveys were conducted to delineate areas to be avoided. However, a mineral lick that would be partially inundated by the Watana Impoundment was located at Jay

Creek. The lick was observed more closely over the next year. It became evident that use of the lick was significant and in 1983 intensive observations of the lick will be made to determine the importance of the portion of the lick that will be altered and to formulate recommendations for preserving the lick. It is anticipated that adequate information will be available by the end of the 1983 season.

Current Status

It appears that adequate information has been collected to identify most significant impacts on big game. The primary emphasis is currently on quantifying those impacts. In many cases, additional field data will do little to enhance quantification. These aspects have been terminated or reduced to levels necessary to detect major changes. The primary emphasis is on providing data needed to evaluate and quantify impacts that may require costly mitigation measures or that require complex interdisciplinary analyses. In particular, there are those that require close coordination with vegetation studies, those where annual variation, such as winter severity, is great, and those where several impacts work together to have a compound influence on the population.

Project Costs

ADF&G's big game studies have been integrated to the extent possible with ADF&G's regular programs. Many of the positions are shared with other projects. This has permitted the use of more experienced individuals at a lower cost. Peak manpower needs such as tagging operations have been met with regular ADF&G staff. Increases in salaries over the life of the project have been primarily related to State pay raises and the increased need for coordination with other APA contractors.

Air charter is the largest item in the operating budget. Animals are captured for radio-collaring by darting from a helicopter. Total costs of tagging range from \$750 for a moose to \$1500 for a wolf. Most of this cost is helicopter charter. Relocation flights are made in fixed-wing aircraft. Similarly, fixed-wing aircraft are used for censuses and other surveys. The lack of charter aircraft and refueling sites in the immediate project area adds to the costs of each flight. Air charter costs have increased approximately 50% since the project started.

Weather has been a major factor influencing costs. Annual variations in weather influences how animals use the project area. This has made it necessary to repeat certain activities each year. Mild winters have hampered a full evaluation of the importance of the area to moose. Poor summer conditions have also hampered certain aerial surveys and tagging operations. If a severe winter had occurred in 1981 or 1982 the amount and quality of information available for the license application would have been far better. Repeated mild winters have forced us to approach the problem less directly, extending the time required to assess impacts.

Susitna Hydroelectric Project - Big Game Studies

Expenditures by Activity by Year

	FY80 (Game only)	FY81	FY82	FY83 (Est)	FY84 (Projected)
Admin & Support	46.0	104.0	164.0	212.0	233.0
Upstream Moose	101.0	181.0	189.0	257.0	235.0
Downstream Moose	44.0	83.0	103.0	127.0	103.0
Wolf	33.0	51.0	66.0	70.0	31.0
Wolverine	14.0	16.0	20.0	20.0	-
Bear	77.0	106.0	137.0	208.0	176.0
Caribou	59.0	80.0	84.0	111.0	97.0
Sheep	4.0	5.0	11.0	19.0	2.0
Belukha	-	-	-	8.0	-
Moose Carrying capacity model	-	-	-	-	23.0
TOTAL	378.0	626.0	774.0	1032.0	900.0

HOUSE RESOURCES COMMITTEE

BUDGET ALLOCATION
ALTERNATIVE FUNDING LEVELS

SUMMARY OF EXPENDITURES
12/19/73 to 3/31/83

SU HYDRO AQUATIC STUDIES PROGRAM

BIG GAME STUDIES

SUSTAINA REPORTS

COMPOSITE REPORT
LEVEL 13
4 SCENARIOS

ALASKA POWER AUTHORITY
Susitna Hydroelectric Project

Summary of Expenditures 12/19/77 to 3/31/83

Cat. #	Description	Funding	Expenditures to Date	Restrictions	Balance Available
100	<u>Personal Services</u>	\$ 1,076,872.64	\$ 890,690.56	\$ 186,182.08	--
200	<u>Travel</u>	162,158.76	114,450.98	47,597.78	--
300	<u>Contractual:</u>				
	- Feasibility Studies Acres American, Inc.	42,445,225.00	39,947,006.35	2,498,218.65	--
	- Big Game Studies, ADF&G	2,808,088.73	2,373,709.68	434,379.05	-0-
	- Fisheries Studies, ADF&G	5,582,700.00	4,105,753.59	1,476,946.41	-0-
	- Land Use Cook Inlet Villages	125,709.67	125,709.67	-0-	
	- Stream Gaging USGS	572,230.00	474,630.00	97,600.00	
	- Power Supply Forecast, ISER #1	30,000.00	30,000.00	-0-	-0-
	- Cost Estimate Ebasco	219,912.61	219,876.61	36.00	-0-
	- External Review Panel	156,023.39	156,023.39		
	- Office of the Governor	4,500.00	4,500.00	-0-	-0-
	- Legal Services Department of Law	19,500.00	-0-	19,500.00	-0-
	- Habitat Studies US Fish & Wildlife	90,672.00	35,472.57	55,199.43	
	- Emergence US Fish & Wildlife				
	- Bond Counsel Wolforth and Flint	12,701.46	7,301.60	6,399.86	-0-

Summary of Expenditures con't 12/19/82 to 3/31/83

Cat. #	Description	Funding	Expenditures to Date	Restrictions	Balance Available
-	Mgmt. Assistance J. Abercrombie	\$ 25,000.00	\$ 17,301.00	\$ 7,698.60	-0-
-	Computerized Acctg Accounting Ltd.	1,000.00	1,000.00	-0-	-0-
-	Permitting Birch, Horton, Bittner	90,000.00	40,417.85	49,582.15	-0-
-	Insurance Consultant McCarthy and Assoc.	12,500.00	10,884.80	1,615.20	-0-
-	Mgmt. Consulting Mgmt. Analysis Co.	25,000.00	24,290.55	709.45	
-	Chakachamna Bechtel	715,035.87	238,799.70	476,236.17	-0-
	Reserve	84,964.13	-0-	84,964.13	
-	Quality Ass/Cost Cont. Harza-Ebasco, interim	8,699,147.00	986,845.00	7,712,302.00	
-	Other Contractuals				
-	Space, T & T, Serv., etc.	148,194.24	141,794.38	6,399.86	
-	Land Field Services	127,000.00	-0-	127,000.00	
-	ISER, #2	27,939.00	27,939.00	-0-	
400	<u>Supplies</u>	15,551.10	9,088.63	64,624.47	
500	<u>Equipment</u>	75,000.00	27,473.00	47,526.97	
CURRENT TOTALS					
TOTAL FUNDING		64,513,800.00			
FUNDING AVAILABLE		1,194,918.92			
999	<u>Project Manager Reserve</u>				
-	Contingency				
-	Uncommitted Reserve				
TOTAL RESERVE					

Alaska Department of Fish and Game Su Hydro Aquatic Studies Program

BACKGROUND

In September of 1979, The Alaska Power Authority (APA) agreed to fund the Alaska Department of Fish and Game (ADF&G), in a short term Reimbursable Services Agreement (RSA), to prepare a plan of study (POS) and budget for fish and wildlife baseline studies for Phase I in support of the Susitna Hydroelectric Project Feasibility Studies. The general objectives of a fishery and aquatic habitat study proposed by the ADF&G in November 1979 were as follows:

"Individual study proposals are designed to provide the necessary background information to enable proper evaluation of impacts. Six general objectives have been outlined:

1. Determine the relative abundance and distribution of adult anadromous fish populations within the drainage.
2. Determine the distribution and abundance of selected resident and juvenile anadromous fish populations.
3. Determine the spatial and seasonal habitat requirements of anadromous and resident fish species during each stage of their life histories.
4. Determine the economic, recreational, social, and aesthetic values of the existing resident and anadromous fish stocks and habitat.
5. Determine the impact the Devil Canyon project will have on the aquatic ecosystems and any required mitigation prior to construction approval decision. This is the primary objective of both Phase I and II studies. This will be discussed in detail in the Phase II work when it is written.
6. Determine a long-term plan of study, if the project is authorized, to monitor the impacts during and after project completion. This is also an objective of Phase II."

After an APA review of the ADF&G November 1979 POS the program was reoriented, and APA funded ADF&G participation in the Susitna Hydro Study program based on a revised POS dated June 2, 1980. The objectives APA designated ADF&G to address were objectives 1, 2 and 3 of the November 1979 POS. Objective 4 was assigned to a private sector contractor under Acres-American, Inc., the prime feasibility study contractor. Objective 5 was also assigned to Acres American, Inc. through a subcontractor, Terrestrial Environmental Services, Incorporated. Objective 6 is a planning and continuing objective which will involve input from ADF&G Su Hydro and other environmental (fish and wildlife) study contractors and subcontractors to the APA and Harza-Ebasco Joint Venture (JV) through the remainder of project activities.

ADF&G programs in FY81, FY82, FY83 did provide and the proposed FY84 program will continue to provide information relevant to the objectives stated in November 1979 and initiated under our revised June 2, 1980 RSA and subsequent revisions.

ADF&G SU HYDRO AQUATIC STUDIES TEAM

The ADF&G created a totally new unit to accomplish the aquatic studies program. ADF&G initiated aquatic studies work in November 1980 after the classification, approval, and receipt of the positions necessary to accomplish the program assigned to us by APA. In November 1980, staffing of positions was initiated, reconnaissance level winter field work was begun and a full scale spring and summer field season was in progress by June 1981.

The Su Hydro Aquatic Studies Team is composed of five organizational units. These are:

1. Administration and Support Unit (AS).
2. Data Processing Unit (DP).
3. Anadromous Adult Project (AA)
4. Resident and Juvenile Anadromous Project (RJ).
5. Aquatic Habitat and Instream Flow Project (AH).

The Administration and Support Unit is composed of administrative, and supervisory, staff for the other four units and the clerical and maintenance staff providing essential services for the Su Hydro Aquatic Studies program.

The Data Processing Unit staff is in charge of project biometric and statistical services, and data processing and data management for the aquatic studies program.

The AA, RJ, and AH projects listed above are each assigned one of the objectives outlined in our November 1979 POS and stated earlier herein. AA is assigned objective 1; RJ, objective 2 and AH, objective 3.

OTHER PROJECT RELATED INFORMATION

Other ADF&G Su Hydro Aquatic Studies information is portrayed in the following attachments:

Attachment A - ADF&G Su Hydro Aquatic Studies Program, FY81 and FY82.

Attachment B - ADF&G Su Hydro Aquatic Studies Program, FY83.

Attachment C - ADF&G Su Hydro Aquatic Studies Program Characteristics and Accomplishments to Date.

Attachment D - ADF&G Su Hydro Aquatic Studies Program, Types of Data Collected and Associated Data Analysis by Field Project Component.

Also, more detailed information on the ADF&G Su Hydro Aquatic Studies program is detailed in the report prepared by the Division of Legislative Budget and Audit this fiscal year.

Attachment A Su Hydro Aquatic Studies Program, FY 81 and FY82

Objectives: Objectives 1, 2, and 3 as stated in the November 1979 POS.

The specific mission of the ADF&G Su Hydro Aquatic Studies Team in FY81 and FY82 was collection and reporting of baseline fisheries and aquatic habitat data on the Susitna River related to the above objectives.

Funding: ADF&G Aquatic Studies by Unit for FY81 and FY82. ^{1/}

Unit	Allocations ^{2/}			Expenditures to 6/30/82	Balance Remaining 6/30/82
	FY 81	FY 82	Total FY 81 & 82		
AS	197.2	560.0	757.2	719.5	37.7
DP	24.1	82.1	106.2	81.6	24.6
AA	247.0	864.5	1,111.5	1,094.4	17.1
RJ	225.0	666.0	891.0	865.8	25.2
AH	152.8	476.5	629.3	588.3	41.0
Total	846.1	2,649.1	3,495.2	3,349.6	145.6 ^{3/}

^{1/} Prepared from ADF&G Su Hydro Aquatic Studies Monthly Budget and Audit Reports.

^{2/} Allocation of project funds within ADF&G Su Hydro Aquatic Studies Team figures rounded to nearest \$100, reflects all RSA changes.

^{3/} Continuing funds returned to APA.

Staffing: In FY81 staffing was initiated in November 1980. These were 20 permanent full time and 18 permanent seasonal positions, provided to conduct the aquatic studies program. In FY82 ADF&G had 26 permanent full time and 34 permanent seasonal positions available.

Attachment B ADF&G Aquatic Studies Program in FY83.

Objectives: Work under general objectives 1, 2, and 3 outlined in the ADF&G November 1979 PGS continued.

In addition to the collection of baseline fisheries and aquatic habitat information, however, the APA requested the ADF&G assume the function of partial analysis of the data we collected to portray the relationship of preproject fisheries and aquatic habitat to changes in mainstem discharge conditions in the Susitna River. Assuming this function added another report series to ADF&G's reporting requirement to the APA which will be completed by June 30, 1983. The Arctic Environmental Information and Data Center (AEIDC) allows plays a role in the preproject analyses task.

Funding: ADF&G Aquatic Studies by Unit in FY83.

<u>Unit</u>	<u>Allocation FY 83</u>
AS	548.3
DP	300.5
AA	653.2
RJ	734.8
AH	815.7
Total	<hr/> 3,052.7

Staffing: The ADF&G Su Hydro Aquatic Studies program in FY83 provided for 33 permanent full time and 46 permanent seasonal positions.

Attachment C ADF&G Program Characteristics and Accomplishments to Date.

The ADF&G Su Hydro Aquatic Studies Program is largely self sufficient in logistics, camp construction operation and support. Maintenance, construction and repair of the equipment used by the project is an important task for ADF&G employees.

We have basically a year around field operation collecting information on fisheries and aquatic habitats during both the ice covered and open water seasons on the Susitna River. The staff work in remote locations from both spike camps and seven more permanently located tent camps which are accessible either by riverboat, float aircraft (3 camps) or helicopter.

A relatively large number of staff are required, particularly in the open water season, to collect concurrent observations on fisheries and aquatic habitats over nearly 200 miles of remote river locations. Staffing at anadromous adult project sites (4 camps) must provide for two shifts of personnel to operate and calibrate Bendix side scan sonars and tag and release salmon in fishwheel live boxes. Anadromous adult project staff are working steadily through each 24 hour period during salmon run peaks or mortalities of salmon in live boxes would be prohibitive. Nearly 9000 salmon were released (4000 tagged) from fishwheels at one station during one 24 period in the summer of 1982 by 8 staff.

In the Talkeetna to Devil Canyon reach of this river, field crews (2 to 3 individuals in each) of the RJ and AH projects are responsible for their own transportation by boat to study sites, and logistics arrangements and resupply before going to the field. All field staff also required to maintain camp cleanliness, their own meal preparation, and take care of their own personal needs.

Literally hundreds of thousands of separate measurements of both the fish and their physical habitat are recorded each year by ADF&G staff. These data are summarized and reported annually to project participants in seven to eight volumes. These reports are required to support the FERC license application process.

The management of data returned from the field and computerized data processing of this information has also been a monumental task. All elements of our data management and data processing were basically started from scratch with hardware unpacked from its boxes and program software and programs for our purposes developed by the DP staff and biometrician.

It was initially assumed that only qualitative levels of information would be available from much of the data collected by ADF&G field programs. In fact, our studies have proven to be sophisticated enough to supply quantifiable information in many areas on fishery resources and their habitats. For example, (a) quantification of salmon escapement rather than indexing, and (b) quantification of flows necessary to support adult salmon migration into slough spawning habitats.

The studies conducted for the evaluation of the Susitna Hydroelectric Project will provide a level of information on fish and their habitats virtually

unmatched for any other river system in Alaska. The studies to date have shown how little we knew about the important salmon and resident fishery resources in the Susitna River prior to the initiation of the program conducted by ADF&G and funded by APA.

Although these studies are specifically designed and focused towards defining the impacts of the Susitna Hydroelectric in support of the FERC license process, it is likely that portions of the information collected can be used to improve fishery and habitat management for the system. Regardless whether the project is constructed or not, the information obtained from these and other studies should prove invaluable in managing the land, water and biological resources of the Susitna River.

Attachment D ADI&G Su Hydro Aquatic Studies Program Types of Data
Collected and Associated Analysis by Field Project
Component.

The following is a list of data types and associated data analysis examples that have been collected over the past two years of the Su Hydro Investigations, Adult Anadromous Studies.

ANADROMOUS ADULT PROJECT DATA

I. Salmon Escapement Population Estimates

- A. Species - All five species of pacific salmon
- B. Locations - Yentna River, Sunshine Station, Talkeetna Station, Curry Station
- C. Methods - Sonar and mark-recapture tagging by fishwheels
- D. Data Analysis Examples
 - 1. Run Timing
 - 2. Population estimates with confidence intervals
 - 3. Correlations of run timing with mainstem discharge
 - 4. Correlations of run timing with mainstem temperature
- E. Data Use Examples
 - 1. Documents the value of the resources that may be affected by the development of the project.
 - 2. Provides a correlative analysis of the possible effects that the project may have on migratory behavior.

II. Sloughs, Tributary, and Mainstem Survey Data

- A. Species - All five species of pacific salmon, Bering Cisco, and eulachon
- B. Locations - Mainstem Susitna below Devil Canyon, tributary populations that may be affected by the dam development, sloughs that may be affected by the dam development.
- C. Methods - Electrofishing, set gill nets, observations
- D. Data Analysis Examples
 - 1. Determination of peak spawning periods
 - 2. Relative abundance of spawners

3. Correlate access by fish to sloughs versus mainstem discharge

D. Data Use Examples

1. Determine the geographical areas of the Susitna River that have significant resources that may be affected by the project.
2. Determine the time window that instream flows will be required to maintain the existing fish populations for the migration and spawning component of their life cycle.
3. Provide correlatory inference as to the levels of discharge, and temperature required to maintain existing populations of anadromous species.

The list above represents only a portion of the data types collected. Over a half a dozen other types of analysis are planned with this data base. These will investigate habitat relationships for adult salmon, examine the assumptions of the population estimates, provide data to assist in the designation of other habitat related studies on incubation and emergence, and yield instream flow information on the spawning requirements of the species.

RESIDENT AND JUVENILE ANADROMOUS PROJECT DATA

I. Incubation, emergence, and outmigration of Juvenile Anadromous species.

- A. Species - All five species of Pacific Salmon
- B. Locations - Mainstems Susitna, sloughs, side channels, and clear water tributaries.
- C. Methods - Inclined Plane smolt traps, egg pumps, observations.

D. Data Analysis Examples

1. Timing of outmigration correlated with mainstem temperature, turbidity, and discharge.
2. Development and growth rates of embryos under variable temperature ranges in the sloughs and selected side channels.
3. Examine effects of ice staging on incubation success and development rates.

E. Data Use Examples

1. Determine timing of outmigration for assignment of a time period of downstream flow release from the dams required to support salmon outmigration.

2. Estimate the response of the juvenile salmon outmigration to natural variations in temperature and flow which can be used to assess the effects of the project on outmigration.
3. Determine the thermal requirements of the incubating eggs and embryos for normal timing of hatching and emergence, thus determine possible impacts of altered flow and altered temperatures. Assess the potential of mainstem or side channel habitats for potential enhancement of spawning areas for possible mitigation of adverse effects of the Project.

II. Juvenile anadromous and resident fish abundance and distribution data

- A. Species - All resident fishes, all juvenile anadromous Pacific salmon species.
- B. Location - Mainstem Susitna below Devil Canyon, clear water tributaries, side channels, and sloughs.
- C. Methods - Electrofishing gear, minnow traps, beach seines.
- D. Data Analysis Examples
 1. Distribution of fish by general habitat type.
 2. Relative abundance by season.
 3. Differences in general habitat preference by species.
 4. Timing of use of habitat by each species.
- E. Data Use Examples
 1. Determine the habitat types that are the most important for a fish species and their life cycle.
 2. Determine the timing of required downstream flows necessary to maintain rearing fish populations.

III. Impoundment area resident fish population data

- A. Species - Grayling, Dolly varden, Burbot, Round and Humpback whitefish, Lake trout.
- B. Location - Eight clear water tributaries of the Susitna above Devil Canyon, mainstem Susitna above Devil Canyon, and on unnamed clear water lake above Devil Canyon.
- C. Methods - Electrofishing, minnow traps, hook and line.
- D. Data Analysis Examples
 1. Population estimates of the grayling populations using the habitat that will be inundated by the reservoirs.

2. Analysis of the effects of various levels of fishing pressure of populations and age structure of grayling populations.

E. Data Use Examples

1. Determine the value of the resource that will be lost by conversion of the clear water tributaries into a glacial reservoir.
2. Estimate the effects of increased fishing pressure created by increased access on the grayling populations.

The above data types and data analysis are not a complete list for the resident and juvenile anadromous fisheries data. Over ten different types of analyses are planned on the juvenile anadromous and resident species that will be affected by the instream flow changes anticipated with the development of the project. These include statistical tests of the importance of different habitats of the juvenile species.

AQUATIC HABITAT AND INSTREAM FLOW PROJECT DATA

This component of the Aquatic Studies program includes collection and the analysis of data from all of the previously discussed study components. It integrates the data into an analysis of the influence of mainstem discharge on the availability and utilization of habitat by the resident and anadromous species present in the Susitna River downstream of the proposed hydroelectric project.

I. Fish habitat utilization data

- A. Location - Sloughs, side channels, mainstem, and tributary mouths below Devil Canyon
- B. Methods - Water quality field measurement probes, turbidity analysis, continuous and instantaneous temperature measurements, substrate measurements, discharge, point velocity and depth measurements, surface area mapping, and others.
- C. Species - All fish species that use the habitat types studies.
- D. Data Analysis Examples
 1. Characterize slough hydraulics
 2. Correlate surface area of sloughs, and tributary mouth habitats with mainstem discharge.
 3. Describe of importance of habitat types to different species and life stages
 4. Compare temperatures of redds (intra gravel and surface temperatures) with use of areas by spawning chum and sockeye salmon.

5. Describe the effects of discharge on the usable habitat of spawning chum salmon.

E. Data Use Example

This component is the most complex of the Su Hydro study components and involves many different types of analysis. The program is designed to determine the essential habitat parameters required or currently used by the important species of anadromous fish and resident species. Data obtained from the resident, juvenile, and adult anadromous studies are used as the basis for these intensive studies and are incorporated in the analysis when appropriate. The data will be used to evaluate alternative project operation schedules with respect to downstream discharge. Many more types of analysis have been outlined for this component and other related data types beyond those listed are also included in our reports.

II. Stage/discharge and water temperature data.

A. Location - Sloughs, mainstem sites and tributary mouths below Devil Canyon

B. Methods - Similar to methods used for fish habitat utilizations.

C. Species - Same as fish habitat utilization

D. Data Analysis Examples

1. Describe effects of discharge on passage of adults into sloughs and tributaries for spawning.
2. Describe effects of discharge on the migration of juveniles in and out of tributary mouths and sloughs.
3. Describe effects of discharge on the incubation and survival of salmon embryos.

E. Data Use Examples

These data when analyzed provides the cornerstone of impact analysis and mitigation planning for the Su Hydro project. If proper flows can be maintained out of the dams, downstream fisheries can possibly be maintained or enhanced.

The above data types are not a complete listing of the information being collected but provide a general outline of the information being analyzed. The complexity of the analysis of the instream flow component would take a separate volume to describe. These data will be subject to additional analysis by the Arctic and Environmental Information and Data Center (AEIDC) in their modelling of the aquatic environments of the Susitna system as it may be affected by of the Susitna Hydro project.

NOV 29 1982

TASKS:

ALASKA POWER AUTHORITY

Task One (1)

- a. Subtask 1.02 Forecasting Peak Electrical Demand for Alaska Railbelt, Final Report, December - WCC
- b. Electric Power Consumption for the Railbelt May 1980
- c. Alaska Economic Projections for Estimating Electricity Requirements for the Railbelt October 1981 - ISER
- d. Railbelt Electric Power Alternatives Study November 81 - Ebasco
- e. Subtask 1.01 Power Studies, Closeout Report - Review of ISER Work December 1980
- f. Power Studies Termination Report, September 1980

Task Two (2)

- a. Task 2 Analysis of Alternative Transportation Modes for Camp Resupply January 1980
- b. Task 2 Analysis of Alternative Transportation Modes for Camp Resupply February 1980
- c. Subtask 2.09 Closeout Report March 1981
- d. Subtask 2.10 Draft Summary of Environmental Report - Access Roads September 1981
- e. Subtask 2.16 Closeout Report Hydrographic Surveys October 1981
- f. Subtask 2.10 Access Roads December 1981
- g. Subtask 2.12 Field Reconnaissance Reservoir Area - Timber Report Draft December 1981
- h. Subtask 2.13 Marketability and Disposal Study for Reservoir Area Draft December 1981
- i. Task 2 Survey & Site Facilities, Hydrographic Surveys, October 1981 R&M
- j. Subtask 2.15 Slope Stability and Erosion Studies Closeout Report Mar 82
- k. Subtask 2.10 Access Roads Closeout Report Final Draft March 82
- l. Subtask 2.10 Access Roads Interim Report #1, Alternative Access Corridor Selection December 1980 R&M
- m. Subtask 2.10 Access Planning Studies, January 1982

Task Three (3)

- a. Subtask 3.01 Closeout Report, Review of Available Material
- b. Subtask 3.03 Field Data Collection - Ice Observation August 81
- c. Subtask 3.05 - Closeout Report 1st Draft February 81
- d. Subtask 3.10 Preliminary Open Water Calculations March 81

- c. Seismicity Evaluation February 79 - D'Appolonia
- d. Seismic Geology Evaluation Draft Report 2 Volume 1 November 80 WCC
- e. " " " " " " " 2 " " "
- f. " Refraction Survey Draft Report Spring 81 WCC
- g. " " " Summer 1980 WCC
- h. " " " December 1981 WCC
- i. Seismic Studies for SHP, Subtask 4.09 thru 4.15 WCC
- j. Final Report on Seismic Studies February 82 WCC
- k. Subtasks 4.01 thru 4.08 Interim Report on Seismic Studies Dec 1980
- l. " 4.09 thru 4.15 Final Report on Seismic Studies Feb 82 WCC
- m. " 4.09 Design Manual for the Long term Earthquake Monitoring System for the SHP June 82 WCC

Task Five (5)

- a. Task 5 Geotechnical Exploration Report on 80 Studies March 1981
- b. Slimhole Geophysical Logging - Edcon
- c. 1980-81 Geotechnical Report (3 volumes) Text, Appx. A-F & Appx. G-K
- d. 1982-84 Geotechnical Program, Subtask 5.07 Report, Draft
- e. Engineering Properties of Soils and Their Measurement - Joseph Bowles
- f. Glacial and Quaternary Geology - John Wiley & Sons, R. F. Flint
- g. FY83 Proposed Geotechnical Exploratory Program May 82

Task Six (6)

- a. Subtask 6.01 Closeout Report August 1980
- b. Subtask 6.01 Closeout Report Final December 1980
- c. " " " " Cost Data Collection May 81
- d. " 6.02 " " Final Draft March 1981
- e. " " , 6.03, 6.06 Preliminary Design Considerations Feb 81
- f. " 6.05 Development Selection Report 1st Draft February 1981
- g. " " " " " March 1981
- h. " " " " " 2nd Draft June 1981
- i. " " " " " Appendices A thru I July 81
- j. " 6.09 and 6.10 Design Criteria for Watana and Devil Canyon May 81
- k. " 6.36 Generation Planning Parameters January 1981
- l. Task 6 - Design Development - El Cajon Project Arch Dam April 15, 1981
- m. Feasibility Report, Volume 1 Section 9-19, First Draft February 1982
- n. Development Selection Report Task 6 December 1981
- o. " " " " " " " , Appx A thru J

- x. Subtask 7.10 Phase 1 Final Draft Report, Resident Fish Investigation on the Upper Susitna River ADF&G/Su Hydro
- y. Subtask 7.10 Phase 1 Final Draft Report, Resident " " on the Lower Susitna River ADF&G/Su Hydro 1981
- z. Phase 1 Final Report Big Game Studies Vol. VII Wolverine, Vol. VIII Dall Sheep March 1982
- aa. Subtask 7.10 Phase 1 Final Draft Report Vol. 1 Aquatic Habitat & Instream Flow Project ADF&G/Su Hydro 1981
- bb. Subtask 7.10, Phase 1 Final Draft Report, Vol. 2 Pt. 1 Aquatic Habitat & Instream Flow Project ADF&G/Su Hydro 1981
- cc. Subtask 7.10 Phase 1 Final Draft Report, Juvenile Anadromous Fish Study on the Lower Susitna River ADF&G/Su Hydro 1981
- dd. Subtask 7.10 Phase 1 Final Draft Stock Separation Feasibility Report Adult Anadromous Fisheries Project ADF&G/Su Hydro 1982
- ee. Subtask 7.10 Phase 1 Final Draft Report, Adult Anadromous Fisheries Project, ADF&G/Su Hydro 1981
- ff. Subtask 7.06, Cultural Resources Investigation Phase 1 Report April 1981
- gg. " " " " " Appendix E, 1982
- hh. " 7.11 Furbearers Phase 1 Report April 1982 - TES
- ii. " 7.12 Plant Ecology, Phase 1 Report, April 1982
- jj. " " Birds, and Non-Game Mammals Phase 1 Report, April 1982 - TES
- kk. Task 7 - Land Use Analysis Navigational Use, April 1982
- ll. Fisheries Impact Report, June 1982 - TES
- mm. Task 7 Environmental Studies, Subtask 7.10 Fish Ecology Phase 1 Supporting Documentation May 1982
- nn. Subtask 7.08 Phase 1 Environmental Studies Report - Recreation Planning May 1982
- oo. Access Plan Recommendation Report, August 1982
- pp. Statement of Qualifications Fisheries Biology in Alaska May 82 WCC
- qq. Fish and Wildlife Mitigation Policy, November 81, Revised Mar 82 & Apr 82
- rr. Subtask 7.07 Land Use Analysis Annual Report 1980, July 81
- ss. Subtask 7.05 Socioeconomics Analysis Annual Report 80, May 81
- tt. 1980 Summary Environmental Report
- uu. Environmental Report, Fish Ecology 1980
- vv. " " , Plant Ecology 1980
- ww. " " , Big Game " "
- xx. " " , Birds and Non-Game 1980
- yy. " " , Furbearers, 1980
- zz. Subtask 7.07, Land Use Analysis, Phase 1 Report, May 1982
- aaa. Subtask 7.10, Stock Separation, Phase 1 Report

- e. Task 11.03 Closeout Report Susitna Risk Analysis April 1982
- f. FERC License Application Exhibit A, First Draft, September 17, 1982
- g. " " " " B, " " " 17, 1982
- h. " " " " C, " " " 24, 1982
- i. " " " " D, " " " 24, 1982
- j. Review of Task 11 - A. R. Tussing
- k. Draft License Application Exhibit A, November 82
- l. " " " " B, " "
- m. " " " " C, " "
- n. " " " " D, " "
- o. " " " " E, " " (5 volumes)
- p. " " " " F, " "
- q. " " " " G, " "

Task Twelve (12)

- a. Subtask 12.03 Agency Consultation, Public and Agency Participation (Volume 1 & 2) March 82

Task Thirteen (13)

- a. July Cost Graphical Display - Acres

A. External Meetings

- A.1. External Review Board Meeting #3 Information Package October 6-8, 81
- A.2. Acres Specialist Consultants Panel Meeting (November 18, 1981)
- A.3. External Review Board Meeting #4 Information Package January 12-13, 81
- A.4. " " " " #1 " " " 24, 81 Vol 2
- A.5. " " " " #5 Report, February 1982
- A.6. Reports by Power Authority and Acres External Review Panels 1980-82
- A.7. External Review Board Meeting #6, November 18-19, 1982

B. Internal Meetings

- B.1. Internal Review Board Meeting #1, Information Package July 1980
- B.2. " " " " " , Geotechnical & Seismic Aspects July 80
- B.3. " " " " #2, Status of Tasks 4,5,6 October 80
- B.4. " " " " #3, February 1981
- B.5. " " " " #4, September 1981
- B.6. " " " " #5, November 4, 1982

- F.6. The Engineering Geology of the Bersimis No. 2 Site O.H. MacDonald and G. Wilson
- F.7. Treatment of Alluvial Foundations for Duke D-20-LG-2 Development R. Arbour & J. J. Pare
- F.8. Muskrat Falls Development Appendix January 1978
- F.9. Kettle Generating Station - A General Description, March 1979
- F.10. AK Economic Scenarios Review Document - Comment Draft Working Paper No. 2.1 Battelle
- F.11. Existing Generating Facilities & Planned Additions for the Railbelt Area - Comment Draft Working Paper No. 4.1 Battelle

G. Feasibility Report

- G.1. Volume 1, Section 1 thru 8, Engineering & Economic Aspects
- G.2. " " " 9 " 19, " " " "
- G.3. " 2, Section 1 " 4, Environmental Report
- G.4. " " " 5 " 11, " " "
- G.5. " 3, Plates
- G.6. " 4, Appendix A, Hydrological Studies
- G.7. " 5, " 8, Design Development Studies
- G.8. " 6, " C, Cost Estimates
- G.9. " 7, " D, Coordination of Public Participation
- G.10. " 6, " C, Cost Estimates, Revised November 1982

FURTHER ADDITIONS

1981 Upper Limit Capital Cost Estimate July 81
 Tunnel Alternative Report, July 81
 Control Network Survey Report
 Hydrographic Surveys - Task 3
 Instream Flow Study Plan
 Sociocultural Report
 Susitna Risk Analysis

Anchorage
November 29, 1982

SUSITNA HYDROELECTRIC PROJECT

Feasibility Report & Back-Up Documents

<u>Task</u>	<u>Subtask</u>	<u>Document Title on Old List</u>	<u>Correct Document Title</u>
		Executive Summary	Susitna Hydroelectric Project Summary Report March 1982 Draft
		Feasibility Report - Volume 1	Susitna Hydroelectric Project Feasibility Report, Volume 1 Engineering and Economic Aspects Sections 1 - 8 Final Draft
			Susitna Hydroelectric Project Feasibility Report, Volume 1 Sections 9 - 19 Final Draft
		Feasibility Report - Volume 2	Susitna Hydroelectric Project Feasibility Report, Volume 2 Environmental Report Sections 1 - 4 Final Draft
			Susitna Hydroelectric Project Feasibility Report, Volume 2 Environmental Report Sections 5 - 11 Final Draft
		Feasibility Report - Volume 3	Susitna Hydroelectric Project Feasibility Report, Volume 3 Plates Final Draft
		Feasibility Report - Volume 4 (Appendix A)	Susitna Hydroelectric Project Feasibility Report, Volume 4 Appendix A, Hydrological Studies Final Draft
		Feasibility Report - Volume 5 (Appendix B)	Susitna Hydroelectric Project Feasibility Report, Volume 5 Appendix B, Design Development Studies Final Draft
		Feasibility Report - Volume 6 (Appendix C)	Susitna Hydroelectric Project Feasibility Report, Volume 6 Appendix C, Cost Estimates Final Draft
		Feasibility Report - Volume 7 (Appendix D)	Susitna Hydroelectric Project Feasibility Report, Volume 7 Appendix D, Coordination and Public Participation Final Draft
		Feasibility Report - Volume 8 (Appendix E)	not published

<u>Task</u>	<u>Subtask</u>	<u>Document Title on Old List</u>	<u>Correct Document Title</u>
3	3.06	Hydraulic and Ice Studies (R&M)	Susitna Hydroelectric Project Hydraulic and Ice Studies March 1982 (R&M)
3	3.07	Reservoir Sedimentation (R&M)	Susitna Hydroelectric Project Reservoir Sedimentation January 1982 (R&M)
3	3.07	River Morphology (R&M)	Susitna Hydroelectric Project River Morphology, January 1982 (R&M)
3	3.01	Review of Available Materials	Susitna Hydroelectric Project Task 3 - Hydrology Subtask 3.01 - Closeout Report, Review of Available Material March 1982 Final Report
3	3.02	Field Data Index (R&M)	Susitna Hydroelectric Project Field Data Index, February 1982 (R&M)
3	3.03	Water Quality - Annual Report, 1980 (R&M)	Susitna Hydroelectric Project Water Quality, Annual Report, 1980 April 1980 (R&M)
3	3.03	Water Quality - Annual Report, 1981 (R&M)	Susitna Hydroelectric Project Water Quality, Annual Report, 1981 December 1981 (R&M)
3	3.03	Water Quality - Interpretation, 1981 (R&M)	Susitna Hydroelectric Project Water Quality Interpretation, 1981 February 1982 (R&M)
3	3.06	Ice Observations - 1980 (R&M)	Susitna Hydroelectric Project Ice Observations, 1980-81 August 1981 (R&M)
3	3.03	Processed Climatic Data for Six Weather Stations (6 Vol- umes) - R&M	Susitna Hydroelectric Project Processed Climatic Data Vol. 1 - Susitna Glacier Station (R&M) Susitna Hydroelectric Project Processed Climatic Data Vol. 2 - Denali Station (R&M) Susitna Hydroelectric Project Processed Climatic Data Vol. 3 - Tycne River Station (R&M) Susitna Hydroelectric Project Processed Climatic Data Vol. 4 - Kosina Creek Station (R&M)

<u>Task</u>	<u>Subtask</u>	<u>Document Title on Old List</u>	<u>Correct Document Title</u>
6	6.01	Review of Previous Studies and Reports - Closeout Report Feb. '81	Susitna Hydroelectric Project Task 6 - Design Development Subtask 6.01, Closeout Report, Review of Previous Studies and Reports, February 1981
6	6.02	Tunnel Alternative Report - July 1981	Susitna Hydroelectric Project Task 6 - Design Development Subtask 6.02, Closeout Report, Investigate Tunnel Alternative June 1981
6	6.04	Evaluation of Arch Dam at Devil Canyon Site	Susitna Hydroelectric Project Task 6 - Design Development Subtask 6.04, Closeout Report, Evaluation of Arch Dam at Devil Canyon Site, March 1982
6/9	6.0/ 9.3	1981 Upper Limit Capital Cost Estimate, July 1981	Susitna Hydroelectric Project Task 6, 1981 Upper Limit Capital Cost Estimate
6	6.14	Scour Hole Development Downstream of High Head Dams	Susitna Hydroelectric Project Task 6 - Design Development Subtask 6.14 - Scour Hole Development Downstream of High Head Dams March 1982
7	7.0	1980 Summary Environmental Report	Susitna Hydroelectric Project Environmental Studies, Summary Annual Report - 1980 May 1981 (TES)
7	7.10	Environmental Report Fish Ecology - 1980 (TES)	Susitna Hydroelectric Project Environmental Studies Subtask 7.10 - Fish Ecology Annual Report - 1980, June 1981 (TES)
7	7.12	Environmental Report Plant Ecology - 1980 (TES)	Susitna Hydroelectric Project Environmental Studies Subtask 7.12 - Plant Ecology Annual Report - 1980, May 1981 (TES)
7	7.11	Environmental Report Big Game - 1980 (TES)	Susitna Hydroelectric Project Environmental Studies Subtask 7.11 - Big Game Annual Report - 1980, July 1981 (TES)
7	7.11	Environmental Report Birds and Non-Game Mammals - 1980 (TES)	Susitna Hydroelectric Project Environmental Studies Subtask 7.11 - Birds and Non-Game Mammals, Annual Report - 1980 April 1981 (TES)

<u>Task</u>	<u>Subtask</u>	<u>Document Title on Old List</u>	<u>Correct Document Title</u>
		Draft Fishery Mitigation Plan (TES)	
		Draft Wildlife Mitigation Plan (TES)	
7	7.10	Phase I Report - Fish Ecology (TES)	Subtask 7.10, Phase I Final Draft Report Vol. 1 - Aquatic Habitat & Instream Flow Project, ADF&G/Su Hydro 1981
			Subtask 7.10, Phase I Final Draft Report Vol. 2, Part 1 - Aquatic Habitat & Instream Flow Project, ADF&G/Su Hydro 1981
			Subtask 7.10, Phase I Final Draft Report Vol. 2, Part 2 - Aquatic Habitat & Instream Flow Project, ADF&G/Su Hydro 1981
			Subtask 7.10, Phase I Final Draft Report Resident Fish Investigation on the Upper Susitna River, ADF&G/1981
			Subtask 7.10, Phase I Final Draft Report Adult Anadromous Fisheries Project ADF&G/Su Hydro 1981
			Subtask 7.10, Phase I Final Draft Report Resident Fish Investigation on the Lower Susitna River, ADF&G/Su Hydro 1981
			Subtask 7.10, Phase I Final Draft Report Juvenile Anadromous Fish Study on the Lower Susitna River, ADF&G/Su Hydro 1981
			Subtask 7.10, Phase I Final Draft Report Stock Separation Feasibility Report Adult Anadromous Fisheries Project ADF&G/Su Hydro 1982
7	7.11	Phase I Report - Big Game Ecology (TES)	Susitna Hydroelectric Project Phase I Final Report Big Game Studies Vol. I - Big Game Summary Report March 1982 (ADF&G)
			Susitna Hydroelectric Project Phase I Final Report Big Game Studies Vol. II - Moose - Downstream March 1982 (ADF&G)
			Susitna Hydroelectric Project Phase I Final Report Big Game Studies Vol. III - Moose - Upstream March 1982 (ADF&G)

<u>Task</u>	<u>Subtask</u>	<u>Document Title on Old List</u>	<u>Correct Document Title</u>
8	8.05	Switching Stations & Substations - Single Line Diagrams	Susitna Hydroelectric Project Switching Stations and Substations Single Line Diagrams, Final Draft March 1982, Figures
12	12.03	Agency Consultation	Susitna Hydroelectric Project Task 12 - Public and Agency Participation Subtask 12.03 - Agency Consultation March 1982
10	10.02	Initial Version - Preliminary Licensing Documentation, April 1980	Susitna Hydroelectric Project Task 10, Subtask 10.02 - Design Transmittal, Initial Version Preliminary Licensing Documentation April 1980
10	10.02	Preliminary Licensing Documentation - 2nd Version, November 1981	Susitna Hydroelectric Project Licensing Report Task 10 - Preliminary Licensing Documentation, Second Version February 1982
7	7.04	Status of Susitna Basin Water Rights	Susitna Hydroelectric Project Task 7 - Environmental Subtask 7.04 - Water Resources Analysis Review of Existing Water Rights in the Susitna River Basin, December 1981 (Dwight)
7	7.04	Navigation Problems (DNR)	Susitna Hydroelectric Project Task 7 - Environmental Subtask 7.04 - Water Resources Analysis A Preliminary Analysis of Potential Navigational Problems Downstream of the Proposed Hydroelectric Dams on the Susitna River, March 1982 (DNR)
11	11.01	Project Overview Report, 2nd Draft	Susitna Hydroelectric Project Task 11, Subtask 11.01 - Project Overview March 1981
11	11.0	Economic Marketing and Financial Evaluation	Susitna Hydroelectric Project Task 11 - Reference Report Economic Marketing and Financial Evaluation
11	11.03	Susitna Risk Analysis	Susitna Hydroelectric Project Task 11, Subtask 11.03 - Closeout Report Susitna Risk Analysis, April 1982

ALASKA POWER AUTHORITY

LOGISTICS AND SURVEY

Procured, transported and erected a forty-man field camp comprised of bedroom units, bathroom modules, kitchen and dining facilities, fuels storage area, materials storage facilities, potable water treatment facilities, electric power generation, sewage treatment, garbage disposal, helicopter landing pads, warehousing, food refrigeration modules and interconnecting walkways.

Reflecting the fact that the only full time access to the camp is via air, provided logistics support of over 3,000 flight hours per year. Incidental items such as radio telephone communications, etc., also installed for life safety.

Performed detailed topographic surveys for the entire area of the project, including reservoirs, damsites, access and transmission line corridors. Established over 1,800 horizontal and vertical bench marks, with associated topographic mapping.

Flew 1,193 miles of air photos and mapped 174,720 acres of project lands (273 square miles).

Performed reconnaissance level timber inventories and marketability studies for timber resources in the project area (nearly 50,000 acres and over 20,000,000 cubic feet of fiber).

Performed detailed assessments of project access, considering such matters as quantities of construction materials to be moved, transport modes, day to day logistical support, socioeconomic effects, constructability, reliability, environmental impacts and location. Eighteen alternative routes were examined in detail, leading to the final access recommendation.

Slope stability and erosion studies were made of the reservoirs.

Over sixty-five transects were made to provide data supporting sediment transport studies, flow velocities, morphology studies and related information.

HYDROLOGICAL CONDITIONS

The first definitive inventory of available hydrologic and climatic material on the basin was made.

Performed continuous monitoring of river and meteorological conditions at multiple locations within the basin. Observations included stream flow, water quality, sediment discharge, freezing rain and icing, snow survey, snow creep, river ice observations and river evaporation. Analyzed nearly a thousand water samples for over a hundred individual properties.

Performed flood studies.

Calculated peak run-off volumes for a thirty-two year period.

Analyzed the probable effects of a hypothetical dam break.

Studied the advance and retreat of glaciers and calculated their probable water contribution to the project over the historic record.

Recorded and evaluated the mechanisms of river freeze-up and break-ups, as well as the timing.

Analyzed predicted reservoir sedimentation, mechanisms and rates.

Analyzed and predicted probable morphology changes resulting from river impoundment.

SEISMIC CONDITIONS

Established and operated a ten station micro-earthquake network as an aid to analyzing the earthquake potential.

Exhaustively inventoried all faults and linements within a hundred kilometers of the project area.

Analyzed two-hundred sixteen faults and linements for their earthquake potential. Constructed a physical and chronological tectonic model of the basin. Through engineering analysis, determined the reservoir induced seismicity magnitudes, probable maximum credible earthquakes for both location and intensity, and postulated the probable acceleration response spectra and duration.

Tested engineering calculations and evaluations against historical earthquake data and physical observations including quarternary studies, geophysical surveys, potassium, argon and radiocarbon age dating, and excavation of several trenches and test pits across potential earthquake faults.

Evaluated long term earthquake monitoring requirements for the project.

GEOTECHNICAL INVESTIGATIONS

Did 14,100 lineal feet of core drilling in over 60 different locations in the vicinity of the main dam and cofferdams.

Did 3,600 lineal feet of soils borings.

Did 208,425 lineal feet of seismic refraction surveys.

Did 14,000 feet of downhole geophysics.

Excavated 44 test pits.

Did over 7,300 rock and soil tests.

PROJECT FORMULATION

Load forecasts for the Railbelt were derived. Involved were the structuring of demand profiles over time, translation of the ISER electricity consumption forecasts into demand forecasts over time, assessment of the potential for load management and energy conservation, and finally computerized them for use in generation planning studies.

Potential Railbelt system generating options (mix of electrical generation sources) were identified and quantified. These included identification of over 48 hydroelectric options (Chakachamna, Bradley Lake, etc.), thermal options (coal, gas, number and location), procedural constraints such as the impact of the Fuel Use Act, and system transmission requirements.

The theoretical output of the Susitna basin development was derived through analysis and computation of climatological and hydrological information.

Optimum methods of developing that potential were analyzed. This entailed engineering analysis of twelve potential damsites in several dozen potential combinations, as well as tunnel alternatives.

Multiple iterations of engineering layouts and cost studies were made for the most effective configurations to define the type of dam, its cost of acquisition, and its potential for staged construction.

Extensive computer modeling of the basin possibilities (various mixes of generation sources, different load growth profiles, and different dam combinations) were made to determine the optimum total railbelt configuration for the next half century.

Collateral investigations of the effect of high-head dams were made, such as the potential for scour hole development.

ENVIRONMENTAL STUDIES

Aquatic Ecosystems

Each year approximately 60 field biologists from the Alaska Department of Fish and Game's (ADF&G) Susitna Hydro Aquatic Studies program have worked in the area. About one half dozen additional technical specialists have worked on the analysis of data and the development of mitigation plans. Fish wheels and/or sonar arrays were installed and maintained at Lentna Station, Sunshine Station, Talkeetna Station, Curry Station, and Gold Creek Station. In addition, the operating season for existing Susitna Station was expanded to more fully cover the return of in-migrants.

Substrate, water temperatures, inter gravel water temperature and hydrologic character of existing and potential spawning areas in the middle river between Devil Canyon and Talkeetna were determined. The 20 dominant sloughs that provide 97 percent of the production in this reach for chum and sockeye were surveyed in detail.

Fish taken by fish wheels were identified to species and sex, weighed and measured, scales taken and samples of fish were marked. Recovery of marked fish at other fish wheels or in the streams and sloughs allowed accurate estimates of escapement (returning population) and of the distribution and timing of returning fish.

The hydrology of the mainstem, tributaries, side channels and sloughs has been examined (sampling, monitoring, gaging) to establish baseline conditions with respect to use of these waters by fishes.

In order to determine possible project impacts on the aquatic ecosystems, a model system is being developed to couple the river flow, reservoir operation models, temperature and ice information models with fish models. This state of the art development will permit the analysis of multiple and complex operating regimes with respect to the trade-offs between impacts on the aquatic ecosystems and project power and economics.

Factors controlling access, spawning, incubation and rearing in the sloughs, have been assessed to support mitigation planning directed at maintaining existing levels of production in these waters with the minimum of, and the most passive of, interventions.

-4

Terrestrial Ecosystems

Vegetation types have been identified based upon field work and the examination of color and false color imagery. Detailed vegetation maps were prepared and ground truthed. Habitat quality has been assessed based upon preliminary sampling. Preliminary wetland maps have been developed.

Wildlife

Caribou: Population distribution and movement of both the caribou herd in general and radio tagged individuals have been made by monitoring from the air. Age, sex, recruitment and condition of the animals have been investigated.

In a comparable way, moose populations in, and adjacent to the project area, and in the lower Susitna have been studied. Population estimates, distribution and movements of the animals were determined.

A bioenergetic model of moose populations is being developed to permit mitigation planning to be based upon carrying capacity of habitats, and to refine the understanding of habitat management for moose production.

Potentially Critical Habitats Have Been Identified

Dall sheep, wolves, wolverines, black bear and brown bear were also investigated by periodic monitoring of radio collared individuals. Population estimates have been developed. Denning areas were identified for bears, wolves, foxes; home ranges as well as seasonal movements were mapped.

Archaeological-Historical

Two field seasons of archaeological investigations have covered the majority of the project areas at a reconnaissance level; 160 sites have been identified and preliminary assessments of 20 sites have been completed.

Socio-Economic Studies

Socio-economic characteristics of the region, and its communities have been determined. Population distribution, employment, income statistics, housing and vacancy rates, existing utilities and services have all been described.

Impacts of the project work force and the economic impacts of the project have been assessed with respect to the ability of the existing communities and infrastructure to absorb project induced growth.

The use of fish, wildlife and game resources by the regional populations was analyzed using Department of Game harvest and catch information. Both commercial and non-commercial activities were determined in order to establish base conditions and to estimate project related impacts that may occur.

Recreation

Recreation resources, both formal and casual, in the region have been inventoried. Existing demand for various types of recreation activities has been determined and projections of future demands have been developed. Recreation planning by Federal, State, and local agencies has been documented. Recreation facilities have been planned which make best use of the project resources, are compatible with existing agency planning, and are responsive to future demand projections.

Land Use

The complex and dynamic patterns of land use and ownership have been elucidated. Federal, state, native corporation and private ownership in the region and movement of land title from one status to another has been documented.

Federal, state, borough, native corporation and local planning documents and intentions have been reviewed and provide a basis to initiate and/or continue dealing with the various owners and planners.

TRANSMISSION LINES

Approximately four hundred miles of transmission line must be built to distribute the power from the Watana campsite to the communities of Fairbanks, Anchorage and intermediate points. Several thousand miles of potential corridors were screened incidental to the final routing. Various combinations of over twenty separate segments were examined in closer detail. Transmission routing was selected on the basis of life cycle cost, constructability, environmental impact and maintainability.

Switching stations and substations were identified, sited and single line diagrams made.

COST ESTIMATES

Multiple cost estimates were made, cumulating in a feasibility level cost estimate of high confidence. Part of the process entailed an independent cost estimate performed by a totally separate consultant engineer. These two cost estimates agreed within five percent, well within the estimating level of accuracy.

PUBLIC PARTICIPATION

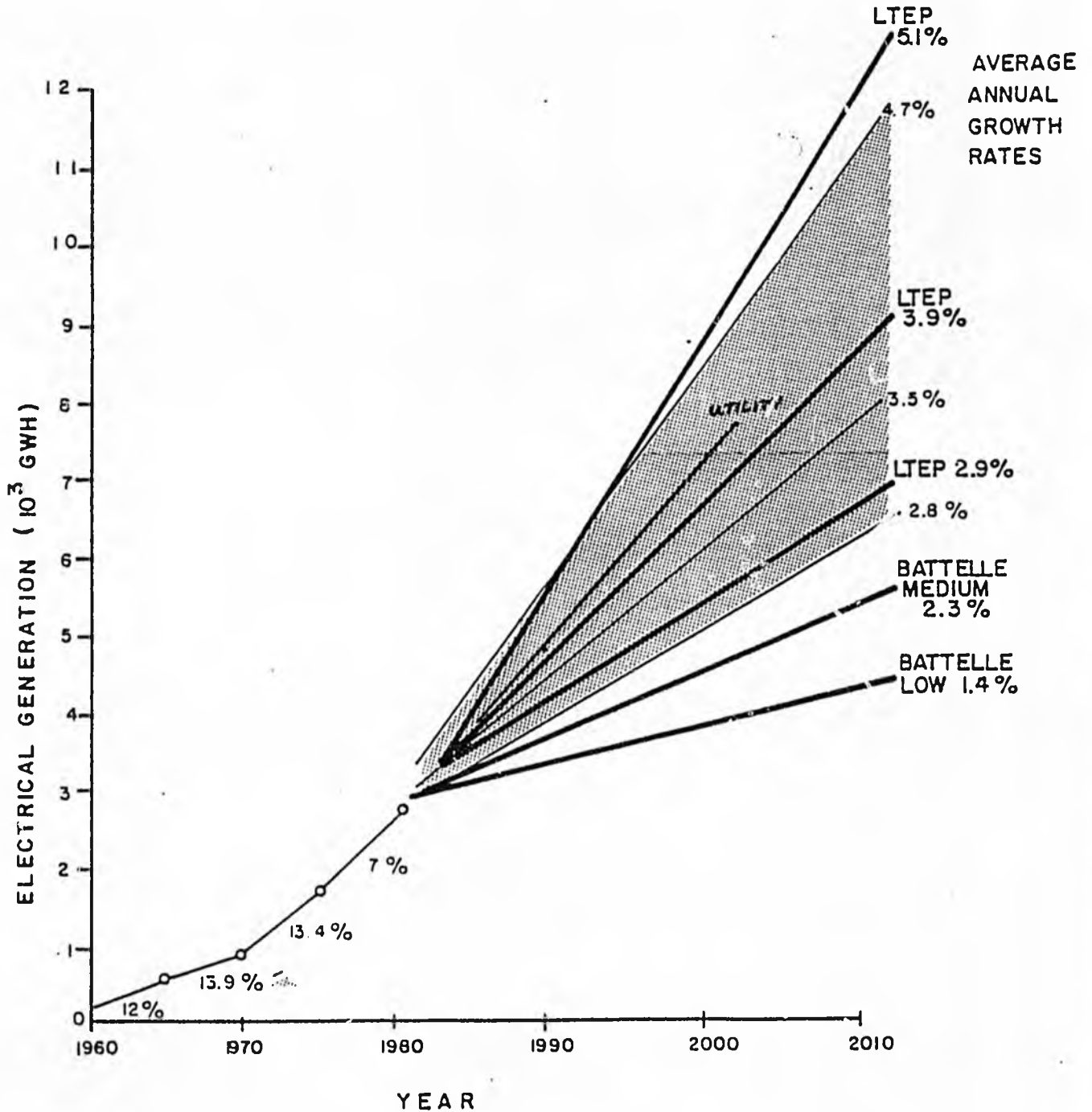
Held over 20 public meetings, workshops and hearings.

Processed nearly 150 citizen inquires.

Published five newsletters, with a total distribution exceeding 150,000 copies.

LOAD FORECAST UPDATE

FEASIBILITY REPORT ASSUMPTIONS:
BETWEEN 2.8% AND 4.7% GROWTH IN ENERGY DEMAND



COMPOSITE REPORT

LEVEL 13

4 SCENARIOS

Susitna Licensing Schedule
synopsis by Early Finish Date

03/11/83

Inode	Jnode	Description	Scenario1	Scenario2	Scenario3	Scenario4
7178	7210	Prelim. Draft of Order Prep.	06/29/83	06/29/83	06/29/83	06/29/83
7200	7210	Linkage Only	----	----	----	----
7210	7300	Draft Order Prepared	07/26/83	07/26/83	07/26/83	07/26/83
7178	7200	Power Memo Issued	12/07/84	04/12/85	----	----
7178	7210	Prelim. Dft. of Order Prepared	12/10/84	04/15/85	----	----
7175	7500	Init. Considered on Agenda	----	----	12/05/86	04/10/87
7200	7210	Linkage Only	----	----	----	----
7210	7300	Draft Order Prepared	01/07/85	05/09/85	----	----
7300	7500	Init. Considered on Agenda	08/15/83	08/15/83	08/15/83	08/15/83
7300	7500	Init. Considered on Agenda	01/21/85	05/31/85	----	----
7500	8000	Commission Order Issued	02/01/85	06/06/85	12/12/86	04/17/87

SCENARIO B2

3/10/83

NO HOLIDAYS

DEFICIENCIES

830 CALENDAR DAYS

575 WORKING DAYS

03/10/1983

ACTIVITY REPORT FOR SLSITNA PROJECT LICENSING (SCENARIO B2)

PAGE 1

ENCODE	ENCODE	QUR	%CP	START	FINISH	STATUS
1	1000	0	100%	RESP.= DLM. LINKS to Start of Project ALX-1= 0 ALX-2= 0 JOB CD=	EARLY - 02/28/83 02/28/83 LATE - 02/28/83 02/28/83 ACTUAL - 02/28/83 02/28/83 TOTAL/FREE FLOAT = 0 / 0	COMPLETED
1000	1050	0	100%	RESP.= APA * ALX-1= 0 ALX-2= 500 JOB CD= 62	Application Docketed EARLY - 02/28/83 02/28/83 LATE - 02/28/83 02/28/83 ACTUAL - 02/28/83 02/28/83 TOTAL/FREE FLOAT = 0 / 0	COMPLETED
1000	5672	34	0%	RESP.= ALX-1= 0 ALX-2= 6720 JOB CD= 72	Settlement Filed EARLY - 02/28/83 04/14/83 LATE - 06/17/86 08/04/86 ACTUAL - TOTAL/FREE FLOAT = 833 / 0	CAN START
1050	1060	30	0%	RESP.= FER ALX-1= 500 ALX-2= 600 JOB CD= 63	PAB Adeq. Rev. Completed EARLY - 02/28/83 04/08/83 LATE - 08/30/84 10/12/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START
1050	1065	30	0%	RESP.= FER ALX-1= 500 ALX-2= 650 JOB CD= 63	PSL Adequacy Rev. Completed EARLY - 02/28/83 04/08/83 LATE - 08/30/84 10/12/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START
1050	1070	30	0%	RESP.= FER ALX-1= 500 ALX-2= 700 JOB CD= 63	Envir. Adequacy Rev. Completed EARLY - 02/28/83 04/08/83 LATE - 08/30/84 10/12/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START
1050	1076	30	0%	RESP.= FER ALX-1= 500 ALX-2= 760 JOB CD= 63	DISA Adequacy Rev. Completed EARLY - 02/28/83 04/08/83 LATE - 08/30/84 10/12/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START
1050	1570	30	0%	RESP.= FER ALX-1= 500 ALX-2= 5700 JOB CD= 63	Jurisdiction Rev. Completed EARLY - 02/28/83 04/08/83 LATE - 08/30/84 10/12/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START
1050	2055	30	0%	RESP.= FER ALX-1= 500 ALX-2= 550 JOB CD= 63	Prog. Man. Adequacy Rev. EARLY - 02/28/83 04/08/83 LATE - 08/30/84 10/12/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START

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ACTIVITY REPORT FOR SUSTAINA PROJECT LICENSING (SCENARIO B2)

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SNODE	ENODE	DUR	%CP		START	FINISH	STATUS
1050	2080	34	0%	RESP. = FER AUX-1 = 500 AUX-2 = 800 JOBCC = 62	Adequacy Review Completed EARLY - 02/28/83 04/14/83 LATE - 08/30/84 10/18/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	CAN START	
1060	2055	0	0%	RESP. = DUM AUX-1 = 600 AUX-2 = 550 JOBCC =	Linkage Only EARLY - 04/11/83 04/11/83 LATE - 10/15/84 10/15/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
1065	2055	0	0%	RESP. = DUM AUX-1 = 650 AUX-2 = 550 JOBCC =	Linkage Only EARLY - 04/11/83 04/11/83 LATE - 10/15/84 10/15/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
1070	2055	0	0%	RESP. = DUM AUX-1 = 700 AUX-2 = 550 JOBCC =	Linkage Only EARLY - 04/11/83 04/11/83 LATE - 10/15/84 10/15/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
1076	2055	0	0%	RESP. = DUM AUX-1 = 760 AUX-2 = 550 JOBCC =	Linkage Only EARLY - 04/11/83 04/11/83 LATE - 10/15/84 10/15/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
1570	2055	0	0%	RESP. = DUM AUX-1 = 5700 AUX-2 = 500 JOBCC =	Linkage Only EARLY - 04/11/83 04/11/83 LATE - 10/15/84 10/15/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
2055	2080	4	0%	RESP. = FER AUX-1 = 550 AUX-2 = 800 JOBCC = 63	Adequacy Rev. Completed by PM EARLY - 04/11/83 04/14/83 LATE - 10/15/84 10/18/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
2080	2090	11	0%	RESP. = FER AUX-1 = 800 AUX-2 = 900 JOBCC = 63	Deficiency Letter Issued EARLY - 04/15/83 04/29/83 LATE - 10/19/84 11/02/84 ACTUAL - TOTAL/FREE FLOAT = 382 / 0		
2080	3200	0	0%	RESP. = FER AUX-1 = 800 AUX-2 = 2000 JOBCC = 62	Application Dat. Adequate EARLY - 04/15/83 04/15/83 LATE - 02/26/85 02/26/85 ACTUAL - TOTAL/FREE FLOAT = 469 / 87		

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ACTIVITY REPORT FOR SUBSTRA PROJECT LICENSING (SCENEP10 B2)

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SNODE	ENODE	DUR	%CP	START	FINISH	STATUS
2070	2100	62	0%	RESP.= APA * AUX-1= 900 AUX-2= 1000 JOB CD= 63	Revisions Submitted EARLY - 05/02/83 07/28/83 LATE - 11/05/84 02/04/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2100	2120	11	0%	RESP.= FER AUX-1= 1000 AUX-2= 1200 JOB CD= 63	HA Review of Revisions Com. EARLY - 07/29/83 08/12/83 LATE - 02/05/85 02/20/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2100	2130	11	0%	RESP.= FER AUX-1= 1000 AUX-2= 1300 JOB CD= 63	EA Review of Revisions Com. EARLY - 07/29/83 08/12/83 LATE - 02/05/85 02/20/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2100	2140	11	0%	RESP.= FER AUX-1= 1000 AUX-2= 1400 JOB CD= 63	DISA Review of Revisions Com. EARLY - 07/29/83 08/12/83 LATE - 02/05/85 02/20/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2100	3110	11	0%	RESP.= FER AUX-1= 1000 AUX-2= 1100 JOB CD= 63	Com. Received by Project Man. EARLY - 07/29/83 08/12/83 LATE - 02/05/85 02/20/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2120	3110	0	0%	RESP.= FER AUX-1= 1200 AUX-2= 1100 JOB CD=	Linkage Only EARLY - 08/15/83 08/15/83 LATE - 02/21/85 02/21/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2130	3110	0	0%	RESP.= DUM AUX-1= 1300 AUX-2= 1100 JOB CD=	Linkage Only EARLY - 08/15/83 08/15/83 LATE - 02/21/85 02/21/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
2140	3110	0	0%	RESP.= DUM AUX-1= 1400 AUX-2= 1100 JOB CD=	Linkage Only EARLY - 08/15/83 08/15/83 LATE - 02/21/85 02/21/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	
3110	3150	3	0%	RESP.= FER AUX-1= 1100 AUX-2= 1500 JOB CD= 63	Review of Revisions Com. by FM EARLY - 08/15/83 09/17/83 LATE - 02/21/85 02/25/85 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	

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ACTIVITY REPORT FOR SUSITNA PROJECT LICENSING (SCENERIO B2)

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SNODE	ETCODE	DUR	%CP	RESP.	DESCRIPTION	START	FINISH	STATUS
3150	3200	0	0%	DUM	Linkage Only			
				AUX-1= 1500	EARLY - 08/18/83	08/18/83		
				AUX-2= 2000	LATE - 02/26/85	02/26/85		
				JOBID=	ACTUAL-			
					TOTAL/FREE FLOAT = 382 / 0			
3150	3777	0	0%	FER	Application Rejected by CEPR			
				AUX-1= 1500	EARLY - 08/18/83	08/18/83		
				AUX-2= 7975	LATE - 12/13/86	12/13/86		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 836 / 0			
3200	3205	11	0%	FER	Accept. Letter Iss. to Appl.			
				AUX-1= 2000	EARLY - 08/18/83	09/01/83		
				AUX-2= 2050	LATE - 02/26/85	03/12/85		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 382 / 0			
3200	3212	14	0%	LAB	Envir. Anal. Report Prepared			
				AUX-1= 2000	EARLY - 08/18/83	09/07/83		
				AUX-2= 2125	LATE - 02/26/85	03/15/85		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 382 / 0			
3200	3400	30	0%	COM	Public Notice Issued			
				AUX-1= 2000	EARLY - 08/18/83	09/29/83		
				AUX-2= 4005	LATE - 04/04/86	05/15/86		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 661 / 0			
3200	3505	100	0%	LAB	Prelim. Salt/Adec. Rev. Com.			
				AUX-1= 2000	EARLY - 08/18/83	01/12/84		
				AUX-2= 5050	LATE - 02/26/85	07/17/85		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 382 / 0			
3200	3557	104	0%	FEN	Prelim. Trans. Line Rev. Com			
				AUX-1= 2000	EARLY - 08/18/83	01/18/84		
				AUX-2= 5575	LATE - 03/12/85	08/06/85		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 392 / 0			
3205	3410	21	0%	APA*	Appl. Dis. Appl. to Rev. Agen.			
				AUX-1= 2050	EARLY - 09/02/83	10/03/83		
				AUX-2= 4100	LATE - 03/13/85	04/10/85		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 382 / 0			
3212	4240	100	0%	LAB	Sec. of DEIS Prepared			
				AUX-1= 2125	EARLY - 09/08/83	02/01/84		
				AUX-2= 2400	LATE - 03/18/85	09/06/85		
				JOBID= 63	ACTUAL-			
					TOTAL/FREE FLOAT = 382 / 0			

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ACTIVITY REPORT FOR SUSTINA PROJECT LICENSING (SCENARIO B2)

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SNODE	ENODE	DLP	ACP	START	FINISH	STATUS
3400	3402	40	0%	RESP.= FER ALX-1= 4005 ALX-2= 4025 JOBCC= 63	Pub. Com.End-Inter P&M Rec. EARLY - 07/30/83 11/29/83 LATE - 05/16/86 07/14/86 ACTUAL - TOTAL/FREE FLOAT = 661 / 0	
3402	3405	15	0%	RESP.= FER ALX-1= 4025 ALX-2= 4050 JOBCC= 63	Interventions Granted EARLY - 11/20/83 12/20/83 LATE - 07/15/86 08/06/86 ACTUAL - TOTAL/FREE FLOAT = 661 / 0	
3405	5603	0	0%	RESP.= DUM ALX-1= 4050 ALX-2= 6000 JOBCC=	Linkage Only EARLY - 12/21/83 12/21/83 LATE - 08/05/86 08/05/86 ACTUAL - TOTAL/FREE FLOAT = 661 / 279	
3410	3450	63	0%	RESP.= COM ALX-1= 4100 ALX-2= 4500 JOBCC= 62	Com. Rec. by FERC and Appl. EARLY - 10/04/83 01/05/84 LATE - 04/11/85 07/10/85 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
3450	3500	42	0%	RESP.= APA * ALX-1= 4500 ALX-2= 5000 JOBCC= 62	App. Response to Agen. Com. EARLY - 01/06/84 03/06/84 LATE - 07/11/85 09/09/85 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
3450	3505	0	0%	RESP.= DUM ALX-1= 4500 ALX-2= 5050 JOBCC=	Linkage Only EARLY - 01/06/84 01/06/84 LATE - 07/18/85 07/18/85 ACTUAL - TOTAL/FREE FLOAT = 387 / 5	
3500	4244	0	0%	RESP.= DUM ALX-1= 5000 ALX-2= 2440 JOBCC=	Linkage Only EARLY - 03/07/84 03/07/84 LATE - 12/16/85 12/16/85 ACTUAL - TOTAL/FREE FLOAT = 448 / 66	
3500	5600	227	0%	RESP.= FER ALX-1= 5000 ALX-2= 6000 JOBCC= 62	Still Analysis Completed EARLY - 03/07/84 01/29/85 LATE - 09/10/85 08/04/86 ACTUAL - TOTAL/FREE FLOAT = 332 / 0	
3505	3506	14	0%	RESP.= LAB ALX-1= 5050 ALX-2= 5060 JOBCC= 63	Labs Prep. Draft of Impact EARLY - 01/13/84 02/01/84 LATE - 07/18/85 08/06/85 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	

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ACTIVITY REPORT FOR SUBTNA PROJECT LICENSING (SCENARIO B2)

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ENODE	ENODE	DJF	%C	START	FINISH	STATUS
3506	4240	0	0%	RESP. = DUM AUX-1 = 5060 AUX-2 = 2400 JOB CD =	Linkage Only EARLY - 02/02/84 02/02/84 LATE - 08/07/85 08/07/85 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
3557	4240	0	0%	RESP. = DUM AUX-1 = 5575 AUX-2 = 2400 JOB CD =	Linkage Only EARLY - 01/19/84 01/19/84 LATE - 08/07/85 08/07/85 ACTUAL - TOTAL/FREE FLOAT = 392 / 10	
3797	7800	0	0%	RESP. = DUM AUX-1 = 7975 AUX-2 = 8000 JOB CD =	Linkage to Project End EARLY - 08/18/83 08/18/83 LATE - 12/13/86 12/13/86 ACTUAL - TOTAL/FREE FLOAT = 836 / 0	
4240	4244	87	0%	RESP. = FER AUX-1 = 2400 AUX-2 = 2440 JOB CD = 63	DEIS Prepared EARLY - 02/02/84 06/07/84 LATE - 08/07/85 12/13/85 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
4244	4245	5	0%	RESP. = FER AUX-1 = 2440 AUX-2 = 2450 JOB CD = 63	DEIS Markup Rev. & Pub. EARLY - 06/08/84 06/14/84 LATE - 12/16/85 12/20/85 ACTUAL - TOTAL/FREE FLOAT = 392 / 0	
4244	4601	6	0%	RESP. = FER AUX-1 = 2440 AUX-2 = 6012 JOB CD = 63	Dft. Hra. Ord. Need for Power EARLY - 06/08/84 06/15/84 LATE - 06/13/86 06/20/86 ACTUAL - TOTAL/FREE FLOAT = 507 / 0	
4245	4260	9	0%	RESP. = FER AUX-1 = 2450 AUX-2 = 2600 JOB CD = 63	DEIS Notice in Fed. Reg. EARLY - 06/15/84 06/27/84 LATE - 12/23/85 01/06/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
4260	4261	28	0%	RESP. = FER AUX-1 = 2600 AUX-2 = 2610 JOB CD = 63	Pub. Com. Ends-Pet. & Mat Rec. EARLY - 06/28/84 08/07/84 LATE - 01/07/86 02/13/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
4260	4265	42	0%	RESP. = FER AUX-1 = 2600 AUX-2 = 2650 JOB CD = 63	Com. Received from Rev. Agen EARLY - 06/28/84 08/27/84 LATE - 01/07/86 02/06/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	

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ACTIVITY REPORT FOR SUSTINA PROJECT LICENSING (SCENARIO B2)

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SNODE	ENODE	DUR	%CP		START	FINISH	STATUS
4261	4263	14	0%	RESP. = FER AUX-1 = 2610 AUX-2 = 2630 JOBCC = 63	Intervention Granted EARLY - 08/08/84 LATE - 02/14/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	08/27/84 03/06/86	
4263	4265	0	0%	RESP. = DUM AUX-1 = 2630 AUX-2 = 2650 JOBCC =	Linkage Only EARLY - 08/28/84 LATE - 03/07/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	08/28/84 03/07/86	
4265	4510	49	0%	RESP. = FER AUX-1 = 2650 AUX-2 = 5100 JOBCC = 63	Prep. Res. to Com. & Ref. UEIS EARLY - 08/28/84 LATE - 04/08/86 ACTUAL - TOTAL/FREE FLOAT = 404 / 0	11/06/84 06/16/86	
4265	4558	49	0%	RESP. = FER AUX-1 = 2650 AUX-2 = 5587 JOBCC = 63	ISIB Final. FEIS Text Rev. EARLY - 08/28/84 LATE - 04/08/86 ACTUAL - TOTAL/FREE FLOAT = 404 / 0	11/06/84 06/16/86	
4265	5280	71	0%	RESP. = FER AUX-1 = 2650 AUX-2 = 2800 JOBCC = 63	FEIS Prepared EARLY - 08/28/84 LATE - 03/07/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	12/10/84 06/16/86	
4510	4515	21	0%	RESP. = FER AUX-1 = 5100 AUX-2 = 5150 JOBCC = 63	IA Memo of Spec. Lic. Con. EARLY - 11/07/84 LATE - 08/26/86 ACTUAL - TOTAL/FREE FLOAT = 453 / 0	12/07/84 09/24/86	
4510	5280	0	0%	RESP. = DUM AUX-1 = 5100 AUX-2 = 2800 JOBCC =	Linkage Only EARLY - 11/07/84 LATE - 06/17/86 ACTUAL - TOTAL/FREE FLOAT = 404 / 22	11/07/84 06/17/86	
4515	5747	0	0%	RESP. = DUM AUX-1 = 5150 AUX-2 = 7478 JOBCC =	Linkage Only EARLY - 12/10/84 LATE - 09/25/86 ACTUAL - TOTAL/FREE FLOAT = 453 / 71	12/10/84 09/25/86	
4558	4560	30	0%	RESP. = FER AUX-1 = 5587 AUX-2 = 5600 JOBCC = 63	Trans. Line Rep. & ISIB Memo EARLY - 11/07/84 LATE - 08/13/86 ACTUAL - TOTAL/FREE FLOAT = 444 / 0	12/20/84 09/24/86	

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ACTIVITY REPORT FOR SUBITNA PROJECT LICENSING (SCENERIO B2)

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SNODE	ENODE	DUP	YCP	START	FINISH	STATUS
4558	5280	0	0%	RESP.= DUM AUX-1= 5587 AUX-2= 2800 JOBOD=	Linkage Only EARLY - 11/07/84 11/07/84 LATE - 06/17/86 06/17/86 ACTUAL- TOTAL/FREE FLOAT = 404 / 22	
4560	5747	0	0%	RESP.= DUM AUX-1= 5600 AUX-2= 7478 JOBOD=	Linkage Only EARLY - 12/21/84 12/21/84 LATE - 09/25/86 09/25/86 ACTUAL- TOTAL/FREE FLOAT = 444 / 62	
4601	4605	9	0%	RESP.= FER AUX-1= 6012 AUX-2= 6052 JOBOD= 63	Hearing Proc. Ordered by Com. EARLY - 06/18/84 06/28/84 LATE - 06/23/86 07/03/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	
4605	4620	22	0%	RESP.= COM AUX-1= 6052 AUX-2= 6202 JOBOD= 63	Prehearing Conf. Held EARLY - 06/29/84 07/31/84 LATE - 07/07/86 09/05/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	
4620	4630	14	0%	RESP.= FER AUX-1= 6202 AUX-2= 6302 JOBOD= 63	Discovery Period Completed EARLY - 08/01/84 08/20/84 LATE - 08/06/86 08/25/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	
4630	4631	14	0%	RESP.= COM AUX-1= 6302 AUX-2= 6377 JOBOD= 63	Admin. Hearing Conducted EARLY - 08/21/84 09/10/84 LATE - 08/26/86 09/15/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	
4631	4647	8	0%	RESP.= COM AUX-1= 6377 AUX-2= 6477 JOBOD= 63	All Initial Briefs Filed EARLY - 09/11/84 09/20/84 LATE - 09/16/86 07/25/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	
4647	4667	7	0%	RESP.= COM AUX-1= 6477 AUX-2= 6677 JOBOD= 63	All Reply Briefs Filed EARLY - 09/21/84 10/01/84 LATE - 09/26/86 10/06/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	
4667	4670	20	0%	RESP.= FER AUX-1= 6677 AUX-2= 6702 JOBOD= 63	ALJ Init. Decision Issued EARLY - 10/02/84 10/30/84 LATE - 10/07/86 11/04/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	

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ACTIVITY REPORT FOR SUSTINA PROJECT LICENSING (SCENARIO B2)

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SNODE	ENODE	DUR	%CP		START	FINISH	STATUS
4670	4680	13	0%	RESP. = APA * AUX-1= 6702 AUX-2= 6802 JOB CD= 63	All Exception Briefs Filed EARLY - 10/31/84 LATE - 11/05/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	11/19/84 11/24/86	
4680	4690	8	0%	RESP. = FER AUX-1= 6802 AUX-2= 6902 JOB CD= 63	All Reply Except. Briefs Filed EARLY - 11/20/84 LATE - 11/25/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 0	11/30/84 12/05/86	
4690	5690	0	0%	RESP. = DUM AUX-1= 6902 AUX-2= 6900 JOB CD=	Linkage Only EARLY - 12/03/84 LATE - 12/08/86 ACTUAL- TOTAL/FREE FLOAT = 507 / 61	12/03/84 12/08/86	
5280	5290	25	0%	RESP. = FER AUX-1= 2900 AUX-2= 2700 JOB CD= 63	FEIS Mark-up Rev. & Pub. EARLY - 12/11/84 LATE - 06/17/86 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	01/16/85 07/22/86	
5290	5300	9	0%	RESP. = FER AUX-1= 2700 AUX-2= 3000 JOB CD= 63	FEIS Notice in Fed. Reg. EARLY - 01/17/85 LATE - 07/23/86 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	01/29/85 08/04/86	
5300	5350	15	0%	RESP. = FER AUX-1= 3000 AUX-2= 3500 JOB CD= 63	EA Memo of Spec. Lic. Con. EARLY - 01/30/85 LATE - 09/01/86 ACTUAL- TOTAL/FREE FLOAT = 403 / 0	02/20/85 09/24/86	
5300	5600	0	0%	RESP. = DUM AUX-1= 3000 AUX-2= 6000 JOB CD=	Linkage Only EARLY - 01/30/85 LATE - 08/05/86 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	01/30/85 08/05/86	
5350	5747	0	0%	RESP. = DUM AUX-1= 3500 AUX-2= 7478 JOB CD=	Linkage Only EARLY - 02/21/85 LATE - 09/25/86 ACTUAL- TOTAL/FREE FLOAT = 403 / 21	02/21/85 09/25/86	
5300	5601	11	0%	RESP. = FER AUX-1= 6000 AUX-2= 6010 JOB CD= 73	Draft Hear. Order Prep. on Env. EARLY - 01/30/85 LATE - 08/05/86 ACTUAL- TOTAL/FREE FLOAT = 382 / 0	02/13/85 08/19/86	

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ACTIVITY REPORT FOR SLSITNA PROJECT LICENSING (SCENERIO B2)

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SNODE	ENODE	DUR	%C	STAGE	FINISH	STATUS
5601	5602	10	0%	RESP. = FER AUX-1 = 6010 AUX-2 = 6025 JOB CD = 73	Commission Meeting EARLY - 02/14/85 02/28/85 LATE - 08/22/86 09/03/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
5602	5605	0	0%	RESP. = FER AUX-1 = 6025 AUX-2 = 6050 JOB CD = 73	Hear. Process Ord. by Com. EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	
5602	5747	15	0%	RESP. = FER AUX-1 = 6025 AUX-2 = 7178 JOB CD = 71	Dft. Power Memo. Prepared EARLY - 03/01/85 03/21/85 LATE - 09/04/86 09/24/86 ACTUAL - TOTAL/FREE FLOAT = 382 / 0	
5605	5620	0	0%	RESP. = COM AUX-1 = 6050 AUX-2 = 6200 JOB CD = 73	Prehear. Con. Held EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/09/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	
5620	5630	0	0%	RESP. = FER AUX-1 = 6200 AUX-2 = 6300 JOB CD = 73	Discovery Period Completed EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	
5630	5637	0	0%	RESP. = COM AUX-1 = 6300 AUX-2 = 6375 JOB CD = 73	Adv. Hearing Conducted EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	
5637	5647	0	0%	RESP. = COM AUX-1 = 6375 AUX-2 = 6475 JOB CD = 73	All Initial Briefs Filed EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	
5647	5667	0	0%	RESP. = COM AUX-1 = 6475 AUX-2 = 6675 JOB CD = 73	All Reply Briefs Filed EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	
5667	5670	0	0%	RESP. = FER AUX-1 = 6675 AUX-2 = 6700 JOB CD = 73	ALJ Initial Dec. Issued EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 0	

03/10/1981

ACTIVITY REPORT FOR SLEIINA PROJECT LICENSING (SCENARIO B2)

PAGE 11

SNODE	ENJOF	DJA	YCF	START	FINISH	STATE
5670	5680	0	0%	RESP. = APA * ALX-1= 6700 ALX-2= 6800 JOBOD= 73	All Exception Briefs Filled EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL- TOTAL/FREE FLOAT = 446 / 0	
5690	5690	0	0%	RESP. = FER ALX-1= 6800 ALX-2= 6900 JOBOD= 73	All Reply Ex. Briefs Filled EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL- TOTAL/FREE FLOAT = 446 / 0	
5690	6717	0	0%	RESP. = FER ALX-1= 6900 ALX-2= 7175 JOBOD= 72	Order Drafted by OOR EARLY - 03/01/85 03/01/85 LATE - 12/08/86 12/08/86 ACTUAL- TOTAL/FREE FLOAT = 446 / 0	
5692	5694	22	0%	RESP. = ALX-1= 6920 ALX-2= 6940 JOBOD= 73	Reply Comments Due EARLY - 04/15/83 05/16/83 LATE - 08/05/86 09/04/86 ACTUAL- TOTAL/FREE FLOAT = 833 / 0	
5694	5717	14	0%	RESP. = FER ALX-1= 6940 ALX-2= 7178 JOBOD= 73	Draft Power Mem. Prepared EARLY - 05/17/83 06/06/83 LATE - 09/05/86 09/24/86 ACTUAL- TOTAL/FREE FLOAT = 833 / 0	
5717	5720	16	0%	RESP. = FER ALX-1= 7178 ALX-2= 7200 JOBOD= 73	PLR Memo Issued EARLY - 06/07/83 06/28/83 LATE - 09/26/86 10/20/86 ACTUAL- TOTAL/FREE FLOAT = 834 / 0	
5717	5721	17	0%	RESP. = FER ALX-1= 7178 ALX-2= 7210 JOBOD= 73	Prelim. Draft of Order Prep. EARLY - 06/07/83 06/29/83 LATE - 09/25/86 10/20/86 ACTUAL- TOTAL/FREE FLOAT = 833 / 0	
5720	5721	0	0%	RESP. = DUM ALX-1= 7200 ALX-2= 7210 JOBOD= 73	Linkage Only EARLY - 06/29/83 06/29/83 LATE - 10/21/86 10/21/86 ACTUAL- TOTAL/FREE FLOAT = 834 / 1	
5721	6730	18	0%	RESP. = FEP ALX-1= 7210 ALX-2= 7300 JOBOD= 73	Draft Order Prepared EARLY - 06/30/83 07/26/83 LATE - 10/21/86 11/14/86 ACTUAL- TOTAL/FREE FLOAT = 833 / 0	

SNODE	ENODE	DUP	%C		START	FINISH	STATUS
5747	6720	16	0%	RESP.= FER ALX-1= 7178 ALX-2= 7200 JOBCC= 71	Power Memo Issued EARLY - 03/22/85 LATE - 09/26/86 ACTUAL - TOTAL/FREE FLOAT = 383 / 0	04/12/85 10/20/86	
5747	6721	17	0%	RESP.= FER ALX-1= 7178 ALX-2= 7210 JOBCC= 73	Prelim. Dft. of Order Prepared EARLY - 03/22/85 LATE - 09/25/86 ACTUAL - TOTAL/FREE FLOAT = 362 / 0	04/15/85 10/20/86	
6717	7750	0	0%	RESP.= FER ALX-1= 7175 ALX-2= 7500 JOBCC= 72	Init. Considered on Agenda EARLY - 03/01/85 LATE - 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 446 / 64	03/01/85 12/08/86	
6720	6721	0	0%	RESP.= DUM ALX-1= 7200 ALX-2= 7210 JOBCC=	Linkage Only EARLY - 04/15/85 LATE - 10/21/86 ACTUAL - TOTAL/FREE FLOAT = 303 / 1	04/15/85 10/21/86	
6721	7730	18	0%	RESP.= FER ALX-1= 7210 ALX-2= 7500 JOBCC= 73	Draft Order Prepared EARLY - 04/16/85 LATE - 10/21/86 ACTUAL - TOTAL/FREE FLOAT = 302 / 0	05/09/85 11/14/86	
6730	7750	14	0%	RESP.= FER ALX-1= 7300 ALX-2= 7500 JOBCC= 72	Init. Considered on Agenda EARLY - 07/27/83 LATE - 11/17/86 ACTUAL - TOTAL/FREE FLOAT = 833 / 451	08/15/83 12/05/86	
7730	7750	14	0%	RESP.= FER ALX-1= 7300 ALX-2= 7500 JOBCC= 72	Init. Considered on Agenda EARLY - 05/10/85 LATE - 11/17/86 ACTUAL - TOTAL/FREE FLOAT = 302 / 0	05/30/85 12/05/86	
7750	7000	5	0%	RESP.= FER ALX-1= 7500 ALX-2= 8000 JOBCC= 72	Commission Order Issued EARLY - 05/31/85 LATE - 12/08/86 ACTUAL - TOTAL/FREE FLOAT = 312 / 0	06/06/85 12/12/86	

SJSITNA PROJECT LICENSING (SCENARIO B2)

CALCULATIONS BASED ON USING ACTUAL START/FINISH DATE LOGIC AND DESIRED FINISH DATE CONTROL

TOTAL ACTUAL COST = 0
 TOTAL PAYMENTS = 0

 OVER / UNDER = 0

START/END DATES : 02/28/83 12/12/86
 CUSTOMER : A.P.A.
 DAYS PER WEEK : 5
 SORT PARAMETERS = / /

PROJECT MGR : Robert A. Mohr
 LAST PAYMENT DATE :
 BURDEN % : 0

STARTS	HOLIDAYS OMITTED	
	LENGTH	DESCRIPTION
05/31/83	1	Memorial Day
07/04/83	1	July 4th
09/05/83	1	Labor Day
10/10/83	1	Columbus Day
11/11/83	1	Veteran's Day
11/24/83	1	Thanksgiving
12/26/83	1	Christmas
01/02/84	1	New Years
02/20/84	1	Washington's Birthday
05/28/84	1	Memorial Day
07/04/84	1	July 4th
09/03/84	1	Labor Day
10/08/84	1	Columbus Day
11/12/84	1	Veteran's Day
11/22/84	1	Thanksgiving
12/26/84	1	Christmas
01/01/85	1	New Years
02/18/85	1	Washington's Birthday
05/27/85	1	Memorial Day
07/04/85	1	July 4th
09/02/85	1	Labor Day
10/14/85	1	Columbus Day
11/11/85	1	Veteran's Day
11/28/85	1	Thanksgiving
12/25/85	1	Christmas
01/01/86	1	New Year
02/17/86	1	Washington's Birthday
05/26/86	1	Memorial Day
07/04/86	1	July 4th
09/01/86	1	Labor Day
10/13/86	1	Columbus Day
11/11/86	1	Veteran's Day
11/27/86	1	Thanksgiving

Alaska State Legislature

Barbara Lscher, Chairman
Mae Tischer, Vice-Chairman
Randy Phillips
Milo Fritz
Don Clocksin
Jack McBride
Mike Szymanski



Room 104
State Capitol
Juneau, Alaska 99811

Pouch V
Juneau, Alaska 99611

House of Representatives Committee on Community & Regional Affairs

TO: Representative John Ringstad
Co-Chairman of House Resources Committee

FROM: Representative Barbara Lscher
Chair of House Community and Regional Affairs Committee

DATE: April 11th, 1983

RE: House Bill 99, Susitna Hydroelectric

The Alaska Power Authority Board of Directors has recently revised their estimated funding requirements for FY 84 in order to continue work on Federal licensing requirements for the Susitna project.

The revised estimate is \$22,000,000, to be used in approximately the following proportions:

<u>CATEGORY ITEM</u>	<u>Amount (\$ million)</u>
<u>Harza-Ebasco Contract</u>	13.5
Includes:	
Project Management and Overhead	1.225
Conceptual Design	3.150
Environmental Program	5.600
Licensing and Agency Coordination	1.200
Public Participation	.125
Logistics	2.200
<u>Department of Fish and Game</u>	4.0
Includes:	
Aquatic Studies - Data Collection Program	3.0
Terrestrial	1.0
<u>U.S. Department of Geological Survey</u>	.200
Includes:	
Hydrology Data Collection	.200

<u>Legal Costs</u>	.200
Includes:	
Support of FERC Licensing	.200
<u>External Review Panel</u>	.50
Includes:	
Consulting to APA	.50
<u>Need for Power Hearings</u>	1.0
Includes:	
Hearings before FERC	1.0
<u>Power Authority Personnel and Related Costs</u>	1.750
Includes:	
Staff, etc.	1.750
<u>Contingency</u>	1.300
Includes:	
Miscellaneous	1.300

Design work on the project will be delayed for one year at this level of funding. The above information was obtained from Robert Mohn of Eric Yould's office, Executive Director, Alaska Power Authority, on April 11, 1983.

Alaska State Legislature

REPRESENTATIVE
BARBARA LACHER
P.O. BOX 478
PALMER, ALASKA 99645
9071376-4215



WHILE IN JUNEAU
FOUCH V
JUNEAU, ALASKA 99811
9071465-4894

House of Representatives

TO: Representative John Ringstad
Co-Chairman of House Resources Committee

FROM: Representative Barbara Lacher
Chair of House Community and Regional Affairs

DATE: April 5, 1983

RE: House Bill 99, Susitna Hydroelectric.

The Alaska Power Authority Board of Directors has recently revised their estimated funding requirements for FY 84 in order to continue work on Federal licensing requirements for the Susitna project.

The revised estimate is \$22,000,000, to be used in approximately the following proportions:

- Environmental studies and activities	55%
- Engineering	10%
- Economic analysis and fiscal impact	3%
- Licensing support and agency coordination	6%
- Program management and consultants	6%
- Alaska Power authority staff	8%
- Contingency	11%

Design work on the project will be delayed for one year at this level of funding. The above information was obtained from Robert Mohn of Eric Yould's office, Executive Director, Alaska Power Authority, on April 11, 1983.

Alaska State Legislature

REPRESENTATIVE
BARBARA LACHER
P.O. BOX 478
PALMER, ALASKA 99645
9071376-4215



WHILE IN JUNEAU
POUCH V
JUNEAU, ALASKA 99811
9071465-4894

House of Representatives

TO: Representative Ringstad
Chairman of House Resources Committee

FROM: Representative Lacher
Chair of House Community and Regional Affairs

DATE: April 1, 1983

RE: HB 99 - Appropriation for Susitna Hydroelectric Project.

Alaska Power Authority has requested \$47 million for FY '84 in order to continue design and studies of the Susitna Hydroelectric project. I have attached a letter from Eric Yould, Executive Director of APA, which breaks out how the appropriation will be used.

The Susitna Hydroelectric Project Draft Summary Report, prepared by APA forecasts that railbelt energy demands could double by the year 2000 ...just seventeen years from now. APA also predicts that the costs of electricity will nearly triple between 1994 and 2010, if thermal energy, which is produced by coal or gas fired plants, is selected as an alternative to hydroelectricity. This is illustrated in the attached charts and graphs, taken from APA's draft Susitna Hydroelectric Summary Report.

On the other hand, Susitna could eventually produce cost advantages as high as \$5.5 billion.

In order to continue the work necessary to receive licensing from the Federal Energy Regulatory Commission, Alaska Power Authority must complete studies of the environment, of the impact of the dams on fisheries and wildlife, and meet other licensing requirements. APA will also continue with engineering and design work.

In light of the great benefits Susitna Hydropower will bring to so many Alaskans, I strongly urge your support for House Bill 99.

Alaska State Legislature

REPRESENTATIVE
BARBARA LACHER
P.O. BOX 478
PALMER, ALASKA 99645
907/376-4215



WHILE IN JUNEAU
POUCH V
JUNEAU, ALASKA 99801
907/465-4894

House of Representatives

To: House Labor & Commerce Committee
From: Representative Barbara Lacher
Date: February 21, 1983
Subject: HB 99—Appropriation for Susitna Hydroelectric Project

Alaska Power Authority has requested \$47 million for FY 84 in order to continue design and studies of the Susitna Hydroelectric project. I have attached a letter from Eric Yould, executive director of APA, which breaks out how the appropriation will be used.

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In light of the great benefits Susitna Hydropower will bring to so many Alaskans, I strongly urge your support for House Bill 99.

ALASKA POWER AUTHORITY

334 WEST 5th AVENUE - ANCHORAGE, ALASKA 99501

Phone: (907) 277-7641
(907) 276-0001

January 27, 1983

The Honorable Barbara Lacher
House of Representatives
P.O. Box 30
Wasilla, Alaska 99687

Dear Representative Lacher:

Through your assistant you have asked for information relating to the Alaska Power Authority's \$47 million FY84 request for the Susitna project.

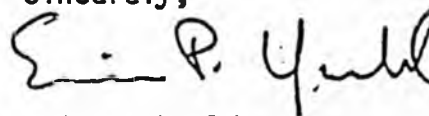
The basis of the estimate follows:

<u>Item:</u>	<u>Amount (\$ Million)</u>
Harza-Ebasco Contract - <i>consultant</i>	35.5
Site explorations, logistical support, licensing support, environmental analysis, detailed engineering and design.	
Alaska Department of Fish & Game	4.0
Fish and wildlife data collection program.	
Land Analysis and Acquisition	0.3
USGS Sediment Studies	0.2
External Review	0.2
Legal Support of FERC Licensing	0.2
USF&WS Support of Environmental Program	0.1
Design Review	1.0
Construction Manager Support	2.0
Transmission Facilities Design	2.0
Power Authority Personnel and Related Costs	1.5
	<hr/>
Total	47.0

Representative Lacher
January 27, 1983
Page 2

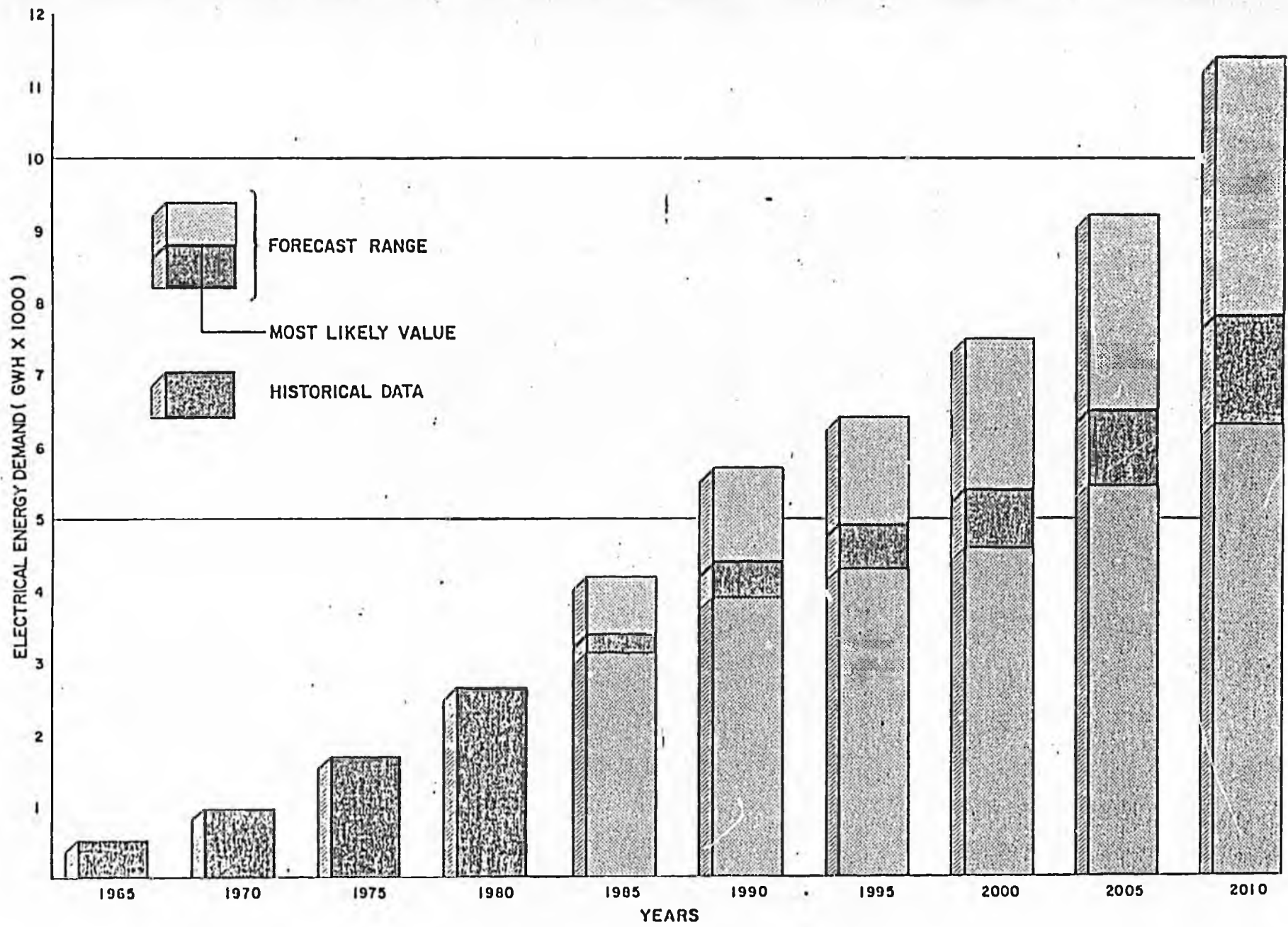
Over the next month, the basis of this estimate will be reviewed in light of the design contract presently under negotiation with Harza-Ebasco and the current outlook for project licensing.

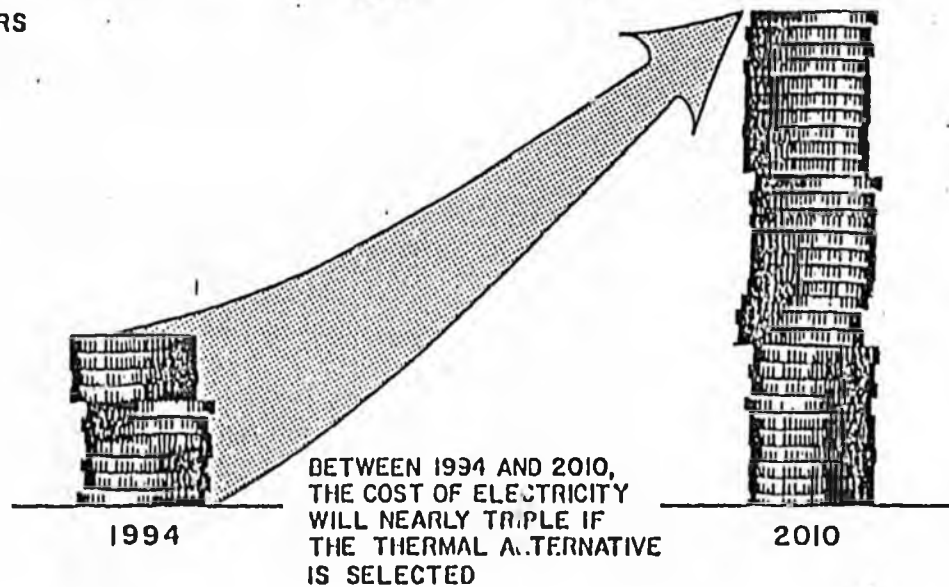
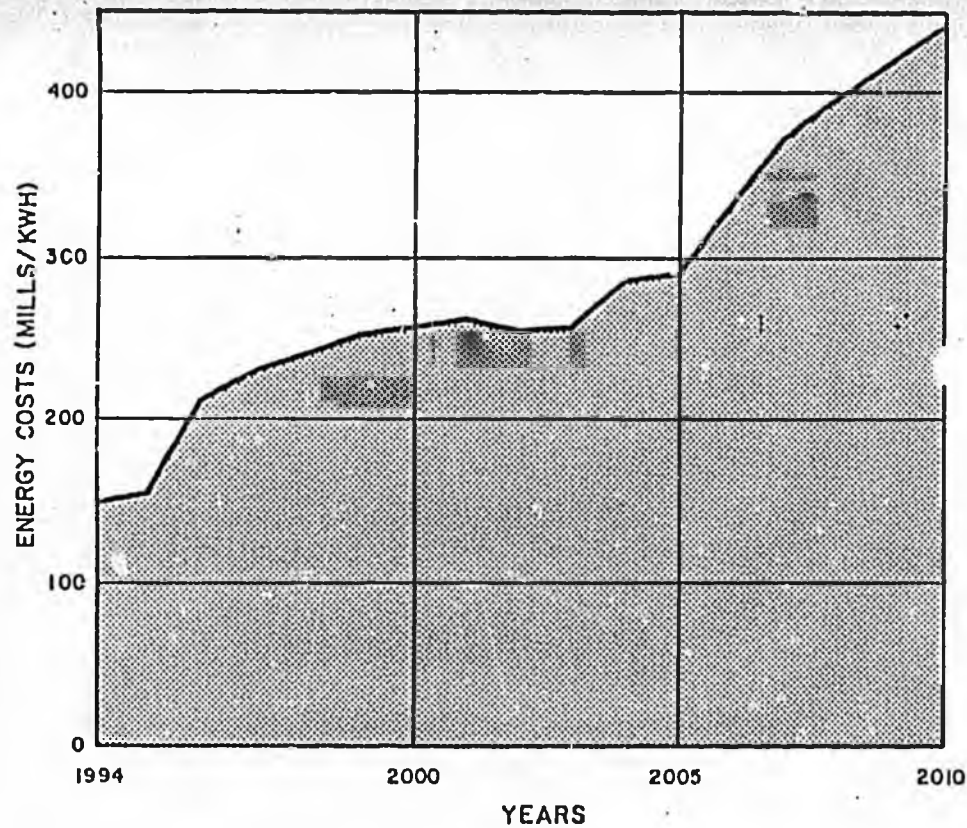
Sincerely,

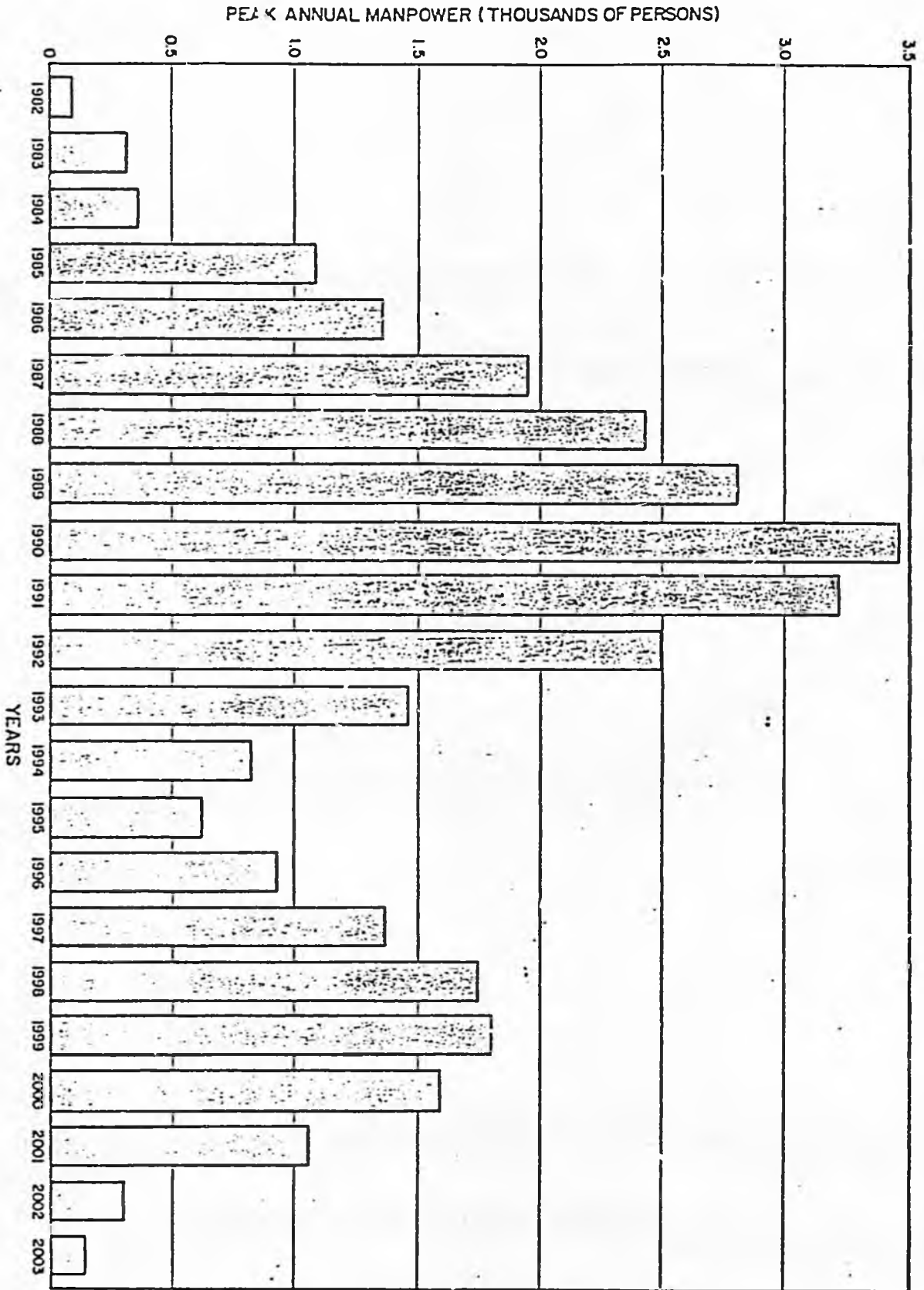
A handwritten signature in cursive script that reads "Eric P. Yould". The signature is written in dark ink and is positioned above the typed name.

Eric P. Yould
Executive Director

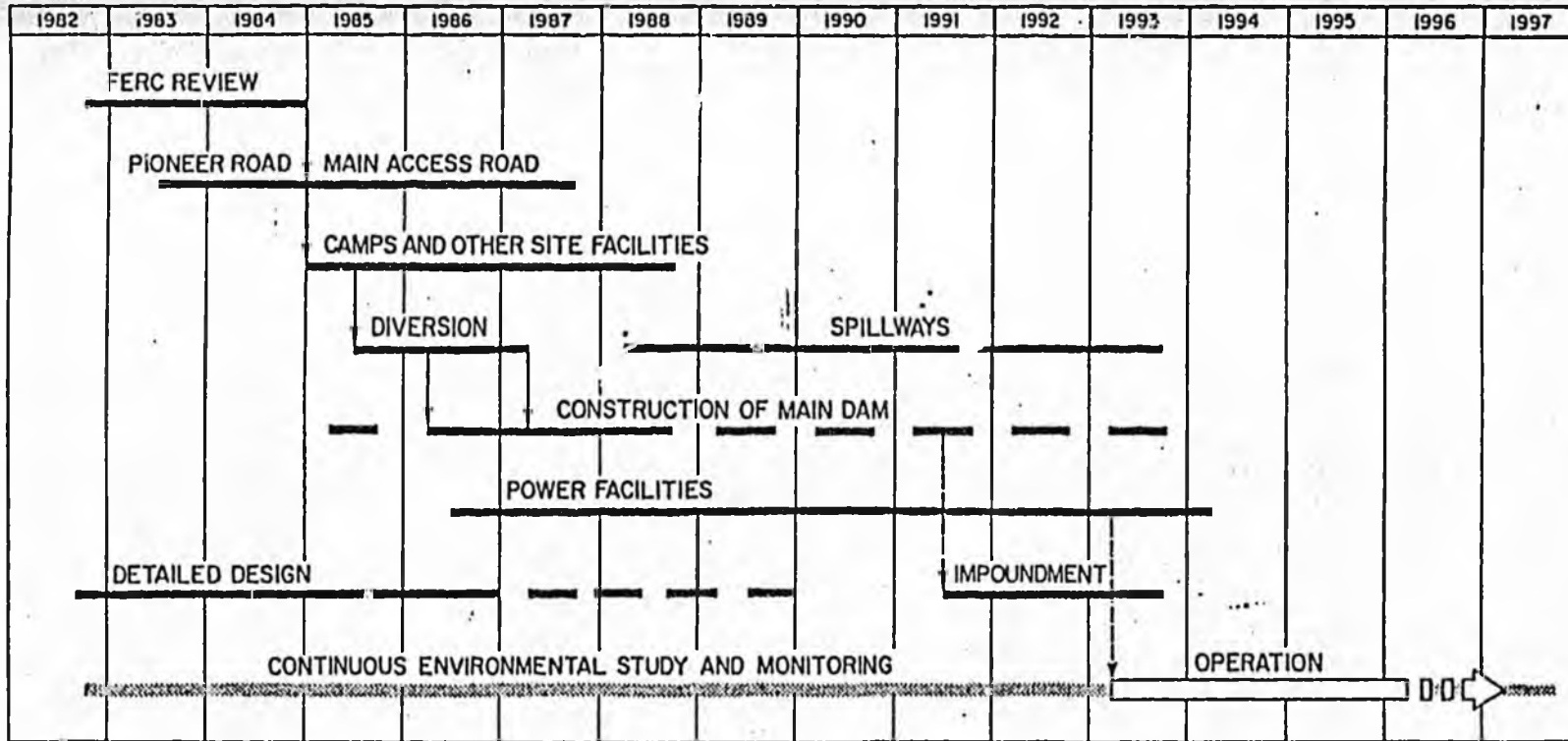
cc: Commissioner Richard Lyon
Pete McDowell
David Wozniak



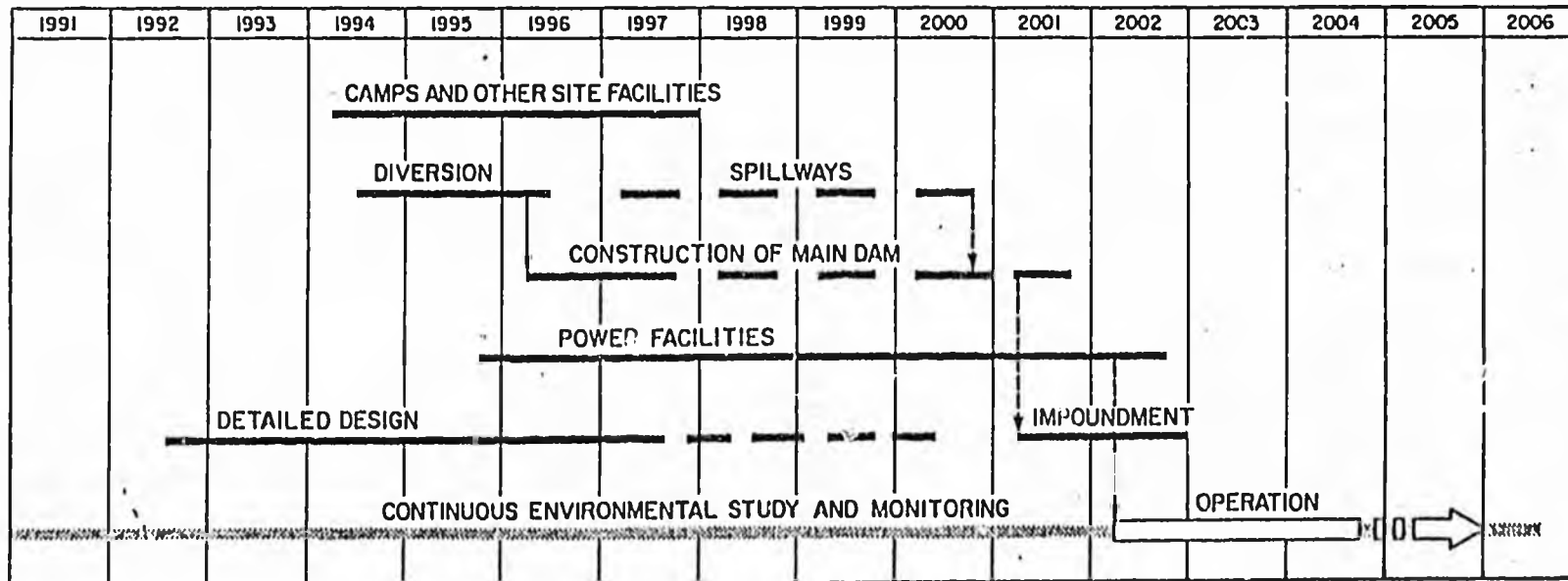


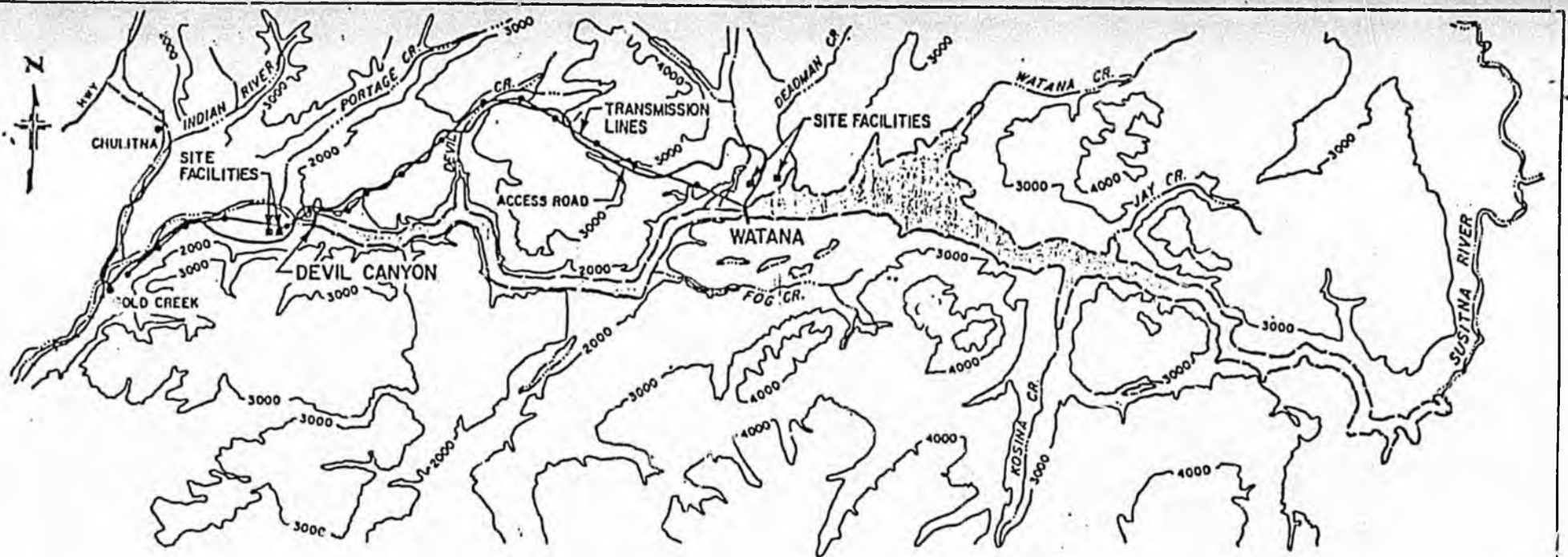


DEVIL CANYON

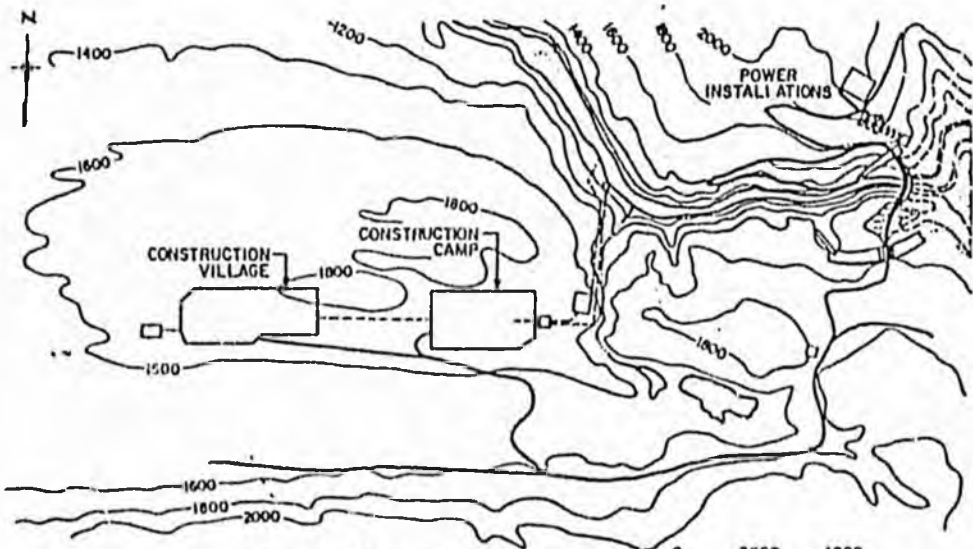
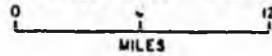


WATANA

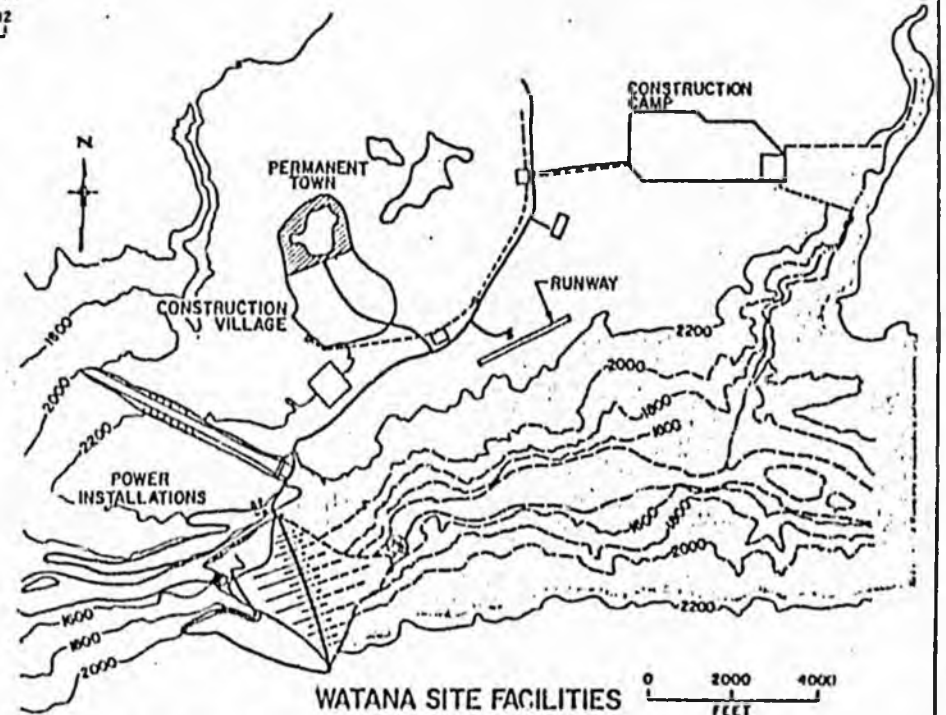




RESERVOIR PLAN



DEVIL CANYON SITE FACILITIES



WATANA SITE FACILITIES



STATUS/SCOPE OF LEGISLATION

ISSUE: HB 99 APPROP/APA/SUSITNA RIVER HYDRO PROJ

SPONSORS: LACHER, HAYES, TISCHER, LARSON, UEHLING

CURRENT STATUS: (Resources)

FISCAL IMPACT: _____

REPRESENTATIVE	A. Comm. Vote	B. Statutory/Tech.	C. Supp.-Memo	D. Opp.-Memo	E. Vote
ABOOD					
ADAMS					
BARNES					
BETTISWORTH					
BUSSEL					
CATO					
CLOCKSIN					
COWDERY	do pass				✓
DAVIS					
DUNCAN					
FLOOD					
FRITZ					
FULLER					
FURNACE	do pass				✓
GO'LL					
GRUSSENDORF					
HAYES					✓
HERRMAN					
HURLBERT					
KOPONEN	No Rec.				
LACHER					✓
LARSON					✓
LINDAUER					
LISKA					
MALONE	do pass				✓
MARTN					
MCBRIDE					
MILLER					
MILLER(NP)					
PESTINGER					
PHILLIPS					
RINGSTAD	do pass				✓
SHULTZ					
SZYMANSKI					
TISCHER					✓
UEHLING	do pass				✓
VASKA					
WARD					
WENDTE	do pass				✓
ZHAROFF					

STATE OF ALASKA
FISCAL NOTE

Revision Date _____, 1983

I. REQUEST

Bill/Resolution No.: HCR 31
 Title: River Commission
 Sponsor: House Resources
 Requestor: House Resources

II. FISCAL DETAIL

Agency Affected: Public Safety
 Program Category Affected: Justice/NRMEC
 BRU, Program of Subprogram(s) Affected: AST and FWP

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
OPERATING						
100 PERSONAL SERVICES		33.1	35.1	37.2	39.4	41.8
200 TRAVEL						
300 CONTRACTUAL		.6	.6	.7	.7	.8
400 COMMODITIES		1.0	1.1	1.1	1.2	1.3
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC						
TOTAL OPERATING		34.7	36.8	39.0	41.3	43.9
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND		34.7	36.8	39.0	41.3	43.9
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						
STAFF MONTHS		5.6	5.6	5.6	5.6	5.6

III. SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

Not identified.

IV. ANALYSIS: Attach a separate page for any Analysis

Prepared By: Francis C. Allan / Capt. James Nutgrass Phone: 269-5691/269-5589
 Division: Alaska State Troopers / Fish & Wildlife Prot. Date: 4-22-83
 Approved by Commissioner: R. J. Sundberg Date: 4/27/83
 Department: Public Safety

Distribution:

- Original to Legislative Finance
- Copy to Office of Management and Budget (for Legislature introduced bills)
- Copy to Department (for Governor introduced bills)
- Copy to Sponsor
- Copy to Requestor (if different from Sponsor)

3/8/83

ANALYSIS

The Division of Alaska State Troopers and Fish and Wildlife Protection have examined the "Final Statement Of Findings" of the Kenai River Task Force dated March 1983. This report recommends the following for the Department of Public Safety on page 31 of the report:

"Increase public safety patrols. Specifically, three new patrol officer positions should be created and funded; and they should be assigned to the (Kenai) River full time during June and July. Increased enforcement patrols could substantially reduce the conflicts."

While we would like to meet the recommendation of the Task Force, it is impractical to employ two full time officers all year and only work them on the Kenai River for two months. We believe that we can more economically provide a similar amount of coverage by receiving funding for additional overtime for our current staff plus some operating costs for the boats already available. These costs are summarized as follows:

	<u>FWP</u>	<u>AST</u>	<u>DPS TOTAL</u>
<u>Personal Services</u> - 500 hrs. overtime for FWP & 400 for AST @ - 76D	14,500	11,540	26,040
Benefits @ .2721	3,945	3,140	7,085
Subtotal	<u>18,445</u>	<u>14,680</u>	<u>33,125</u>
<u>Contractual</u> - Additional repair on boats/motors due to increased use	600		600
<u>Commodities</u> - Fuel, oil etc to operate current equipment	<u>1,000</u>		<u>1,000</u>
TOTAL	<u>20,045</u>	<u>14,680</u>	<u>34,725</u>

It should be noted that this fiscal note is submitted with the assumption that the River Commission will be issuing a minimum number of orders or regulations that would require direct law enforcement personnel involvement to assure that these requirements are followed. Should this not prove to be a correct assumption a substantially more sizeable fiscal impact would be required.

NOTE: 6% inflation factor has been calculated on all costs after FY'84.

ALASKA POWER AUTHORITY

TO: REPRESENTATIVE WENDTE

FROM: ERIC P. YOULG ²²⁴
Executive Director
Alaska Power Authority

4/12/83

SUBJECT: AS 44.83.398(b) 2

You have requested my views of proposed legislation to repeal AS 44.83.398 (b) 2. Repeal of this section is consistent with the policy of the Power Authority Board of Directors and Governor Sheffield. In fact, Governor Sheffield requested similar repeal by way of SB 168. Repeal of this section will only partially address the Utilities' and State's concerns. In my opinion while your legislative efforts are of value, the more comprehensive changes sought under SB 168 are critical to the interests of your constituents.

The following comments address AS 44.83.398(b) 2. This section will require a 10 percent return on all amounts invested in power projects if the legislature has not appropriated \$5,000,000,000 to the Power Development Fund by July 1, 1986.

This legislation adversely ^{effects} the Power Authority's ability to enter into long term power sales agreements with utilities participating in the Energy Program for Alaska. Utilities cannot predict future wholesale power rates and may not be able to meet the 10 percent rate of return.

In addition, there is a serious question regarding the ability of the Power Authority to successfully complete the take out of \$200 million in interim financing with long term revenue bonds if this Section is retained. The investment community takes a dim view of such language due to its probable effect on power rates. Operation of the clause could escalate the wholesale power rate for purchasing utilities sufficiently to jeopardize their ability to pay for the contracted power.

Also, the Trustees for Alaska has contended that the clause is unconstitutional. Its repeal would moot that claim.

In summary, the section serves no useful purpose since the present condition of state revenues will in all likelihood not allow for a \$5 billion appropriation. As such, the section is clearly detrimental to the existing projects and to the development of future power projects. It should be repealed this session.



ALASKA STATE LEGISLATURE
HOUSE OF REPRESENTATIVES
RESEARCH AGENCY

Pouch Y, State Capitol
Juneau, Alaska 99811
(907) 465-3991

April 12, 1983

MEMORANDUM

TO: Representative Ron Wendte

FROM: Jack Kreinheder *JK*
Research Staff

RE: Susitna "Blackmail Clause" [AS 44.83.398(b)(2)]
Research Request 83-145

Suzanne Mullen of your staff asked that we briefly explain the current effect of [AS 44.83.398(b)(2)], commonly referred to as the Susitna "blackmail clause," on the viability of the Susitna hydroelectric project and on other Alaska Power Authority projects.

As you know, the clause states that if \$5 billion is not appropriated to the power development fund by July 1, 1986, the power rate for each project owned by the Power Authority will increase to a level sufficient to return to the State 10 percent of the State investment in the project each year. There has been some controversy over the definition of the term "State investment" as used in the clause, which has resulted in uncertainty over the power rates that would occur if the clause went into effect. In any case, the clause would result in a substantial increase in power rates, up to 100 percent or more for some projects. The higher rates under the clause would apply not only to current projects, but to Susitna and other future projects, as well.

The "blackmail clause" was enacted as part of SB 25 in 1981, and was intended to provide some assurance that Susitna or another large Rail-belt power project would receive appropriations comparable to those made in 1980 and 1981 for power projects in other regions of the state. At that time, \$5 billion was considered sufficient to pay for almost the full cost of Susitna and the other projects under development.

As a result of the sharp declines in State revenues over the last two years, the blackmail clause is now considered by the Power Authority and other experts to be an obstacle, rather than an aid, to development of Susitna and other projects. As you know, the Power Authority has introduced (through the Governor's Office) legislation to repeal the clause.

The basic problem is that falling State revenues have made it extremely unlikely, barring a complete reversal in oil price trends, that the State can afford to appropriate \$5 billion for power projects by FY 86. Approximately \$500 million has been appropriated for power projects to date, so that an additional \$4.5 billion would have to be appropriated in the next three fiscal years to meet the requirements of the clause. The latest Department of Revenue figures (30th percentile) project about \$8.8 billion in total general fund revenues from FY 84 to FY 86. At current levels, the operating budget alone would require about \$5.8 billion over these three years, leaving only \$3 billion for all loan and capital appropriations. Under more optimistic revenue forecasts, it would be more practical to appropriate the required \$4.5 billion for power projects, but very little money would remain for other capital projects or loans.

Because it appears almost certain that the "blackmail clause" would take effect if it remains law,* the electric utilities in the Railbelt and other areas of the state have become concerned about the effect of the clause on them. The clause, as part of the Power Authority's rate statutes, must be included in every power sales contract negotiated by the Authority. Although the Authority has obtained power sales contracts for the Solomon Gulch, Terror Lake, and Swan Lake projects, the utilities involved are very concerned about the prospect that their rates for purchased power could double in three years.

The Power Authority's financial advisors also fear that the clause could affect the issuance of revenue bonds for existing and future power projects, because the bond markets could be concerned about the ability and willingness of utilities to pay the higher rates under the clause. The financial advisors have stressed the importance of having the Power Authority's first bond issues be as straightforward and risk-free as possible in order to establish a sound credit rating.

With respect to Susitna, both the Governor and the Federal Energy Regulatory Commission (FERC) have stated that construction cannot begin, nor will a FERC license be issued, until power sales agreements for Susitna power have been signed by Railbelt utilities. As mentioned earlier, the "blackmail clause" applies to future power projects, not just projects now under construction or in operation. One of the

* There have been questions raised about the constitutionality of the clause, and it is possible that the clause would be struck down in court. The clause is currently the subject of a lawsuit by the Trustees for Alaska; however, the suit has been stayed pending legislative action on the measures to repeal the clause.

Representative Wendte

April 12, 1983

Page 3

largest obstacles to the successful negotiation of the Susitna power sales agreements is that the power rates for Susitna depend heavily on the level of State funding for the project, which is uncertain at this time. The clause accentuates this problem by creating the prospect that Susitna power rates could be considerably higher than estimated by recent studies.

I hope this information is useful. If you have any questions or would like additional research, please let us know.

Sec. 44.83.398. Sale of power from power project. (a) The authority shall sell power produced from power projects acquired or constructed under the energy program for Alaska. A utility that purchases power produced by a power project of the authority shall agree with the authority

(1) to give preference in the sale of power at retail to all classes of consumers of power except industrial consumers;

(2) to charge industrial consumers of power a rate determined by the authority in accordance with (d) of this section.

(b) The authority shall establish a wholesale power rate structure applicable to sales of power to its customers at the busbar of a power project as follows:

(1) The authority shall establish and maintain a separate wholesale power rate applicable to each power project that it has acquired or constructed under the energy program for Alaska, other than a project described in (f) of this section. The wholesale power rate shall be computed by the authority annually, or more frequently as may be necessary, and shall equal the rate that the authority estimates is necessary to produce revenue that is sufficient to pay

(A) operation, maintenance, and equipment replacement costs of the power project;

(B) the power project's proportionate share of the debt service on state loans and bonds for all power projects in the energy program for Alaska, determined in accordance with (g) of this section;

(C) safety inspections and investigations of the power project by the authority.

(2) If, by July 1, 1986, the legislature has not appropriated at least \$5,000,000,000 to the fund, in addition to appropriations to the fund of interest earned on money in the fund, the authority shall, beginning on that date, establish and maintain a separate wholesale power rate applicable to each power project that is acquired or constructed under the energy program for Alaska. The wholesale power rate shall be computed by the authority annually, or more frequently as may be necessary, and shall be the greater of

(A) 10 percent of the amount the authority has invested in the power project, including loans and grants made by the state; or

(B) the rate that the authority estimates is necessary to produce revenue sufficient to pay

(i) operation, maintenance, and equipment replacement costs of the power project;

(ii) the power project's proportionate share of debt service on state loans and bonds for all power projects in the energy program for Alaska, determined in accordance with (g) of this section; and

(iii) safety inspections and investigations of the power project by the authority.



ALASKA STATE LEGISLATURE
HOUSE OF REPRESENTATIVES
RESEARCH AGENCY

Fourth A, State Capitol
Juneau, Alaska 99811
(907) 465-3991

January 19, 1982

MEMORANDUM

TO: Representative Don Clocksin

FROM: Jack Kreinheder
Research Staff *JK*

RE: Effect of "Susitna Blackmail Clause" on Power Rates
Research Request 82-199

You requested that we provide an analysis of the effect on electric power rates of the "Susitna Blackmail Clause" [AS 44.83.398(b)(2)], using the Alaska Power Authority's rate model, if possible. Although the Power Authority agreed to provide the analysis, a question on the meaning of the Blackmail Clause has arisen, and I am currently waiting for an Attorney General's opinion on the matter.

I received a copy of the Power Authority rate analysis of the Clause on December 17, 1982. However, it appeared to me that the Power Authority misinterpreted the meaning of the Blackmail Clause and that the resulting power rates were too high. The Power Authority obtained a legal opinion from their bond counsel, Wohlforth and Flint, which reached a different interpretation of the Clause. However, the Wohlforth and Flint opinion did not agree with my own reading of the Clause. On December 30, the Power Authority requested the Attorney General's Office to provide an opinion on the meaning of the Clause. — I am still waiting for this opinion.

The controversy basically centers on two questions:

- (1) whether the 10 percent return to the State under the Clause includes debt service and operating costs, or if these costs are to be added on in the rate calculation; and
- (2) whether the term "State investment" as used in the Clause means only State appropriations and loans to power projects, or means total project cost, including bond proceeds or other non-State borrowings.

The Power Authority's interpretation was that the State was to receive a 10 percent return plus debt service and operating costs, and that "State investment" means State appropriations and loans.

Wohlforth and Flint concluded that the 10 percent return to the State includes debt service and operating costs, and that "State investment" means total project cost.

I agree with the Wohlforth and Flint interpretation of the 10 percent return, but the Power Authority's interpretation of "State investment" appears more accurate to me. In any case, the Attorney General's opinion should provide a final definition which can be used in calculating the power rate impact of the clause.

Attachments

Attached are two tables of power rates under the HB 9 rate structure and under the Blackmail Clause, as provided by the Power Authority. Table 1 reflects the Power Authority's interpretation of the Clause, while Table 2 shows the results of the Wohlforth and Flint interpretation. The Blackmail Clause rates are much higher (up to 50 percent more) under the Power Authority's interpretation than under Wohlforth and Flint's. Although a final analysis cannot be made until the meaning of the Clause is resolved, I thought you might like to see the difference in rates which results from the two interpretations.

Under either interpretation, the Blackmail Clause would dramatically increase power rates in 1986, particularly for the Swan Lake and Lake Tye projects. For example, the wholesale power rate for Tye would jump from 18.5 cents per kilowatt hour (KWH) to 42.4 cents/KWH under the Power Authority's interpretation. Under the Wohlforth and Flint definition, the rate would increase to 33.9 cents per KWH.

* * *

I hope this preliminary information is useful. I will provide a final analysis of the rate effects of the Blackmail Clause as soon as the Attorney General's Office issues an opinion defining the Clause.

JK

Attachments as stated

TABLE 1

HOUSE BILL NO. 9/SUSITNA CLAUSE COMPARISON
WHOLESALE POWER RATES AT C/KWH

Year End June 30	SWAN LAKE		TYEE LAKE		SOLOMON GULCH		TERROR LAKE	
	H.B.9	S.C.	H.B.9	S.C.	H.B.9	S.C.	H.B.9	S.C.
1985	14.26	37.52	15.38	42.37	12.07	16.02	-	-
1986	17.49	39.65	18.48	43.19	11.18	16.24	14.90	24.58
1987	17.46	38.56	18.31	41.08	11.11	16.47	13.68	23.15
1988	17.40	37.50	18.11	39.03	11.05	16.72	12.87	21.78
1989	17.32	36.46	17.90	37.11	10.99	16.99	11.93	20.47
1990	16.55	34.78	17.66	35.31	11.08	17.27	11.24	19.44
1991	15.99	33.35	17.07	33.83	11.38	17.58	11.09	19.13
1992	15.47	32.00	16.48	32.41	11.71	17.90	10.97	18.85
1993	14.98	30.73	15.93	31.06	12.05	18.25	10.84	18.57
1994	14.52	29.51	15.41	29.78	12.43	18.62	10.73	18.30
1995	14.08	28.36	14.92	28.57	12.83	19.02	10.62	18.04

Assumptions:

- 1) Debt is issued at 11% and is amortized over 35 years.
- 2) Bond Coverage is computed at 1.10 times level debt service.
- 3) H.B.9-Rates are stated "with limit", includes Bond Coverage, Debt Service-only, and M&O Costs.
- 4) Computation of H.B.9 - on John Nuveen & Company Computer Model; see Schedules A - F, for data and analysis.
- 5) S.C. = SUSITNA CLAUSE; Example Computation follows:

TYEE LAKE - 1986

- 1) State Appropriation for Project = $\$82,000,000 \times (10\%) =$ \$ 8,200,000
- 2) Amount to be long term financed = \$50,000,000
Computed annual operation revenues equals
(14.21¢) which includes Debt Service Component
and the 1:10 Bond Coverage times the number
of project firm sales which is (33,069,000 KWH)
- 3) (\$.1421) (33,069,000 KWH) 4,699,100

- | | |
|--------------------------------------------------------------------------------------------|------------------|
| 4) Annual M&O Costs which increase at a rate of 7% per annum, See Schedule "D" | <u>1,412,000</u> |
| 5) Total Computed Project Costs inclusive of M&O Costs | 14,311,100 |
| 6) To get Susitna Clause Cost of power estimate
($\$14,311,100 \div 33,069,000$ KWH) = | \$43.28¢/KWH |

It should be noted that this format was utilized for TYEE LAKE, SWAN LAKE, SOLOMON GULCH, AND TERROR LAKE. Worksheets are attached for confirmation.

TABLE 2

HOUSE BILL NO. 9/SUSITNA COMPARISON
WHOLESALE POWER RATES AT c/KWH

Year End June 30	SWAN LAKE		TYEE LAKE		SOLOMON GULCH		TERROR LAKE	
	H.B.9	S.C.	H.B.9	S.C.	H.B.9	S.C.	H.B.9	S.C.
1986	17.49	29.17	18.48	33.87	11.18	12.93	14.90	22.22
1987	17.46	27.78	18.31	31.11	11.11	12.93	13.86	21.32
1988	17.40	26.45	18.11	28.57	11.05	12.93	12.87	20.44
1989	17.32	25.19	17.90	26.24	10.99	12.93	11.93	19.61
1990	16.55	24.00	17.66	24.10	11.08	12.93	11.24	18.81
1991	15.99	22.85	17.07	22.89	11.38	12.93	11.09	18.44
1992	15.47	21.76	16.48	21.75	11.71	12.93	10.97	18.08
1993	14.98	20.73	15.93	20.66	12.05	12.93	10.87	17.72
1994	14.52	19.74	15.41	19.62	12.43	12.93	10.73	17.37
1995	14.08	18.80	14.92	18.64	12.83	12.93	10.62	17.03

(1) PROJECT COSTS:

SWAN LAKE: \$ 98,000,000
 TYEE LAKE: \$112,000,000
 SOLOMON GULCH \$ 53,000,000
 TERROR LAKE \$196,000,000

(2) H.B.9 Computation - John Nuveen & Company Computer Model, inclusive of Debt Service
~~11%/35 years; 1.10 Bond Coverage and Maintenance & Operations Cost~~

(3) S.C. Susitna Blackmail Clause Computation Example

Tyee Lake - 1986

Total Project Cost \$112,000,000 (10%) = $\frac{\$11,200,000}{33,069,000 \text{ KWH}}$ = 33.87c/KWH

(4) Analysis assumes no additional major Capital Expenditures