

ALASKA LEGISLATURE COMMITTEE FILES 1983-1984 86 / 2

2803 SRES SB 11 - SB 14

EXHIBIT A

- 1 Cat Generator Model D-348 s/n 77693 with wiring, controls, base, radiator, etc.
- 1 Cat Generator Model D-342T s/n 150TH3064 with wiring, controls, base, radiator, etc.
- 1 Cat Generator Model 8432 s/n 250TH3860 with wiring, controls, base, radiator, etc.
- 1 Washington Diesel Electric Plant s/n 7427 with wiring, controls, base, radiator, etc.
- 1 Lot of primary distribution switchgear, bus duct, transformers
- 1 Lot of overhead distribution cables complete with approximately 100⁺ poles, 12,900⁺ feet of cable, all necessary hardware.
- 1 Lot of miscellaneous equipment
- 1 Light plant building KPC 93-021
- 1 Transformer building KPC 93-007
- 1 Administrative building KPC 93-22
- 1 Cafe/Recreation building KPC 93-011
- 2 Sewage Lift Pumps each complete mounted on a 5' x 6' concrete pad.
- 1 1951 Mack fire truck s/n 95LS1272 KPC 83-132

Appraised Value

\$471,900

Agreed Purchase Price

\$368,000

GRANT CONTRACT



STATE OF ALASKA
 Department of Community and Regional Affairs
 Division of Local Government Assistance

Contract Summary

Project Name Thorne Bay Electrical Generating Plant and Distribution System		Contract Number RDA 83-19-04	
Contract Ceiling \$100,000	Period of Performance July 30, 1982 to June 30, 1983		Basis of State Authority to Contract AS 44.07.050
State Contact Person		Contractor Contact Person	
Name Suzanne Perry-Piper		Name DENIS M. KUNTZ	
Title Local Government Specialist IV		Title Mayor of the City of Thorne Bay	
Street or P.O. Box 225 Cordova, Bldg. B		Street or P.O. Box Box 110	
City/State/Zip Code Anchorage, Alaska 99501	Phone 264-2201	City/State/Zip Code Thorne Bay, Alaska 99950	Phone 828-3393

Agreement

The Alaska Department of Community and Regional Affairs, Division of Local Government Assistance (hereinafter "Department") and the City of Thorne Bay, Alaska (hereinafter "Contractor") agree as set forth herein.

Section I. The Department shall pay the Contractor for the performance of the project work under the terms outlined in this contract. The amount of the payment is based upon project expenses incurred which are authorized under this contract. In no event shall the payment exceed \$ 100,000.

Section II. The Contractor shall perform all of the work required by the contract.

Section III. The work to be performed under the contract shall begin July 30, 1982 and shall be completed no later than June 30, 1983.

Section IV. The contract consists of the following:

- This Agreement
- Attachment A - Standard Provisions
- Attachment B - Scope of Services
- Attachment C - Payment Schedule
- Any properly signed amendments to this contract.

This Agreement takes effect the last date shown below.

Department	Contractor
Signature of Certifying Officer <i>Palmer McCarter</i>	Signature of Authorized Representative <i>Denis M. Kuntz</i>
Printed Name and Title Palmer McCarter, Director	Printed Name and Title Denis M. Kuntz Mayor
Date Aug 7, 1982	Date Aug 9, 1982

ATTACHMENT A — STANDARD PROVISIONS

Article 1. Definitions. In this contract, attachments and amendments, "Certifying Officer" means the person who signs this contract on behalf of the Department and includes a successor or authorized representative.

Article 2. State Saved Harmless. The Contractor shall indemnify and hold and save the State, its officers, agents and employees harmless from liability of any nature or kind, arising from its performance of this contract in any way whatsoever. Such liability may include, but is not limited to, costs and expenses for or on account of any and all legal actions or claims of any character whatsoever resulting from injuries or damages sustained by any person or persons or property arising from its performance of this contract in any way whatsoever.

Article 3. Inspections and Retention of Records. The State may inspect, in the manner and at reasonable times it considers appropriate, all the Contractor's facilities, records and activities under this contract.

The Contractor agrees to retain financial and other records relating to the performance of this contract for a period of three years from completion of the project and furnish access to the State upon request.

Article 4. Disputes. Any dispute concerning a question of fact arising under this contract which is not disposed of by mutual agreement, shall be decided without bias by the Certifying Officer. The decision shall be in writing and mailed or otherwise furnished to the Contractor. The decision of the Certifying Officer is final and conclusive, unless, within 30 days from the date of receipt of the decision, the Contractor mails or otherwise furnishes a written appeal addressed to the Commissioner of the Department. The Commissioner shall hear the appeal. The decision of the Commissioner is final and conclusive. In any proceeding under this Article, the Contractor has a right to offer evidence in support of its appeal. Pending final decision of a dispute, the Contractor shall proceed with the performance of the contract in accordance with the Certifying Officer's decision.

Article 5. Equal Employment Opportunity (EEO). The Contractor may not discriminate against any employee or applicant for employment because of race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy, or parenthood. The Contractor shall post in a conspicuous place, available to employees and applicants for employment, a notice setting out the provisions of this paragraph.

The Contractor shall state, in all solicitations or advertisements for employees to work on State funded projects, that it is an equal opportunity employer (EEO) and that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood.

ATTACHMENT A — STANDARD PROVISIONS

The Contractor shall include the provisions of this EEO article in every subcontract relating to this contract and shall require the inclusion of these provisions in every agreement entered into by any of its subcontractors, so that those provisions will be binding upon each subcontractor.

Article 6. Termination. The Certifying Officer, by written notice may terminate this contract, in whole or in part, when it is in the best interest of the State. The State is liable only for payment in accordance with the provisions of this contract for services rendered before the effective date of termination.

Article 7. No Assignment or Delegation. This contract is non transferable and the Contractor may not assign or delegate this contract, or any part of it, or any right to any of the money to be paid under it, except with the written consent of the Certifying Officer.

Article 8. No Additional Work or Material. No claim which will be allowed for services, which are performed or furnished by the Contractor, not specifically provided for in this contract.

Article 9. Independent Contractor. The Contractor and any agents and employees of the Contractor act in an independent capacity and are not officers or employees or agents of the State in the performance of this contract.

Article 10. Payment of Taxes. As a condition of this contract, the Contractor shall pay all Federal, State and local taxes incurred by the Contractor and shall require their payment by any subcontractor or any other persons in the performance of this contract.

Article 11. Workers' Compensation Insurance. The contractor shall provide and maintain workers' compensation insurance as required by AS 23.30 for all employees engaged in work under this contract.

Article 12. Insurance. The Contractor is responsible for obtaining any and all necessary liability insurance.

Article 13. Governing Law. This contract is governed by the laws of the State of Alaska and the Contractor shall perform all aspects of this project in compliance with all appropriate laws and regulations. It is the responsibility of the contractor to ensure that all permits required for the construction and operation of this project by the Federal, State or local governments have been obtained.

Article 14. Officials not to Benefit. No member of or delegate to Congress or the Legislature, or officials or employees of the State or Federal government may share any part of this contract or to any profit to arise from it.

Article 15. Covenant Against Contingent Fees. The Contractor warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, contingent fee, or brokerage except

employees or agencies maintained by the Contractor for the purpose of securing business. For the breach or violation of this warranty, the State may terminate this contract without liability or in its discretion, deduct from the contract price or consideration the full amount of the commission, percentage, brokerage, or contingent fee.

Article 16. Changes. Any changes which have been agreed to by both parties will be attached and made a part of this contract by use of an Amendment. Any such Amendment must be signed by both parties before the change is considered official and approved.

Article 17. Public Purposes. The Contractor agrees that the project to which this contract relates shall be dedicated to public purposes for its useful life. The benefits of the project shall be made available without regard to race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood.

If the Contractor is a non-municipal entity and if the project involves the acquisition of equipment or facilities, the Contractor agrees that in the event a municipal corporation is formed which possesses the power and jurisdiction to provide for such equipment or facilities, the Contractor shall offer to transfer ownership of such equipment or facilities to the municipal corporation without compensation.

Article 18. Assurance. The Contractor will spend monies appropriated under this grant only for the purposes specified in this contract.

Article 19. Remission. The Contractor will return all unexpended grant monies to the State within 90 days of the project completion.

Article 20. Reporting requirements. The Contractor shall submit to the Department a report each month on the progress of the performance of this contract. Reports are due 20 days following the completion of each month and are delinquent if not received by the due date. The Department shall provide forms and instructions necessary for the preparation of such reports.

Article 21. Right to withhold funds. The Department may withhold payments under this contract if reports required in Article 20 above are incomplete or delinquent. The Department may also withhold payments under this contract for any other violation of this contract.

Article 22. Sovereign Immunity. If the Contractor is an entity which possesses sovereign immunity, it has been required as a condition of this grant to irrevocably waive its sovereign immunity with respect to this contract as well as any action arising out of the performance of the terms of this contract. The waiver of sovereign immunity, effected by a resolution of the entity's governing body, is hereby incorporated into this contract.

ATTACHMENT B — SCOPE OF SERVICES

By authority of this contract, the City of Thorne Bay has been awarded a grant of \$100,000.00 from the Rural Development Assistance Grant Program.

These funds are to be used entirely for the completion of the Project. The Project consists of an expenditure of \$100,000.00 by the Contractor toward the purchase of an electrical generation plant and distribution system from the Louisiana-Pacific Corporation for subsequent operation as a municipally-owned public utility serving residents of the City of Thorne Bay. This \$100,000.00 constitutes approximately one-third of the estimated purchase price of the utility; the remaining balance of the agreed-upon purchase price shall be obtained by the Contractor from sources other than RDA. The Contractor shall negotiate a purchase agreement with the seller of the utility (Louisiana - Pacific Corporation) for the acquisition of the property, and the purchase price shall not exceed the actual fair market value of the utility as determined by a third-party appraisal rendered by a qualified appraiser. The Contractor shall furnish the State with a copy of the purchase agreement upon execution of the sale.

ATTACHMENT C — PAYMENT SCHEDULE

The Contract Sum of \$100,000.00 is the total amount payable by the State to the Contractor for the performance of work under the Contract. Payment shall be made in one lump sum to the Contractor upon request as provided for below.

Prior to the disbursement of any grant funds to the Contractor, the following stipulations of the grant award must be complied with:

1. The Contractor must furnish evidence satisfactory to the State that it has adequate site control with respect to the tracts or parcels of land on which buildings, structures, or other project improvements will be located.
2. The Contractor must furnish evidence satisfactory to the State that it has obtained, or can obtain, all necessary easements, permits, rights-of-way, and all Federal, State and local approval necessary for the completion of the project.
3. The Contractor must demonstrate that it has made financial arrangements to purchase the electrical generating plant and distribution system without additional RDA funds.
4. The Contractor must obtain written permission from the Alaska Public Utilities Commission stating that the City of Therne Bay has the authority pursuant to AS 42.05 to provide electrical utility services within the municipality and that the services are required for the convenience and necessity of the public. The Contractor shall be required to furnish such documentation to the State.

GRANT CONTRACT



STATE OF ALASKA
DEPT OF COMMUNITY AND REGIONAL AFFAIRS
DIVISION OF LOCAL GOVERNMENT ASSISTANCE

CONTRACT NO. 1-72-3-401/3228

ISSUED and ADMINISTERED BY:

STATE OF ALASKA
DEPT OF COMMUNITY AND REGIONAL AFFAIRS
DIVISION OF LOCAL GOVERNMENT ASSISTANCE

Pouch BH

Juneau, Alaska 99811

Contact Person-State:

W.F. "Bill" Williams

Phone: (907) 465-4735

CONTRACTOR

Name and Address:

Thorne Bay Community Club

P. O. Box ~~110~~ ^{RW} 625

Thorne Bay, Alaska 99950

Project Coordinator - Contractor:

Reginald W. Johnson

Phone: (907) 228-3991

PROJECT DESCRIPTION Purchase and upgrade of utilities and other approved community projects.

AUTHORITY. This contract is authorized by AS 37.05.315 and Chapter 60, SLA 1981
The parties to this contract agree as stated below.

GENERAL INTENT. This contract is awarded by the Department of Community and Regional Affairs, Local Government Assistance Division (the State) to the Thorne Bay Community Club (the contractor) in full accordance with the general and special provisions of this agreement. The contract consists of this sheet and attachments A through D governing standard provisions, scope of services, reporting and method of payment.

ESTIMATED COSTS. The total estimated cost of this activity is \$ 320,000 to consist of \$ 320,000 from State and -0- from the contractor.
The state share of this project will not exceed \$ 320,000.

PERIOD OF PERFORMANCE. The period of performance shall be from June 15, 1982
to December 31, 1983

APPROVED BY THE STATE:

x Palmer McCarter
Signature

Palmer McCarter

Typed Name
Director

Title

Date July 12, 1982

APPROVED BY THE CONTRACTOR:

x Reginald W. Johnson
Signature

Reginald W. Johnson

Typed Name
President

Title

Date July 7, 1982

ATTACHMENT B - SCOPE OF SERVICES

By the authority of this contract, the Thorne Bay Community Club, Inc. is being awarded a grant of \$320,000 from the Unincorporated Community Aid program as authorized in Chapter 60, SLA 1981. Enclosed herein is a description of the tasks to be performed with these funds and the approved amount of funds to be utilized for each project.

1. The Thorne Bay Community Club, Inc. shall expend \$100,000 toward the purchase of the electric utility which is in place and serves the Community. This \$100,000 is one-third of the purchase price and the remaining two-thirds are to be obtained by the Community from other sources:- A Certificate of Public Convenience and Necessity must be approved and issued to the Community for the operation of this utility before any funds will be disbursed for this electrical project. This permit is issued by the Alaska Public Utilities Commission.

In addition to the certificate cited above, the grantee shall also provide documentation for site control of the land where the generation equipment is located and documentation for the easements where transmission lines are located above grade and where transmission lines are buried below the surface of the ground. This requirement stands for land which will be effected by electrical grid expansion funded with monies from this grant.

2. The Grantee shall expend \$18,000 for the purchase and installation of electrical metering devices in conjunction with the services to be provided through Project #1 above.
3. A total of \$35,000 shall be used to purchase portions of an existing sewer system, the repair of an existing water system, and to expand the existing water distribution grid. The following tasks are included in this project:
 - (a) Purchase two sewer lift stations from Louisiana Pacific-Ketchikan (the present owner) for a total price of \$6,000 or less.
 - (b) Install new sewer lines and a sewerage lift station to serve the Whiskey Flat area of the community of Thorne Bay at a price not to exceed \$20,000.
 - (c) Repair damaged water and sewer lines that exist in the Community for a cost not to exceed \$9,000.

A Certificate of Public Convenience and Necessity must be approved and issued to the Community for each of these public utilities before any funds will be disbursed for either the water or sewer services. These permits are issued by the Alaska Public Utilities Commission.

In addition to the certificates cited above, the grantee shall provide documentation for site control for the land where the existing sewerage lift stations are located, where the existing sewerage and water lines are located, and where the expansion of the sewerage and water lines will be accomplished.

ATTACHMENT B - SCOPE OF SERVICES

4. The Grantee is authorized to purchase the "Old Louisiana Pacific-Ketchikan office" building for use as the Community's administration building and meeting hall. This building shall be purchased for no more than \$68,000.

The Grantee shall furnish documentation of site control for the expected life of the building which, for an existing structure, is fifteen years.

5. The Grantee shall buy equipment and furniture necessary to conduct the business of the community and to hold public meetings. This equipment and furniture may include but not be limited to the items found in the following list:

- Desks and office chairs
- Filing cabinets
- A Safe
- Conference table and chairs
- Typewriter
- Photocopy machine
- Office supplies
- Chairs and other equipment necessary to conduct public meetings

The cost of this project shall not exceed \$20,000.

6. An expenditure of not more than \$20,00 shall be made from this grant for the renovation of the existing "Coop Building". All renovations made with monies from this grant shall be in compliance with appropriate fire, health, electrical and safety codes.

Before these renovation may begin, the Grantee shall provide site control for the land upon which this building is located.

The Grantee shall obtain any required building and sanitation permits necessary before work may begin on this project.

7. The Grantee shall expend \$29,000 for the initial operation of the electrical utility. Subsequent operation expenses are to be paid from funds derived through charges made to subscribers of the service. Rates to be charged must be approved by the Alaska Public Utilities Commission.
8. The Grantee shall expend \$5,000 for the rental of equipment to maintain roads in the Community. These funds shall also be used for the purchase of necessary materials for road maintenance. When necessary, the Grantee may pay salaries of equipment operators and laborers from the monies received through this project award. Documented site control must be obtained before road maintenance work may begin.

ATTACHMENT B - SCOPE OF SERVICES

9. The Grantee shall expend ~~the monies~~ correcting health and safety deficiencies relative to the Community's float and docking facilities. The Community shall provide ~~the~~ control on these facilities before work may begin. The Community shall review plans for these changes and additions with the U.S. Army Corps of Engineers before work may begin. This review of plans is to determine if wetlands and navigable waters will be effected and to secure any permits that may be required.

BUDGET SUMMARY

<u>Project</u>	<u>Project Name</u>	<u>Approved Budget</u>
1	Purchase 1/3 of Electric Utility	\$100,000 <
2	Purchase and install electric meters	18,000
3	Up-grade water and sewer system	35,000.
4	Purchase building for community office	68,000 <
5	Purchase office furniture and equipment	20,000
6	Renovate Coop Building	20,000
7	Initial operation of electric utility	29,000 <i>...</i>
8	Road maintenance equipment rental	5,000-
9	Dock and float improvements	25,000 <i>...</i>
	Total of Projects	<u>\$320,000</u>

The Contractor will spend the monies from this grant only for the services and purchases specifically listed above in this Scope of Services. Should conditions change and an amendment is justified, a written approval of the changes must be obtained from the Department prior to any deviation from the approved financial plan.

The Thorne Bay Community Club, Inc. is solely responsible for the administration of this grant and the expenditure of monies derived from the award.

1. The Contractor shall submit a financial status report every three months (a normal calendar quarter) during the life of the contract and/or with each request for the next incremental funding. This financial report shall include expenditures for the reporting period, the total expended to date, the budgeted amount and a projection of the use of funds that are being requested. The regular report shall be submitted or postmarked no later than 15 days after the close of a normal calendar quarter.

Upon the complete expenditure of the community's grant, the Contractor shall submit a financial report to the Department detailing the expenditure of all funds received through the grant.

These reports shall be prepared by a certified public accountant and shall be certified by that person as being true and correct.

2. A narrative report shall be submitted with each financial report and that narrative report shall describe the activities accomplished during the preceding quarter and a narrative forecast as to what will be accomplished during the next calendar quarter.

The final project(s) report shall be accompanied by a narrative report describing the accomplishments of the entire grant period. The final report, financial and narrative, shall be submitted within 15 days after the project is considered completed by the Contractor or 15 days after the end of the contracted performance period which ever is first.

Under no circumstances will payments be made to a grantee that is delinquent in its financial and/or narrative reports.

ATTACHMENT A - STANDARD PROVISIONS

Article 1. Definitions. In this contract, attachments and amendments, "Certifying Officer" means the person who signs this contract on behalf of the Department and includes a successor or authorized representative.

Article 2. State Saved Harmless. The Contractor shall indemnify and hold and save the State, its officers, agents and employees harmless from liability of any nature or kind, arising from its performance of this contract in any way whatsoever. Such liability may include, but is not limited to, costs and expenses for or on account of any and all legal actions or claims of any character whatsoever resulting from injuries or damages sustained by any person or persons or property arising from its performance of this contract in any way whatsoever.

Article 3. Inspections and Retention of Records. The State may inspect, in the manner and at reasonable times it considers appropriate, all the Contractor's facilities, records and activities under this contract.

The Contractor agrees to retain financial and other records relating to the performance of this contract for a period of three years from completion of the project and furnish access to the State upon request.

Article 4. Disputes. Any dispute concerning a question of fact arising under this contract which is not disposed of by mutual agreement, shall be decided without bias by the Certifying Officer. The decision shall be in writing and mailed or otherwise furnished to the Contractor. The decision of the Certifying Officer is final and conclusive, unless, within 30 days from the date of receipt of the decision, the Contractor mails or otherwise furnishes a written appeal addressed to the Commissioner of the Department. The Commissioner shall hear the appeal. The decision of the Commissioner is final and conclusive. In any proceeding under this Article, the Contractor has a right to offer evidence in support of its appeal. Pending final decision of a dispute, the Contractor shall proceed with the performance of the contract in accordance with the Certifying Officer's decision.

Article 5. Equal Employment Opportunity (EEO). The Contractor may not discriminate against any employee or applicant for employment because of race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy, or parenthood. The Contractor shall post in a conspicuous place, available to employees and applicants for employment, a notice setting out the provisions of this paragraph.

ATTACHMENT A - STANDARD PROVISIONS

The Contactor shall state, in all solicitations or advertisements for employees to work on State funded projects, that it is an equal opportunity employer (EOE) and that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood.

The Contractor shall include the provisions of this EEO article in every subcontract relating to this contract and shall require the inclusion of these provisions in every agreement entered into by any of its subcontractors, so that those provisions will be binding upon each subcontractor.

Article 6. Termination. The Certifying Officer, by written notice may terminate this contract, in whole or in part, when it is in the best interest of the State. The State is liable only for payment in accordance with the provisions of this contract for services rendered before the effective date of termination.

Article 7. No Assignment or Delegation. This contract is non transferable and the Contractor may not assign or delegate this contract, or any part of it, or any right to any of the money to be paid under it, except with the written consent of the Certifying Officer.

Article 8. No Additional Work or Material. No claim which will be allowed for services, which are performed or furnished by the Contractor, not specifically provided for in this contract.

Article 9. Independent Contractor. The Contractor and any agents and employees of the contractor act in an independent capacity and are not officers or employees or agents of the State in the performance of this contract.

Article 10. Payment of Taxes. As a condition of this contract, the Contractor shall pay all Federal, State and local taxes incurred by the Contractor and shall require their payment by any subcontractor or any other persons in the performance of this contract.

Article 11. Worker's Compensation Insurance. The contractor shall provide and maintain workers' compensation insurance as required by AS 23.30 for all employees engaged in work under this contract.

Article 12. Insurance. The Contractor is responsible for obtaining any and all necessary liability insurance.

Article 13. Governing Law. This contract is governed by the laws of the State of Alaska and the Contractor shall perform all aspects of this project in compliance with all appropriate statutes.

ATTACHMENT A - STANDARD PROVISIONS

Article 14. Officials not to Benefit. No member of or delegate to Congress or the Legislature, or officials or employees of the State or Federal government may share any part of this contract or to any profit to arise from it.

Article 15. Covenant Against Contingent Fees. The Contractor warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, contingent fee, or brokerage except employees or agencies maintained by the Contractor for the purpose of securing business. For the breach or violation of this warranty, the State may terminate this contract without liability or in its discretion, deduct from the contract price or consideration the full amount of the commission, percentage, brokerage, or contingent fee.

Article 16. Changes. Any changes which have been agreed to by both parties will be attached and made a part of this contract by use of an Amendment. Any such Amendment must be signed by both parties before the change is considered official and approved.

Article 17. Public Purposes. The Contractor agrees that the project to which this contract relates shall be dedicated to public purposes for its useful life. The benefits of the project shall be made available without regard to race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood.

If the Contractor is a non-municipal entity and if the project involves the acquisition of equipment or facilities, the Contractor agrees that in the event a municipal corporation is formed which possesses the power and jurisdiction to provide for such equipment or facilities, the Contractor shall offer to transfer ownership of such equipment or facilities to the municipal corporation without compensation.

Article 18. Assurance. The Contractor will spend monies appropriated under this grant monies only for the purposes specified in this contract.

Article 19. Remission. The Contractor will return all unexpended grant monies to the State within 90 days of the project completion.

Article 20. Reporting requirements. The Contractor shall submit to the Department a report each quarter on the progress of the performance of this contract. Reports are due 20 days following the completion of each quarter and are delinquent if not received by the due date. The Department shall provide forms and instructions necessary for the preparation of such reports.

Article 21. Right to withhold funds. The Department may withhold payments under this contract if reports required in Article 20 above are incomplete or delinquent. The Department may also withhold payments under this contract for any other violation of this contract.

ATTACHMENT D - METHOD OF PAYMENT

The State will pay the Contractor no more than \$320,000 and this amount shall constitute the full amount of the grant.

The following payment schedule is established and approved by the Contractor and the State:

1. Upon the approval and signing of this contract by both the Contractor and the State, the State will pay the Contractor a sum of \$80,000. Of this amount, \$20,000 shall be for Project number five (5) as detailed in Attachment B and the remaining \$60,000 is 20% of the balance (\$300,000) of the award.
2. The remaining balance shall be paid in four (4) equal payments of \$60,000 each and upon the requisitioning of payments by the Contractor as described in Attachment C.

In the event some other payment schedule would facilitate the completion of the approved projects, an amendment to the "four equal payments" clause may be requested by the contractor and may be approved by the Department. All requests for and approvals of changes must be written.

Due to the unusual site control and permit requirements of the projects within this grant, funds will only be disbursed by the State when the individual contract stipulations are met for the particular projects.

ALASKA POWER AUTHORITY
FINANCIAL STATEMENTS
AND
ADDITIONAL INFORMATION
THRU JUNE 30, 1982 AND 1981

Price
Waterhouse

12/10/82

Operating Fund -

The Operating Fund accounts for appropriations from the State which are to be expended by the Authority for administrative and operating costs. Any appropriations unexpended or unencumbered at the end of a fiscal year lapse into the State's General Fund.

Power Development Fund -

Effective August 4, 1981, the legislature of the State of Alaska established the Power Development Fund of the Authority. The Power Development Fund accounts for appropriations for the energy program for the State of Alaska to be expended by the Authority for reconnaissance and feasibility studies, power project finance plans, power project construction, debt service and power project operating costs. Formerly such costs were accounted for in the Capital Projects Fund; however, since August 4, 1981 all activities and balances of the Capital Projects Fund have been reflected in the Power Development Fund.

Power Development Fund project costs are accounted for in accordance with the policy described in Note 1. Such capital projects appropriations are generally expended over the life of the related projects and unexpended amounts do not lapse into the State's General Fund until the project is completed.

Power Project Loan Fund -

The Power Project Loan Fund accounts for appropriations from the State which are to be expended by the Authority in the form of loans for feasibility studies or loans for the design and construction of power projects consistent with the Authority's mandate. These funds are to be expended at the direction of the Authority's Board of Directors or by legislative mandate and do not lapse at the end of the fiscal year.

All power project loan earnings and repayments (on loans not redesignated as grants as more fully described below) revert to the State of Alaska General Fund.

Effective August 4, 1981, legislation was passed which redesignated \$18,624,875 of the June 30, 1981 balance of Power Project Loan Fund loans and \$6,450,000 of undisbursed loan proceeds as grants subject to the newly established Power Development Fund established on the same date. Accordingly, such loans in connection with the acquisition and construction of the Terror and Swan Lake Hydroelectric Projects from Kodiak Electric Association and Ketchikan Public Utilities, respectively, have been reclassified as deferred project costs in the accompanying financial statements. The related loans payable to the State of Alaska have been reclassified as contributed capital.

Lake Tye Hydroelectric Project -

With respect to the construction of the Lake Tye Hydroelectric Project, the Authority adopted a resolution dated January 22, 1982 authorizing the issuance of \$50,000,000 principal amount of Alaska Power Authority Variable Rate Demand Notes (Lake Tye Hydroelectric Project) dated February 17, 1982 and maturing January 2, 1985. The Authority has covenanted to issue long-term bonds on or before October 1, 1984 in an amount sufficient to pay principal and interest on the notes; such bonds will be secured by a capital reserve fund of the Authority. The notes are subject to certain early redemption provisions both mandatory and at the option of the Authority, on or after June 30, 1982.

The notes bear interest paid quarterly equal to the TENR plus $\frac{1}{2}$ of 1% as described above for the Terror Lake Hydroelectric Project.

The notes are general obligations of the Authority and are secured in the same manner as the Terror Lake Variable Rate Demand Notes described above. Additionally, the notes are secured by and payable from monies available under an irrevocable standby letter of credit in the amount of \$52,000,000 expiring January 18, 1985. As of June 30, 1982 no amounts had been drawn under the letter of credit arrangement.

The letter of credit requires advance annual commitment fees of $\frac{1}{2}$ of 1% of the undrawn stated amount. Additionally, an advance annual sales agency fee of $\frac{3}{8}$ of 1% of the average aggregate amount of notes outstanding is required.

NOTE 6 - POWER PROJECT LOAN FUND:

Pursuant to the Power Project Loan Fund program the Authority has loans receivable at June 30, 1982 and 1981 from various utilities as set forth below:

Date of Loan	Borrower	Rate of Interest	June 30, 1982		Total
			Principal	Accrued Interest	
4/78	Alaska Electric Light and Power - Improvements	6.5%	\$ 449,000	\$ 6,157	\$ 455,157
10/80	Improvements	8.6%	1,047,988	45,063	1,093,051
3/81	Upper Salmon Creek	7.0%	202,031	7,071	209,102
12/81	Transmission and Distribution	11.8%	2,321,963	136,996	2,458,959
8/80	City of King Cove	7.0%	209,203	7,007	207,210
8/81	Anchorage Cogeneration Utility	5.0%	600,000(1)	12,679	612,679
10/80	Illamna-New Haven	0.6%	300,000	47,193	347,193
			<u>\$ 5,121,185(1)</u>	<u>\$ 262,166</u>	<u>\$ 5,383,351</u>

(1) Excludes undischursed loan proceeds of \$400,000

Date of loan	Borrower	Rate of Interest	June 30, 1981		
			Principal	Accrued Interest	Total
4/78	Alaska Electric Light and Power - Improvements	6.5%	\$ 483,000	\$ 6,536	\$ 489,536
10/80	Improvements	8.6%	1,000,000	59,847	1,059,847
3/81	Upper Salmon Creek	7.0%	200,000	4,450	204,450
11/78	Kodiak Electric Association (1) - Terror Lake	5.0%	100,000	13,811	113,811
8/79	Terror Lake	5.0%	2,000,000	190,832	2,190,832
10/79	Hennonite Creek	7.0%	89,198	3,121	92,319
8/80	Port Lions	7.0%	205,677	7,199	212,876
8/80	Terror Lake	5.0%	1,050,000	48,218	1,098,218
11/78	Ketchikan Public Utilities (1) - Swan Lake	5.0%	200,000	27,375	227,375
12/78	Swan Lake	5.0%	135,000	17,747	152,747
7/79	Swan Lake	5.0%	3,115,000	289,414	3,404,414
6/80	Swan Lake	5.0%	11,550,000(2)	455,958	12,005,958
12/78	Thomas Bay Power Commission (1) - Lake Tyce	5.0%	120,000	15,769	135,769
7/79	Lake Tyce	5.0%	60,000	6,132	66,132
8/80	City of King Cove	7.0%	205,140	7,180	212,320
9/80	Akutan	7.0%	125,641	7,254	132,895
10/80	Illiana-New Hales	8.6%	300,000	19,156	319,156
			<u>\$20,938,656(2)</u>	<u>\$1,179,999</u>	<u>\$22,118,655</u>

(1) Redesignated as grants effective August 4, 1981.

(2) Excludes undisbursed loan proceeds of \$6,450,000.

Each of the loans was made pursuant to legislative direction and all principal and interest repayments revert directly to the State of Alaska General Fund. Accordingly, the Authority has recorded payables to the State of Alaska equal to the outstanding balance of Power Project Loan Fund loans, interest receivable and available undisbursed loan proceeds of \$400,000 and \$6,450,000 at June 30, 1982 and 1981, respectively. Effective August 4, 1981 approximately \$18,624,875 of the loans outstanding at June 30, 1981 and \$6,450,000 of undisbursed loan proceeds were redesignated as grants and accounted for as discussed in Notes 2 and 5 above.

NOTE 7 - UNEXPENDED APPROPRIATIONS:

Following is a summary of unexpended appropriations by fund as of June 30, 1982:

Power Project Loan Fund	\$ 28,850,000
Rural Electrification Revolving Loan Fund	6,500,000
Grant Fund	1,464,628
Power Development Fund - Construction Work in Progress	117,515,938
Deferred Projects	154,222,379
Power Cost Assistance Fund	2,837,367
Operating Fund	10,428,100*

* Appropriated for fiscal year 1983

AMENDMENTS TO CSSB--11, APA APPROPRIATIONS

- 1) Daves Creek--Seward Transmission Line (design only) \$ 1.35 million
This amendment was advocated by Dawson and Seward and is not on APA's original priority list.
- 2) Thorne Bay generation purchase (loan) .13 million
This amendment was made by Eliason. Does not appear on APA list
- 3) Pelican generation (replace burned down plant) 3.074 million
Eliason. The APA Board approved same amount
- 4) Kake-Petersburg Intertie (design) .545 million
Eliason. The APA Board approved this amount.
- 5) Susitna project. (Design and studies) reduce from 22 mil. to 17.5 mil.
Fischer. This amount was approved in Gov's second budget. Dzenick says 22 Mil. needed.
- 6) Chakachamna feasibility study 2.9 mil.
Fischer. This was approved by APA Board.
- 7) Other railbelt energy studies, North Slope gas generation, wind, coal, conservation, 1.6 mil.
Fischer. APA Board approved 1mil. for North Slope gas

FY84 APA CAPITAL BUDGET (1,000.0)

Project Name	Original Request	Revised Request	Approved By APA Board	Governor's 1st Budget	Governor's 2nd Budget	Remarks
Anchorage-Fairbanks Intertie	\$54,000.0	\$54,000.0	\$54,000.0	\$44,000.0	-0-	Under const. 25.
Susitna Hydroelectric Design & Studies	71,286.0	47,000.0	47,000.0	37,000.0	17,500.0	Continuing 22. (2 yr. FEHC license)
Swan Lake Hydroelectric	35,000.0	-0-	-0-	-0-	-0-	Under const. -2. (to free debt service, will help all)
Tyee Lake Hydroelectric	50,000.0	-0-	-0-	-0-	-0-	Under const. 1
Terror Lake Hydroelectric	115,000.0	-0-	-0-	-0-	-0-	Under const. 1
North Slope Gas Feasibility Study	1,000.0	1,000.0	1,000.0	1,000.0	-0-	Being compl. 0. (1 yr studies)
Chakachamna Feasibility Study	2,943.0	2,943.0	2,943.0	2,500.0	-0-	Continuing 0. (1050 alternative)
Black Bear Lake Hydroelectric Design	8,311.0	8,311.0	1,200.0	-0-	-0-	Continuing 1.2
Bradley Lake Hydroelectric	30,520.0	200,000.0	46,380.0	32,000.0	-0-	Scope/design being reviewed -112 (revised from 18 new 4 to 2 in kitly)
Rural Reconnaissance Studies	1,275.0	1,275.0	1,275.0	1,000.0	-0-	Continuing 1.
Chester Lake Hydroelectric	5,449.0	13,750.0	5,449.0	5,449.0	-0-	New const. 5.5
Kake-Petersburg Transmission Line Study	9,500.0	545.0	545.0	-0-	-0-	New study 545
Lower Kuskokwim Feasibility Study	2,725.0	2,725.0	2,725.0	1,000.0	-0-	Continuing 1.0
Unalaska Geothermal Power Dev. Study	3,500.0	3,500.0	3,500.0	2,000.0	-0-	Continuing 0
Old Harbor Hydroelectric	4,120.0	3,915.0	3,915.0	Note 1	-0-	New const./small hydro 3.915
King Cove Hydroelectric	4,574.0	4,780.0	4,780.0	7,000.0 ¹	-0-	New const./small hydro 4.780
Larson Bay Hydroelectric	3,493.0	3,617.0	3,617.0	Note 1	-0-	New const./small hydro 3.617
Scammon Bay Hydroelectric	1,778.0	1,760.0	1,760.0	Note 1	-0-	New const./small hydro 1.760
Rural Alternatives	5,000.0	5,000.0	5,000.0	4,000.0	-0-	New const./waste heat & wind 5.0 (waste heat)
Cordova/Silver Lake Study	7,000.0	832.0	832.0	832.0	-0-	Continuing 532
Hoonah/Juneau Intertie Study	1,205.0	1,432.0	-0-	-0-	-0-	New study 0
Kotzebue Coal-Fired Generation	3,050.0	3,050.0	3,050.0	1,000.0	-0-	Continuing 1.0
Bristol Bay Regional Plan	1,635.0	1,635.0	1,635.0	1,000.0	-0-	Continuing 1.0
Grant Lake Hydroelectric Study	3,400.0	-0-	-0-	-0-	-0-	Completed draft 0
West Creek Design Study	500.0	-0-	-0-	-0-	-0-	Updating draft 0
Reynolds Creek Feasibility Study	491.0	-0-	-0-	-0-	-0-	0
Tenakee and Chignik Hydroelectric	13,000.0	-0-	-0-	-0-	-0-	New const./small hydro 0
Pelican Hydroelectric	2,990.0	3,074.0	3,074.0	-0-	-0-	New const./replace damaged plant 3.074
	<u>\$442,745.0</u>	<u>\$364,144.0</u>	<u>\$193,680.0</u>	<u>\$140,781.0</u>	<u>\$17,500.0</u>	
<u>Loan Funds</u>						
Power Development	-0-	\$25,000.0	\$25,000.0	-0-	-0-	
Rural Electrification Revolving	2,500.0	2,500.0	2,500.0	1,000.0	-0-	
	<u>\$2,500.0</u>	<u>\$27,500.0</u>	<u>\$27,500.0</u>	<u>\$1,000.0</u>	<u>-0-</u>	

* 68-69 mil (including Bradley \$)
 * 25 mil (Hoonah serious problem)
 * 10 mil (new ways)

¹ Governor's budget combined these four projects and provided a total of \$7 million with remainder to be financed.

new ones coming to kill -

PROPOSED AMENDMENT TO SB 11 offered by Sen. Eliason

Add a new section to read:

Sec. _____. "The sum of \$130,000 is appropriated to the Alaska Power Authority for loan to the City of Thorne Bay under the Power Project Loan Fund for the balance needed to fund the purchase of the electrical generation facility."

SB 11
AMENDMENT

Susitna project

Delete 22,000,000 and insert in its place 17,500,000.

Add

Chakachamna feasibility	2,900,000
Other railbelt energy studies, including North Slope and Cook Inlet gas, wind, coal, conservation, and price elasticity	1,600,000

The Governor has included in his capital budget \$17.5 million, rather than \$22 million, for continuing the feasibility studies needed for the Susitna FERC license.

Other railbelt energy studies must be performed in order to be prepared to meet railbelt electrical needs should Susitna be found to be either uneconomic or unfinancible.

This amendment would decrease the funding for Susitna and appropriate the same amount for alternatives studies.

Project Title Chakachamna Hydroelectric Project			Type	Location South Central	Agency ID #	Elect Dist 24	Start Date	Complete Date 12/7/89	
Cash Flow		Operating Impact		First Op. Yr. FY 89	Ult. Annual Yr. FY 90	Funding Information		Funding Information	
FY 84	2,943.0	Funding Source	Fed. Rec.			Agency	FY 84	Gov. FY	FY
FY 85	68,909.0		Gen. Fund			1002	Fed. Rec.		
FY 86	777,017.0		Other			1004	Gen. Fund	2,943.0	
FY 87	564,631.0		Proj Rev	1,000.0	2,000.0		G.O. Bonds		
FY 88	307,725.0		Total	1,000.0	2,000.0		Total	2,943.0	
FY 89	335,420.0	Positions (FTE)	7			Priority:	Prior Year 83-18	Agency 84-7	Governor
TOTAL	2,056,645.0								
Special Features:	One of Several Phases <input checked="" type="checkbox"/>	External Funding Source <input type="checkbox"/>	Funds to Enable Completion <input type="checkbox"/>	Contingent Upon Other Projects <input type="checkbox"/>	Site Owned? <input type="checkbox"/>	Utilities Available? <input type="checkbox"/>	Access Available? <input type="checkbox"/>		
Project Description:					Project Justification:				
<p>Chakachamna Lake (Water-Surface Elevation 1140 ft.) lies in the southern part of the Alaska Range of mountains about 85 miles due west of Anchorage. The most likely alternative to develop this resource would be by a diversion via a tunnel 23 ft. in diameter and 12 miles long) of the lake outflow to the valley of the McArthur River which lies southeast of the lake outlet. The power plant would have an installed capacity of 330 MW and could produce 1,374,000 MWH. In addition, approximately 19% of the average annual flow has been allocated to be released through the natural water course (Chakachamna River) for fish purposes.</p> <p>The FY 82 appropriation was utilized to study the engineering and environmental aspects of the Project and culminated with an interim report in December of 1981. The FY 83 funds are coming from Susitna funds since Chakachamna is considered as an alternative to the Susitna Project. This phase of the Project will see a threshold level of environmental evaluation and additional engineering studies to confirm the construction cost estimate and cost of power.</p>					<p><u>Project Need Statement.</u> The Anchorage area presently receives the majority of its electricity from thermal plants which have an ever increasing cost of fuel along with high operation and maintenance costs. In the future some of these plants will be shut down due to age. In addition, the Anchorage area is growing and there is a continuing need for more energy and capacity. The Susitna Hydroelectric Project could provide energy into the same load area as the Chakachamna project. If the demand is available, it is possible that both projects could be utilized by the Railbelt area.</p> <p><u>Documentation of Estimated Capital Cost.</u> The Interim Report estimated a \$1.45 billion cost of the project in 1982 dollars. This is a rough estimate of cost since the feasibility study is not complete and the schedule is uncertain.</p> <p><u>Analysis of Estimate on Operational Expense.</u> The project economics has assessed a 1.5 mil/kwh operation and maintenance expense or about \$2 million annually. This, too, is a rough estimate for same reasons as stated in Estimated of Capital Cost.</p>				

35a PROPOSED PROJECT
Chakachamna Hydroelec Proj
Project Title

CATEGORY Power Development
AGENCY Alaska Power Authority
PROGRAM Energy Development
PROPOSED FUNDING YEAR FY 84

Page 1 of 2
Revised Date

FY 84

PROJECT DESCRIPTION (CONTINUED):

The FY 84 budget of \$2.9 million will be required to complete the engineering and environmental studies necessary for the detailed feasibility study along with processing of the FERC license application. Upon completion of the feasibility study, a recommendation will be made to the Power Authority Board of Directors concerning whether a FERC application should be prepared and submitted.

PROJECT JUSTIFICATION (CONTINUED):

Identification of Alternatives Considered. Some of the alternatives to the Chakachamna project would be 1) Susitna Hydroelectric Project, 2) other hydroelectric projects, 3) coal-fired plants, and 4) gas fired plants. A decision on the Susitna project feasibility will be available in 1982. The Chakachamna project could be in operation by 1989, which could provide the Anchorage area with 300-400 MW's of power. If the Chakachamna project is not pursued then either other hydroelectric projects or thermal alternatives (gas or coal) will have to be pursued. This study will impact the Susitna study and that study will impact the feasibility of this project. The every increasing cost of fossil fuels is a disadvantage which may preclude their use in the future. There are no other hydroelectric projects (with the exception of Susitna) close to the Anchorage area which could provide the capacity and energy needed in the near future.

CATEGORY POWER DEVELOPMENT

AGENCY ALASKA POWER AUTHORITY

PROGRAM ENERGY DEVELOPMENT

PROPOSED FUNDING YEAR FY 84

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Revised Date 84

FY 84

35b PROPOSED PROJECT
(Continued)
Chakachamna Hydroelectric Proj.
Project Title

Project Title NORTHSLOPE GAS GENERATION		Type I	Location North Slope and South Central		Agency ID #	Elect Dist	Start Date NA	Complete D. NA	
Cash Flow		Operating Impact		Funding Information		Funding Information			
FY 84	1,000.0	Funding Source	Fed. Rec.	100%	Fed. Rec.	Gov. FY	FY	FY	
FY			Gen. Fund	100%	Gen. Fund				1,000.0
FY			Other	NA	G.O. Bonds				
FY			Total	NA	Total				1,000.0
FY			Positions (FIE)						
TOTAL	1,000.0								
Special Features:	One of Several Phases	External Funding Source	Funds to Enable Completion	Continued Upon Other Projects	Priority:	Prior Year	Agency	Overhead	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	81 - 14	84 - 6			
					Site Owned?	Utilities Available?			
					Access Available?				

Project Description:

This project would provide the capacity and electrical energy required in the Railbelt in the absence of an alternative major power supply project such as Susitna. The project lacks definition at this point in the sequential development process. Conceptually, the project would entail power generation facilities on the North Slope with electrical transmission lines to the Railbelt or a small-diameter, single or multi-purpose gas pipeline to Fairbanks with electrical generation there at the north end of the interconnected Railbelt system. Ultimate energy output would be phased to match load requirements, perhaps as much as 6 billion KW by 2010.

No specific sites have yet been identified, but general siting will be considered in the present reconnaissance level study.

The specific activity for which FY-84 funds are sought is a feasibility study. It is anticipated that an additional year would subsequently be required for design, with yet another for necessary permits and land use rights. The use

Project Justification:

a) Between 1982 and 1993, many of the long-term contracts now held by utility companies for very favorably priced Cook Inlet gas will expire. Not only will major increases in electric energy costs result from the requirement by Anchorage utilities to purchase gas of market prices will above present average prices, but also known Cook Inlet gas reserves may have been depleted in the early 1990's to the point that reliance on Cook Inlet natural gas as the principal fuel for electrical energy generation would no longer be possible. Further, substantial future need for electrical energy in the Railbelt has been forecasted.

The Susitna Hydroelectric Project is being considered as a means of both forestalling major price adjustments in the 1990's and of satisfying increased demand. There remain, however, a number of uncertainties about the economic and financial viability of the Susitna Project, primarily revolving around the future value of oil. Before a construction decision can be made for the Susitna Project, all reasonable alternatives must be adequately explored. One alternative not adequately evaluated in the recently completed Battelle

35a PROPOSED PROJECT

Northslope Gas Generation
Project Title

CATEGORY DEVELOPMENT

AGENCY ALASKA POWER AUTHORITY

PROGRAM ENERGY DEVELOPMENT

PROPOSED FUNDING YEAR FY 84

Page 1 of 2

Revised Date

FY 84

PROJECT DESCRIPTION (CONTINUED):

of the gas for this purpose is fraught with institutional constraints which will also impact the viability of this project.

PROJECT JUSTIFICATION (CONTINUED):

Alternatives Study is the use of North Slope natural gas. Previous evaluations of this alternative presumed all North Slope gas would be dedicated to the Alaska Natural Gas Transportation System (ANGTS) for transport and utilization outside the Railbelt market area. It now appears ANGTS will experience substantial if not indefinite delay, thus making the gas resource potentially available for Railbelt utilization.

An initial assessment of this concept was mandated by legislative appropriation in FY 83. That reconnaissance level evaluation is being coordinated with related activities by a state task force and by a Governor-appointed citizen committee, both exploring state options for use of North Slope gas.

Proceeding with this feasibility study contingent upon favorable findings from the reconnaissance study presently underway and upon some indication that the gas will be available for this use at a sufficiently low price.

b. Neither the construction nor operating costs of this project are known at this point in time. The reconnaissance study will provide the initial estimate of construction costs. The estimate for feasibility study costs is based on Power Authority experience on similar activities.

c. The primary alternatives to this project are: 1) no state action with result that Railbelt utilities would be required to rely on their own efforts in pursuit of long-term supply options, 2) development of the Susitna Hydroelectric Project, 3) development of coal-fired power generation and 4) development of the Chakachamna Hydroelectric Project in concert with other options. Feasibility level studies will be required to gain enough knowledge about the North Slope gas alternative to be able to adequately compare it to these alternatives.

CATEGORY DEVELOPMENT
AGENCY ALASKA POWER AUTHORITY
PROGRAM ENERGY DEVELOPMENT
PROPOSED FUNDING YEAR EY 84

35b PROPOSED PROJECT
(Continued)
Northslope Gas Generation
Project Title

Page 2 of 2
Revised Date

FY 84

PROPOSED AMENDMENT TO SB 11 offered by Sen. Eliason

Add a new section to read:

Sec. _____. "The sum of \$500,000 is appropriated to the Alaska Power Authority for completion of design work for the Kake-Petersburg intertie."

Kake

II. PRIORITIES NOT REQUIRING DIRECT FUNDING TO THE CITY

This section describes the seven priorities which do not require funds to be made available directly to the City. However, each of the projects described below is extremely important for the orderly development of the community, and for providing an improved standard of living. Each is described separately, and is listed in order of importance and priority.

II.A. Hydro-Electric Power Development - Kake-Petersburg Intertie

The single most critical need in Kake this year, as it has been for the past several years, is for more reliable and less expensive electrical power. All residential and commercial consumers are severely handicapped by having to pay 4 to 5 times as much for electricity as people pay in places like Juneau and Anchorage. During the past year the Alaska Power Authority (APA) completed a feasibility study for a project to connect Kake with a hydro-electric project serving Petersburg. The study concluded that the Kake-Petersburg Intertie is the most feasible long-term solution for electrical power in Kake. The City heartily endorses all efforts to bring that service to Kake as soon as possible, and strongly recommends that APA be appropriated funds this year to design the intertie so that construction can be coordinated with completion of the Tye Lake Project. It should be noted that the design phase will require about \$ 500,000, with actual construction estimated to cost \$9,000,000 if the APA takes on the project. The City firmly believes that both the design and construction of the intertie can be done more quickly and at lower cost if the money is granted directly to the City, as evidenced by our projects last year.

The City of Kake clearly does not want to continue depending on diesel fuel for future electrical needs. This increasingly undependable and costly source of electricity is not suitable for Kake's future. Dependence on diesel fuel will continue to force Kake to use the State energy subsidy program. This program is costly to the state and the

City does not like this dependency, because if the program were to cease the Kake electricity bills would double almost immediately and vital city services would have to be curtailed.

Community leaders have expressed a strong preference for hydro power. They have stated they are willing to do what they can through local native corporation and other means to bring Tyee Lake hydro-power to Kake. The intertie project would enable all Kake residents to plan on a stable electricity supply. This stability is necessary for Kake's continued well being and growth. In addition, the intertie would help the entire Tyee Lake hydro system by providing another market for its power production.

For all of the reasons listed above, the City of Kake urges the Alaska Legislature and executive branch to support this important project.

City of Kake

"HOME OF THE WORLD'S LARGEST TOTEM POLE"

rec. 4-15-83, 1pm

P.O. BOX 500
KAKE, AK 99830
907-785-3804

SB 11

April 14, 1983

The Honorable Betty Fahrenkamp
Chairman
Senate Resources Committee
Alaska State Capitol
Pouch V
Juneau, Alaska 99811

SUBJECT: Testimony on
Proposed CS for SB-11,
Relating to the Alaska
Power Authority

Dear Chairman and Members of the
Senate Resources Committee:

The residents of Kake have for years suffered through the shortcomings and cost of diesel-fired electric power. We do not wish for this to continue. We, and the State, now have the opportunity to end this dangerous dependence, but we need your help in the form of design funds for the Kake-Petersburg Electric Power Intertie project.

The original SB-11 included \$545,000 to complete design details and prepare for construction of the Intertie. However, the proposed Committee Substitute before you does not include this project. We strongly hope that you will reinsert these funds, so that this much-needed project can proceed without delay.

The Kake-Petersburg Power Intertie project is much too feasible and important to be dropped. Not only will it provide another customer to purchase power from the Tyee Lake hydroelectric project which is nearing completion, but it will provide the least expensive and most reliable power that Kake could have. Even though the Alaska Power Authority has not yet completed its update of the project's feasibility study, we know enough already to conclude that the project will definitely be feasible and the most cost-effective long term power source for Kake. In addition to the cost effectiveness of the project, there are additional benefits which will be extremely important to Kake residents over the next 20-30 years. For instance,

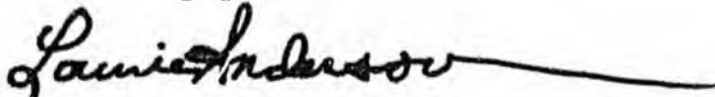
1. Kake will have reliable hydroelectric power, rather than suffering through the chronic breakdowns and

brownouts which plague the current diesel-electric system;

2. Kake will no longer be dependent on foreign-supplied oil for power generation, which is becoming increasingly less stable and dependable. In effect, the Intertie will enable power costs to be relatively constant and known;
3. Kake residents will be charged between 18-22¢/kwh, depending on the outcome of the Tyee Lake appropriation request in the FY-84 budget. This is less than the subsidized cost passed on to the Kake customer at this time!
4. At some time in the future, the State power subsidy may no longer be available to rural communities. If this occurs, Kake residents will be subjected to the full power generation costs of approximately 37¢/kwh, if the diesel-electric power generation is continued. The 1982 Kake subsidy amounted to \$248,824!
5. The availability of hydroelectric power will substantially improve the ability of Kake to develop and diversify the local economy. In contrast, the current system does not have the capacity, flexibility or reliability to assist this much-needed development.

We hope that you will give serious consideration to providing funds for the Kake-Petersburg Power Intertie. Kake needs this project and it is economically feasible. We would be more than willing to provide any backup or additional information that you might need. This project is the single most important need for the City of Kake, and we sincerely hope that there will be no delay in its design and construction.

Sincerely yours,



Lonnie Anderson
Mayor

cc: The Honorable Senator Eliason
The Honorable Representative Goll



ALASKA RURAL ELECTRIC COOPERATIVE ASSOCIATION, INC.

237 E. FIREWEED LANE • SUITE 301
ANCHORAGE, ALASKA 99503 • (907) 276-3235

RECOMMENDED FY 84 APA CAPITAL BUDGET (1,000)

Anchorage-Fairbanks Intertie Construction	\$ 34,000
Susitna Studies and Licensing	22,000
Tyee Debt Service Assistance	2,000
Chakachanna Study	2,500
Black Bear Lake Design	1,200
Rural Reconnaissance Studies	1,000
Chester Lake Design and Construction	5,449
Kake-Petersburg Transmission Study	545
Lower Kuskokwim/Bristol Bay Feasibility	2,000
Unalaska Geothermal Study	2,000
Old Harbor Hydro Construction	3,915
King Cove Hydro Construction	4,780
Larson Bay Hydro Construction	3,617
Scammon Bay Hydro Construction	1,760
Pelican Hydro Construction	3,074
Rural Alternatives Studies	5,000
Cordova/Silver Lake Study	832
Hoonah-Juneau Transmission Study	1,400
Kotzebue Coal Study	1,000
Rural Electrification Loan Fund	<u>2,500</u>
	\$100,572

FY84 APA CAPITAL BUDGET (1,000.0)

Project Name	Original Request	Revised Request	Approved By APA Board	Governor's 1st Budget	Governor's 2nd Budget	Remarks
Anchorage-Fairbanks Intertie	\$54,000.0	\$54,000.0	\$54,000.0	\$44,000.0	-0-	Under const. 25.
Susitna Hydroelectric Design & Studies	71,286.0	47,000.0	47,000.0	37,000.0	17,500.0	Continuing 22. (to be funded)
Swan Lake Hydroelectric	35,000.0	-0-	-0-	-0-	-0-	Under const. 2. (to be done some time)
Tyee Lake Hydroelectric	50,000.0	-0-	-0-	-0-	-0-	Under const. 1. (to be done)
Terror Lake Hydroelectric	115,000.0	-0-	-0-	-0-	-0-	Under const. 1.
North Slope Gas Feasibility Study	1,000.0	1,000.0	1,000.0	1,000.0	-0-	Being compl. 0.
Chakachamna Feasibility Study	2,943.0	2,943.0	2,943.0	2,500.0	-0-	Continuing 0. (to be done)
Black Bear Lake Hydroelectric Design	8,311.0	8,311.0	1,200.0	-0-	-0-	Continuing 1.2.
Bradley Lake Hydroelectric	30,520.0	200,000.0	46,380.0	32,000.0	-0-	Scope/design being reviewed 1.2 (to be done)
Rural Reconnaissance Studies	1,275.0	1,275.0	1,275.0	1,000.0	-0-	Continuing 1.
Chester Lake Hydroelectric	5,449.0	13,750.0	5,449.0	5,449.0	-0-	New const. 3.5
Kake-Petersburg Transmission Line Study	9,500.0	545.0	545.0	-0-	-0-	New study 1,545
Lower Kuskokwim Feasibility Study	2,725.0	2,725.0	2,725.0	1,000.0	-0-	Continuing 1.0
Unalaska Geothermal Power Dev. Study	3,500.0	3,500.0	3,500.0	2,000.0	-0-	Continuing 0.
Old Harbor Hydroelectric	4,120.0	3,915.0	3,915.0	Note 1	-0-	New const./small hydro 3.915
King Cove Hydroelectric	4,574.0	4,780.0	4,780.0	7,000.0 ¹	-0-	New const./small hydro 4.780
Larson Bay Hydroelectric	3,493.0	3,617.0	3,617.0	Note 1	-0-	New const./small hydro 3.617
Scanmon Bay Hydroelectric	1,778.0	1,760.0	1,760.0	Note 1	-0-	New const./small hydro 1.760
Rural Alternatives	5,000.0	5,000.0	5,000.0	4,000.0	-0-	New const./waste heat & wind 5.0 (to be done)
Cordova/Silver Lake Study	7,000.0	832.0	832.0	832.0	-0-	Continuing 1,532
Hoonah/Juneau Intertie Study	1,205.0	1,432.0	-0-	-0-	-0-	New study 0.
Kotzebue Coal-Fired Generation	3,050.0	3,050.0	3,050.0	1,000.0	-0-	Continuing 1.0
Bristol Bay Regional Plan	1,635.0	1,635.0	1,635.0	1,000.0	-0-	Continuing 1.0
Grant Lake Hydroelectric Study	3,400.0	-0-	-0-	-0-	-0-	Completed draft 0
West Creek Design Study	500.0	-0-	-0-	-0-	-0-	Updating draft 0
Reynolds Creek Feasibility Study	491.0	-0-	-0-	-0-	-0-	0
Tenakee and Chignik Hydroelectric	13,000.0	-0-	-0-	-0-	-0-	New const./small hydro 0
Pelican Hydroelectric	2,990.0	3,074.0	3,074.0	-0-	-0-	New const./replace damaged plant 3.074
	<u>\$442,745.0</u>	<u>\$364,144.0</u>	<u>\$193,680.0</u>	<u>\$140,781.0</u>	<u>\$17,500.0</u>	
<u>Loan Funds</u>						
Power Development	-0-	\$25,000.0	\$25,000.0	-0-	-0-	\$25 mil (to be done)
Rural Electrification Revolving	2,500.0	2,500.0	2,500.0	1,000.0	-0-	\$10 mil (to be done)
	<u>\$2,500.0</u>	<u>\$27,500.0</u>	<u>\$27,500.0</u>	<u>\$1,000.0</u>	<u>-0-</u>	

¹ Governor's budget combined these four projects and provided a total of \$7 million with remainder to be financed.

now over owing to bill



Resource Development Council

for Alaska, Inc.

444 West 7th Avenue, Anchorage, Alaska 99501
Box 100516, Anchorage, Alaska 99510 — 907/278-9615

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May 27, 1983

MAY 31 1983

Senator Jalmar Kerttula
Alaska State Legislature
Pouch V, Mail Stop 3100
Juneau, Alaska 99811

Dear Senator Kerttula:

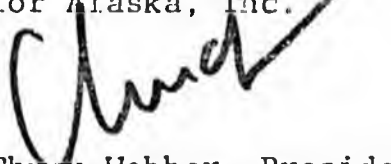
As you know, the Resource Development Council has supported State funding for the construction of the electrical power transmission intertie between Fairbanks and Anchorage as a priority project.

On the 18th of May, 1983 the Executive Committee of the Council adopted the enclosed resolution supporting funding of intertie construction. We are forwarding our resolution for your consideration.

We believe very strongly that the benefits to be accrued to all citizens of Alaska from the intertie construction make it one of the most valuable means by which the State can provide for the wellbeing of our citizens. Your support in ensuring rapid completion of this project that is so vital to our entire state is appreciated by the Council.

Sincerely,

RESOURCE DEVELOPMENT COUNCIL
for Alaska, Inc.


Chuck Webber, President

enclosure

cc: senators

CW/cr

Resource Development Council
Energy Committee
May 18, 1983

Subject: Anchorage-Fairbanks (Railbelt Transmission)
Intertie Project

WHEREAS the railbelt transmission intertie would benefit three-quarters of the population of Alaska, and

WHEREAS power pooling and the exchange of economy power have been a long sought goal of the electric utilities from Fairbanks to Homer, and

WHEREAS delay or non-completion of this transmission line would cloud and make power planning efforts much more difficult, and

WHEREAS this intertie will result in greatly improving the power supply reliability, and

WHEREAS the project would significantly enhance cooperative endeavors among the railbelt communities,

BE IT THEREFORE RESOLVED that the Resource Development Council supports the continued State funding of the Railbelt Transmission Intertie Project between Anchorage and Fairbanks for a total of \$25,000,000 in FY-84.

Copies of this resolution shall be sent to all members of the Alaska State House of Representatives, the Alaska State Senate and the Office of the Governor.

ANALYSIS OF
VOLTAGE DROP AND ENERGY LOSSES

PREPARED FOR:
CITY OF SEWARD
SEWARD ALASKA

OCTOBER, 1982

BY:
DWANE LEGG ASSOCIATES
7526 OLD HARBOR RD.
ANCHORAGE, ALASKA 99504
PHONE 337-2303

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- I. INTRODUCTION
- II. LOAD HISTORY AND PROJECTIONS
- III. VOLTAGE DROP AND ENERGY LOSSES
- IV. POSSIBLE ACTION
- V. ANALYSIS
- VI. CONCLUSION AND RECOMMENDATIONS

I. INTRODUCTION

This report is presented in response to purchase order 7463 from the City of Seward. The report is not intended to be an exhaustive original work, but rather a summary of and careful analysis of existing information, together with brief projections of future conditions.

The City of Seward is experiencing brownout (low voltage) problems during periods of peak load. This is not a new problem. It is addressed in detail in the "City of Seward Electric System Planning Study" by CH2M Hill, Inc., August, 1979.

Considerable new commercial/industrial construction is underway in Seward. More is in advanced planning/design stages and should appear as new electrical loads in the very near future. These new loads along with normal load growth will further aggravate existing problems.

Chugach Electric Association (CEA) provides power at wholesale to the City of Seward via a 14.4/24.9 kV line from Daves Creek to Lawing, a distance of approximately 16 miles. The City of Seward owns a 69 kV line, operated at 14.4/24.9 kV, from Lawing to Seward, A distance of 18 miles. The City of Seward supplies several consumers from this line before it reaches Seward. At the outskirts of Seward, the voltage is reduced to 7.2/12.5 kV for additional distribution.

Seward owns two 1500 kW and one 2500 kW diesel-generators. During periods of peak load these generators are operated in order to maintain proper voltage levels at Seward.

When supply voltage at Lawing is increased even to 130 V on a 120 Volt base, the voltage at Seward is 110 V or below during peak loads.

When a CEA outage occurs, the supply from CEA is opened and the Seward generators supply the Seward Load. When the CEA supply is re-established, the CEA no-load voltage is too high to close the tie.

II. LOAD HISTORY AND PROJECTIONS

Historical kW demand and kWh consumption information was obtained from utility records and from previous engineering studies. This information indicates that consumption grew at an annual rate of 10% per year from 1967 through 1981. Data for the first 8 months of 1982 indicates that consumption in 1982 will probably be about 14% above 1981.

Peak demand grew at an average rate of 10.6 percent from 1967 through 1978, experienced an unusually high value of 6697 kW in 1979, and has remained at slightly above 5000 kW since 1980. Since 1980, demand has been relatively stable, growing at less than 5% per year. It is most probable that the 1982 peak will be in the range of 5200-5600 kW. It should be noted that the indicated peak load values are at the CEA metering point at Lawing. Seward generators are used to shave the peak, therefore peak load values are actually higher than the indicated values by an unknown amount.

A number of major new loads are under construction or planned for the very near future. The most prominent are listed below.

DESCRIPTION	STATUS	LOAD
State grain terminal	Being constructed	500-1000 kW
AVTEC Student Center	Construction/Design	300-500 kW
Fourth of July Shiplift	Being constructed	500-1000kW
Fourth of July Industrial	Planned	1000-2000kW
Reactivate Lumber Mill	Uncertain	500kW

Total		2300-5000kW

These loads will be in addition to normal growth, and will likely spur additional growth in residential and light commercial sectors as well.

Figures 1 and 2 are graphs indicating historical peak load and consumption, as well as several possible future growth rates. Based upon historical information and known load additions, it is only remotely possible that load growth will be as low as 5%. However, even ignoring the peak shaving by Seward generation, peak load will be 6000kW by 1985. If 10% growth is realized, peak load will be 7800 kW by 1985. Further analysis in this report will be based upon the top curve of 20% growth through 1983, and 10% thereafter. If, in fact, peak loads during 1980 and 1981 have been artificially depressed by peak shaving, even these projections could be low.

The magnitude of these voltage drops and energy loss

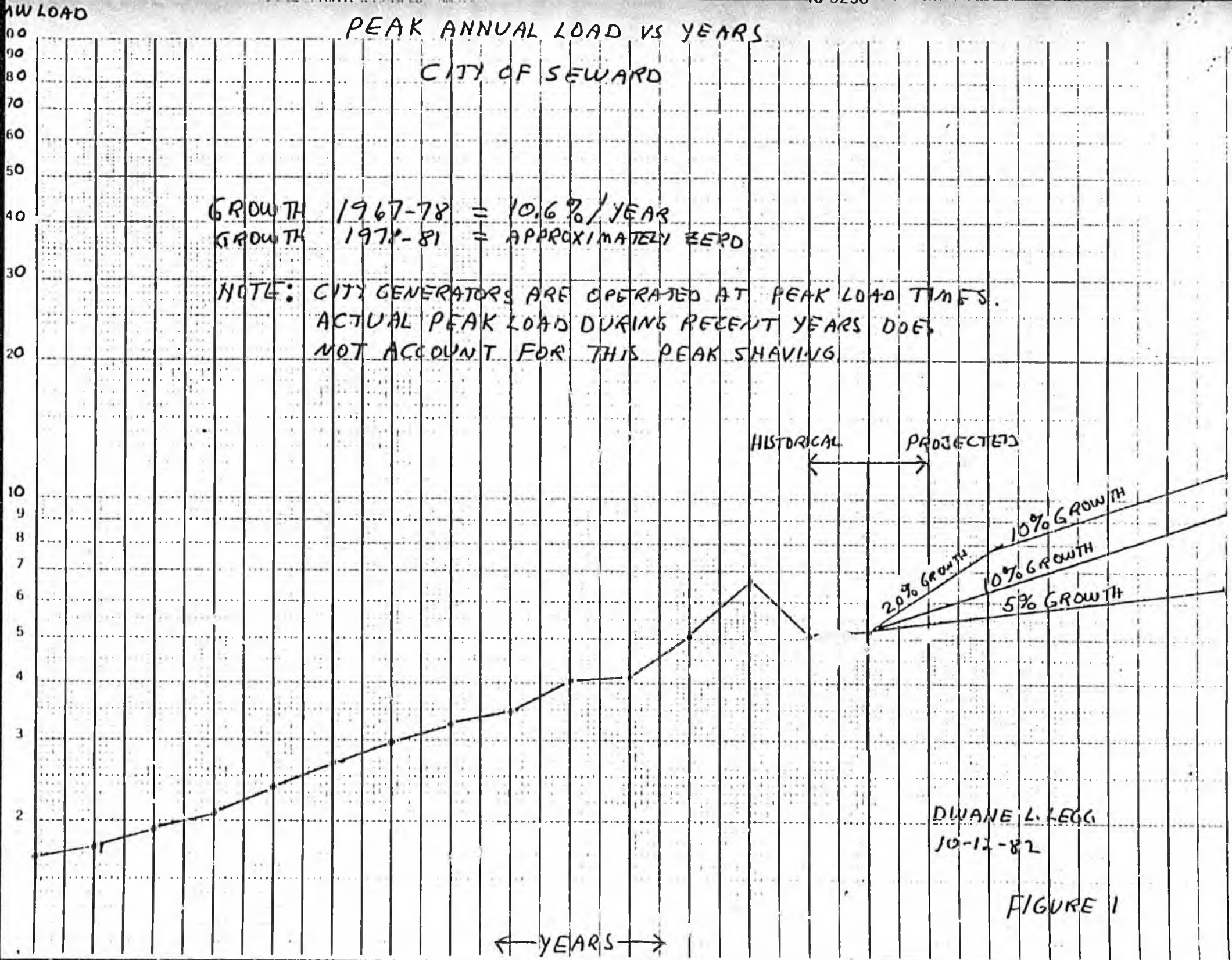
problems are so imminent and so drastic in nature that immediate corrective action is needed.

PEAK ANNUAL LOAD VS YEARS

CITY OF SEWARD

GROWTH 1967-78 = 10.6%/YEAR
GROWTH 1979-81 = APPROXIMATELY ZERO

NOTE: CITY GENERATORS ARE OPERATED AT PEAK LOAD TIMES.
ACTUAL PEAK LOAD DURING RECENT YEARS DOES
NOT ACCOUNT FOR THIS PEAK SHAVING



DUANE L. LEGG
10-12-82

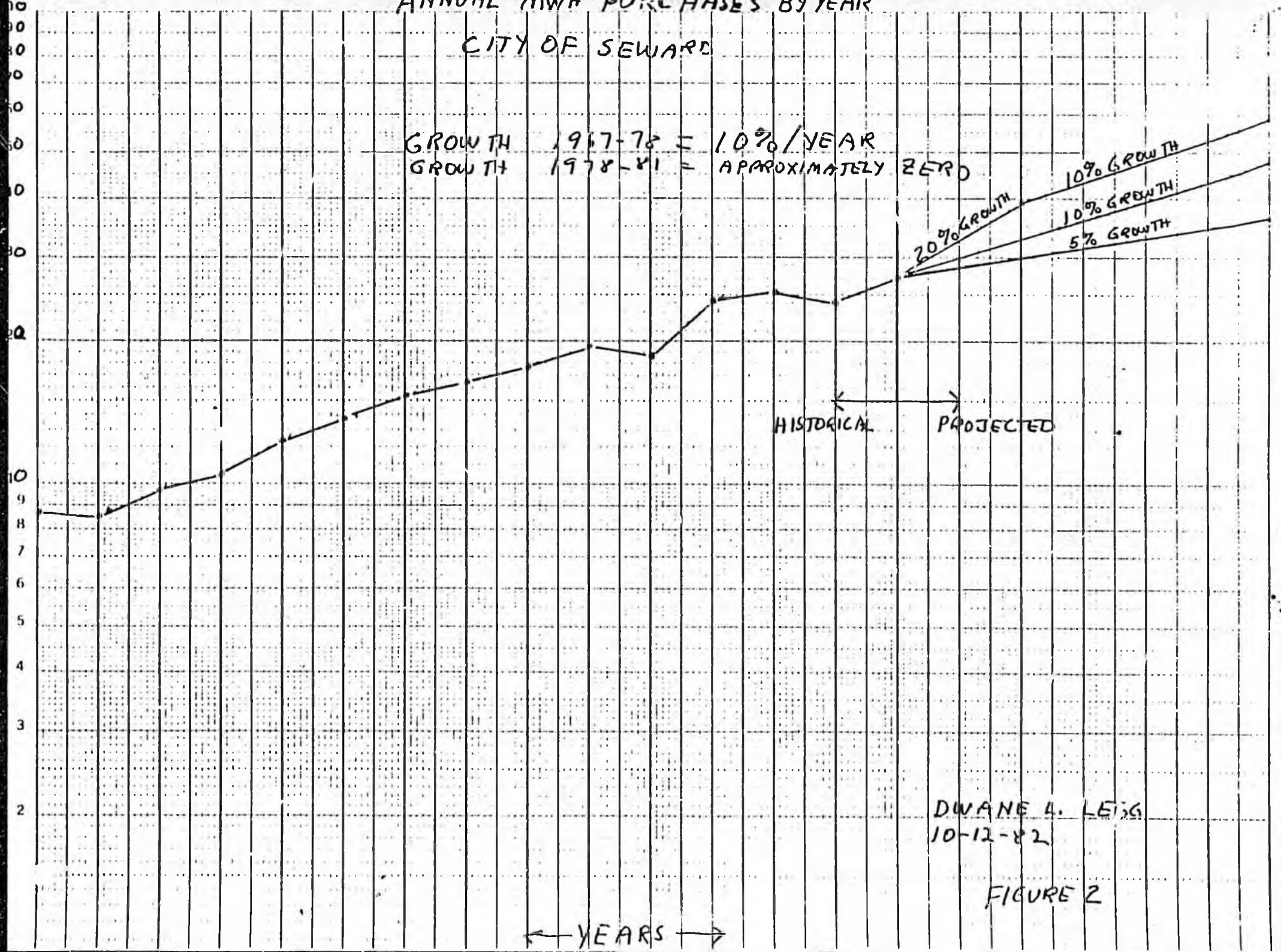
FIGURE 1

MWH X 1000

ANNUAL MWH PURCHASES BY YEAR

CITY OF SEWARD

GROWTH 1967-78 = 10%/YEAR
 GROWTH 1978-81 = APPROXIMATELY ZERO



HISTORICAL

PROJECTED

20% GROWTH

10% GROWTH

10% GROWTH

5% GROWTH

DWANE A. LEIG
10-12-82

FIGURE 2

← YEARS →

III. VOLTAGE DROP AND ENERGY LOSS

Voltage drop and energy loss calculations were performed for a range of loads from 4 to 20 MW for three configurations. Table 1 is for the present configuration, table 2 is for operation of the line from Daves Creek to Seward at 69 kV, and table 3 is for operation of the line at 115 kV. All cases assume unit voltage at Daves Creek. Adding 5% boost at Daves Creek, at Lawing, and at Seward substation will increase the supply voltage at Seward by 15%, but losses will remain approximately the same.

Table 4 is a summary of expected load, service voltage conditions, and energy losses through 1990.

TABLE 1

VOLTAGE DROP AND ENERGY LOSSES
EXISTING SYSTEM

CALCULATED AT .90 POWER FACTOR
1000 KW LOAD AT MOUSE PASS

KW LOAD SEWARD	---PU VOLTAGE---		-----ANNUAL MWH LOSSES----		
	LAWING	SEWARD	D.C-LAWING	LAWING-SEWARD	TOTAL
4000	.899	.806	1413	1081	2494
5000	.883	.771	2063	1690	3753
6000	.867	.738	2839	2433	5272
7000	.853	.708	3738	3312	7050
8000	.840	.680	4761	4326	9087
9000	.827	.654	5909	5476	11385
10000	.816	.630	7179	6760	13939
11000	.805	.608	8574	8180	16754
12000	.795	.587	10092	9735	19827
13000	.786	.567	11735	11425	23160
14000	.778	.549	13502	13251	26753
15000	.769	.532	15392	15211	30603
16000	.762	.515	17407	17307	34714
17000	.754	.500	19545	19538	39083
18000	.748	.485	21808	21905	43713
19000	.741	.472	24194	24406	48600
20000	.735	.459	26703	27043	53746

TABLE 2

VOLTAGE DROP AND ENERGY LOSSES
69 KV OPERATION

CALCULATED AT .90 POWER FACTOR
1000 KW LOAD AT MOOSE PASS
69KV, 556.5 MCM ACSR, TP-69 CONSTRUCTION DAVES CREEK-LAWING
EXISTING LINE LAWING-SEWARD

KW LOAD SEWARD	---PU VOLTAGE---		-----ANNUAL MWH LOSSES-----		
	LAWING	SEWARD	D.C-LAWING	LAWING-SEWARD	TOTAL
4000	.992	.977	50	141	191
5000	.990	.972	74	220	294
6000	.988	.967	103	318	421
7000	.987	.962	136	432	568
8000	.985	.956	174	565	739
9000	.983	.951	215	715	930
10000	.981	.946	262	883	1145
11000	.980	.941	313	1068	1381
12000	.978	.936	369	1272	1641
13000	.976	.931	429	1492	1921
14000	.975	.926	494	1731	2225
15000	.973	.921	563	1987	2550
16000	.971	.917	637	2261	2898
17000	.970	.912	715	2552	3267
18000	.968	.907	798	2862	3660
19000	.967	.902	885	3188	4073
20000	.965	.898	977	3533	4510

TABLE 3

VOLTAGE AND ENERGY LOSSES
115 KV OPERATION

CALCULATED AT .90 POWER FACTOR
1000 KW LOAD AT MOOSE PASS
115 KV, 336 MCM ACSR, TH1A STRUCTUES

KW LOAD SEWARD	---PU VOLTAGE---		-----ANNUAL MWH LOSSES-----		
	LAWING	SEWARD	D.C-LAWING	LAWING-SEWARD	TOTAL
4000	.997	.992	18	50	68
5000	.996	.990	26	79	105
6000	.996	.988	37	114	151
7000	.995	.986	48	155	203
8000	.995	.984	62	203	265
9000	.994	.982	77	257	334
10000	.993	.980	93	318	411
11000	.993	.978	112	384	496
12000	.992	.976	132	457	589
13000	.991	.974	154	537	691
14000	.991	.973	178	623	801
15000	.990	.971	202	715	917
16000	.990	.969	228	814	1042
17000	.989	.967	257	919	1176
18000	.988	.965	287	1030	1317
19000	.988	.963	318	1148	1466
20000	.987	.961	351	1272	1623

TABLE 4
PROJECTED CONDITIONS

YEAR	LOAD MW	SERVICE VOLTAGE-P.U.			-----LOSSES-MWH-----		
		24.9kV	69kV	115kV	24.9kV (1)	69kV (1)	115kV (2)
1982	6.4	.73	.96	.98	2784	364	172
1983	7.7	.69	.95	.98	4022	525	246
1984	8.5	.67	.95	.98	4901	640	303
1985	9.3	.65	.95	.98	5861	765	357
1986	10.3	.62	.94	.98	7186	939	437
1987	11.3	.60	.94	.98	8647	1129	524
1988	12.4	.58	.93	.98	10411	1360	630
1989	13.6	.56	.93	.97	12521	1635	757
1990	15.0	.53	.92	.97	15211	1987	917

(1) Losses from Lawing to Seward

(2) Losses from Daves Creek to Seward, assuming the metering point is moved to Daves Creek

IV. POSSIBLE COURSES OF ACTION

Several possible courses of action are available. They are listed below and discussed in brief detail.

1. CONTINUE AS AT PRESENT. This alternative will continue to produce substandard service voltages and high energy losses. It will be mandatory that the Seward generators be operated at peak-load times to prevent voltage levels from dipping to completely unacceptable levels. As system load continues to grow, it will be necessary to operate the generators more hours each month which will cause fuel and operating costs to rise.
2. ADD POWER FACTOR CORRECTING CAPACITORS. Correcting power factor with capacitors will cause a measurable but not significant increase in voltage level, and decrease in energy losses. This would at best be only a temporary patch.
3. ADD AUTOMATIC VOLTAGE REGULATORS. This also would be a temporary fix. It would be possible, by installing a sufficient number of regulators, to provide proper levels of service voltage, but losses would continue to mount. The ultimate limitation will be the 16 mVA rating of the 4/0 transmission conductor at 24.9 kV
4. CONVERT TO 69 KV TRANSMISSION VOLTAGE. This would be implemented by operating the existing line from Lawing to Seward at 69 kV and by building a new 69 kV line from Daves Creek to Lawing or converting the existing one. It would provide a good solution for now and the near future.

However, by the time the system load reaches 15-20 MW (1990-1995), voltage drop and energy losses will again become of concern.

5. CONVERT TO 115 kV TRANSMISSION VOLTAGE. This would require rebuilding or replacing the total line from Daves Creek to Seward. It would accommodate 10% per year load growth for up to 30 years.

6. COMBINATION 115/69 kV TRANSMISSION. This would require a new 115 kV line from Daves Creek to Lawing, a 115-69 kV substation at Lawing, and operation of the existing line from Lawing to Seward at 69 kV. It would hold down immediate construction costs, but it would still be necessary to convert to 115 kV from Lawing to Seward within a few (say 5) years.

V. ANALYSIS

Seward is experiencing approximately 20% system energy loss. The losses appear to be split approximately evenly between the distribution system and the 24.9kV transmission system. At the present wholesale rate of 2.5 cents per kwh, the losses in the transmission system have a real cost of \$64,000 per year. The cost of these losses will increase many fold during the next few years as a result of increased consumption and wholesale rate increases. Any of the possible actions to reduce voltage drop will also reduce system losses, but not sufficiently to pay for the improvements. The improvements will represent a cost which is made necessary by the requirement to maintain acceptable system voltages.

Options 1, 2 and 3 are not considered for further analysis, as they do not provide a lasting solution to the problem. Option, 4, convert to 69 kV, would provide relief for a few years. However, it would require a major expenditure to upgrade the Daves Creek-Lawing line to 69 kV and that would soon be inadequate. Therefore the final analysis is a comparison of option 5, convert to 115 kV, and option 6, use a combination of 69 kV and 115 kV.

Option 5, convert 115 kV will require the following approximate expenditures:

1983-84

34 miles 115 kV line at \$400,000/mi	\$13,600,000
20 mVA 115kV substation at Seward	200,000
115kV tap at Daves Creek	100,000
Local 12.5 or 24.9 kV underbuild	240,000

Total	\$14,140,000

Option 6, operate at 115/69 kV will require the following approximate expenditures:

1983-84 Expenditures

16 mi 115kV, Daves Creek-Lawing at \$400,000	\$6,400,000
20 mVA 115kV to 69/24.9 kV sub at Lawing	200,000
115 kV tap at Daves Creek	100,000
Local 12.5 or 24.9 kV underbuild	240,000

Total 1983-84	\$6,940,000

1988-89 Expenditures (1983-84 dollars)

18 miles 115 kV, (Lawing-Seward) at \$400,000	\$7,200,000
Relocate 115 kV sub from Lawing to Seward	100,000

Total 1988-89	\$7,300,000

Cost of debt service will vary, depending upon the interest rate and length of loan. The following factors, multiplied by the amount of the loan, will approximate the annual repayment amount for the terms and rates indicated.

TERM/RATE	6%	8%	10%	12%	15%
15 years	.10296	.11683	.13147	.14682	.17102
20 years	.08718	.10185	.11746	.13388	.15976
25 years	.07823	.09368	.11017	.12750	.15470
30 years	.07265	.08883	.10608	.12414	.15230

Using, for example, a factor of 0.10608 for 10%, 30 years, the repayment schedule for option 5 will be \$1,500,000 per year. It would require an average retail rate increase of about \$0.038/kWh in 1983 to pay the debt service. In later years, as kWh consumption increases, the cost would be spread over the larger number of kWh and would be less per kWh.

Using this same factor, the repayment schedule for option 6 would be \$736,000 per year from 1983-87 and \$1,511,000 beyond 1988. This would require a retail rate increase of \$0.019/kWh in 1983 and an additional \$0.005/kWh in 1988.

These analysis are all based upon constant 1983-84 dollars.

VI. CONCLUSION AND RECOMMENDATIONS

The City of Seward should immediately proceed with detailed engineering analysis/design for transmission system improvements, and should immediately investigate methods of financing construction.

This engineer's recommendation, based upon only a brief study and subject to verification by a more detailed study, is that option 6 be implemented. This would construct in 1983-84 a 115 kV line from Daves Creek to Lawing, a 115 kV to 69/24.9 kV substation at Lawing, convert the line from Lawing to Seward to 69 kV, and build local 12.5 or 24.9 kV underbuild as required on the line from Lawing to Seward. In 1988-89 the line from Lawing to Seward would be converted to 115 kV and the 115 kV to 69/24.9 kV substation would be relocated to Seward.

This plan will require an approximate retail rate increase of \$0.019/kwh in 1983 and an additional \$0.005 in 1988.

7526 OLD HARBOR ROAD, ANCHORAGE, ALASKA 99504

January 31, 1983

Mr. Ron Garzini, City Manager
City of Seward
P.O. Box 167
Seward, Alaska 99664

RECEIVED

CITY OF SEWARD
CITY MANAGER

Subj: Transmission Line loan

Dear Mr. Garzini:

Enclosed per your request are some computer generated tables which will enable you to make a rapid evaluation of numerous loan payback possibilities for the proposed Daves Creek to Seward transmission line. The tables are prepared for two consumption levels. Case I, the lower level, represents a projection based upon historical growth. Case II, the higher level, represents an increased load level due to the many projects planned or under construction in Seward. These two cases represent the upper two curves in Figure 2 of our October report.

The accompanying charts are to be used as follows:

1. For a given loan amount, term, and interest rate, find the annual repayment amount in millions of dollars from Table I. For instance, on a work copy I have indicated that the repayment schedule for a \$14,000,000, 30 year, 10% loan will be \$1,493,000 per year.
2. Use Table II for lower consumption rate or table III for higher consumption rate to determine the added cost in cents/kWh to meet the annual repayment requirements determined in step 1. For instance, Table II indicates that at the lower consumption level it would be necessary to add 45.5 cents per kWh to existing rates to cover a \$1,500,000 annual repayment. At the higher consumption rate it would be necessary to add 38.5 cents per kWh to existing rates to cover a \$1,500,000 annual repayment. Note that in later years as energy consumption increases, the added cost per kWh will become less.

This same exercise can be conducted for any other loan values, terms, etc. within the range of the tables. Interpolation may be used for intermediate values.

I believe this will give you the tools you need to make quick analyses of various plans. If we can give more specific help in any area we will be glad to do so.

Sincerely,

Dwane L. Legg

Dwane L. Legg, P.E.

encl.
dl1/al

TABLE I

CITY OF SEWARD POWER LINE CONSTRUCTION
REPAYMENT SCHEDULE IN MILLIONS OF DOLLARS PER YEAR

ANNUAL INTEREST RATE (%)		4	6	8	10	12	15	18
\$8,000,000	15 YEAR LOAN	.72	.82	.93	1.05	1.17	1.37	1.57
\$8,000,000	20 YEAR LOAN	.59	.70	.81	.94	1.07	1.28	1.49
\$8,000,000	25 YEAR LOAN	.51	.63	.75	.88	1.02	1.24	1.46
\$8,000,000	30 YEAR LOAN	.46	.58	.71	.85	.99	1.22	1.45
\$9,000,000	15 YEAR LOAN	.81	.93	1.05	1.18	1.32	1.54	1.77
\$9,000,000	20 YEAR LOAN	.66	.78	.92	1.06	1.20	1.44	1.68
\$9,000,000	25 YEAR LOAN	.58	.70	.84	.99	1.15	1.39	1.65
\$9,000,000	30 YEAR LOAN	.52	.65	.80	.95	1.12	1.37	1.63
\$10,000,000	15 YEAR LOAN	.90	1.03	1.17	1.31	1.47	1.71	1.96
\$10,000,000	20 YEAR LOAN	.74	.87	1.02	1.17	1.34	1.60	1.87
\$10,000,000	25 YEAR LOAN	.64	.78	.94	1.10	1.27	1.55	1.83
\$10,000,000	30 YEAR LOAN	.58	.73	.89	1.06	1.24	1.52	1.81
\$11,000,000	15 YEAR LOAN	.99	1.13	1.29	1.45	1.62	1.88	2.16
\$11,000,000	20 YEAR LOAN	.81	.96	1.12	1.29	1.47	1.76	2.06
\$11,000,000	25 YEAR LOAN	.70	.86	1.03	1.21	1.40	1.70	2.01
\$11,000,000	30 YEAR LOAN	.64	.80	.98	1.17	1.37	1.68	1.99
\$12,000,000	15 YEAR LOAN	1.08	1.24	1.40	1.58	1.76	2.05	2.36
\$12,000,000	20 YEAR LOAN	.88	1.05	1.22	1.41	1.61	1.92	2.24
\$12,000,000	25 YEAR LOAN	.77	.94	1.12	1.32	1.53	1.86	2.20
\$12,000,000	30 YEAR LOAN	.69	.87	1.07	1.27	1.49	1.83	2.18
\$13,000,000	15 YEAR LOAN	1.17	1.34	1.52	1.71	1.91	2.22	2.55
\$13,000,000	20 YEAR LOAN	.96	1.13	1.32	1.53	1.74	2.08	2.43
\$13,000,000	25 YEAR LOAN	.83	1.02	1.22	1.43	1.66	2.01	2.38
\$13,000,000	30 YEAR LOAN	.75	.94	1.15	1.38	1.61	1.98	2.36
\$14,000,000	15 YEAR LOAN	1.26	1.44	1.64	1.84	2.06	2.39	2.75
\$14,000,000	20 YEAR LOAN	1.03	1.22	1.43	1.64	1.87	2.24	2.62
\$14,000,000	25 YEAR LOAN	.90	1.10	1.31	1.54	1.78	2.17	2.56
\$14,000,000	30 YEAR LOAN	.81	1.02	1.24	1.49	1.74	2.13	2.54
\$15,000,000	15 YEAR LOAN	1.35	1.54	1.75	1.97	2.20	2.57	2.95
\$15,000,000	20 YEAR LOAN	1.10	1.31	1.53	1.76	2.01	2.40	2.80
\$15,000,000	25 YEAR LOAN	.96	1.17	1.41	1.65	1.91	2.32	2.74
\$15,000,000	30 YEAR LOAN	.87	1.09	1.33	1.59	1.86	2.28	2.72
\$16,000,000	15 YEAR LOAN	1.44	1.65	1.87	2.10	2.35	2.74	3.14
\$16,000,000	20 YEAR LOAN	1.18	1.39	1.63	1.88	2.14	2.56	2.99
\$16,000,000	25 YEAR LOAN	1.02	1.25	1.50	1.76	2.04	2.48	2.93
\$16,000,000	30 YEAR LOAN	.93	1.16	1.42	1.70	1.99	2.44	2.90

PREPARED BY DWANE LEGG ASSOCIATES
7526 OLD HARBOR RD
ANCHORAGE, ALASKA 99504
JAN. 31, 1983

TABLE II

CITY OF SEWARD
TRANSMISSION LINE AMORTIZATION

CASE I--LOWER CONSUMPTION RATE

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
MWH /YEAR	33.0	36.3	39.9	43.9	48.3	53.1	58.5	64.3
ANNUAL PAYMENT	COST, CENTS/KWH SOLD							
\$500,000	15.2	13.8	12.5	11.4	10.3	9.4	8.6	7.8
\$600,000	18.2	16.5	15.0	13.7	12.4	11.3	10.3	9.3
\$700,000	21.2	19.3	17.5	15.9	14.5	13.2	12.0	10.9
\$800,000	24.2	22.0	20.0	18.2	16.6	15.1	13.7	12.4
\$900,000	27.3	24.8	22.5	20.5	18.6	16.9	15.4	14.0
\$1,000,000	30.3	27.5	25.0	22.8	20.7	18.8	17.1	15.6
\$1,100,000	33.3	30.3	27.5	25.0	22.8	20.7	18.8	17.1
\$1,200,000	36.4	33.1	30.1	27.3	24.8	22.6	20.5	18.7
\$1,300,000	39.4	35.8	32.6	29.6	26.9	24.5	22.2	20.2
\$1,400,000	42.4	38.6	35.1	31.9	29.0	26.3	23.9	21.8
\$1,500,000	45.5	41.3	37.6	34.2	31.0	28.2	25.7	23.3
\$1,600,000	48.5	44.1	40.1	36.4	33.1	30.1	27.4	24.9
\$1,700,000	51.5	46.8	42.6	38.7	35.2	32.0	29.1	26.4
\$1,800,000	54.5	49.6	45.1	41.0	37.3	33.9	30.8	28.0
\$1,900,000	57.6	52.3	47.6	43.3	39.3	35.8	32.5	29.5
\$2,000,000	60.6	55.1	50.1	45.5	41.4	37.6	34.2	31.1
\$2,100,000	63.6	57.9	52.6	47.8	43.5	39.5	35.9	32.7
\$2,200,000	66.7	60.6	55.1	50.1	45.5	41.4	37.6	34.2
\$2,300,000	69.7	63.4	57.6	52.4	47.6	43.3	39.3	35.8
\$2,400,000	72.7	66.1	60.1	54.6	49.7	45.2	41.1	37.3
\$2,500,000	75.8	68.9	62.6	56.9	51.7	47.0	42.8	38.9
\$2,600,000	78.8	71.6	65.1	59.2	53.8	48.9	44.5	40.4
\$2,700,000	81.8	74.4	67.6	61.5	55.9	50.8	46.2	42.0
\$2,800,000	84.8	77.1	70.1	63.7	58.0	52.7	47.9	43.5
\$2,900,000	87.9	79.9	72.6	66.0	60.0	54.6	49.6	45.1
\$3,000,000	90.9	82.6	75.1	68.3	62.1	56.4	51.3	46.7

PREPARED BY DWANE LEGG ASSOCIATES
7526 OLD HARBOR RD.
ANCHORAGE, ALASKA 99504
PHONE 907-337-2303
JAN. 31, 1983

TABLE III

CITY OF SEWARD
TRANSMISSION LINE AMORTIZATION

CASE II--HIGHER CONSUMPTION RATE

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
MWH /YEAR	39.0	42.9	47.2	51.9	57.1	62.8	69.1	76.0
ANNUAL PAYMENT	COST, CENTS/KWH SOLD							
\$500,000	12.8	11.7	10.6	9.6	8.8	8.0	7.2	6.6
\$600,000	15.4	14.0	12.7	11.6	10.5	9.6	8.7	7.9
\$700,000	17.9	16.3	14.8	13.5	12.3	11.1	10.1	9.2
\$800,000	20.5	18.6	17.0	15.4	14.0	12.7	11.6	10.5
\$900,000	23.1	21.0	19.1	17.3	15.8	14.3	13.0	11.8
\$1,000,000	25.6	23.3	21.2	19.3	17.5	15.9	14.5	13.2
\$1,100,000	28.2	25.6	23.3	21.2	19.3	17.5	15.9	14.5
\$1,200,000	30.8	28.0	25.4	23.1	21.0	19.1	17.4	15.8
\$1,300,000	33.3	30.3	27.5	25.0	22.8	20.7	18.8	17.1
\$1,400,000	35.9	32.6	29.7	27.0	24.5	22.3	20.3	18.4
\$1,500,000	38.5	35.0	31.8	28.9	26.3	23.9	21.7	19.7
\$1,600,000	41.0	37.3	33.9	30.8	28.0	25.5	23.2	21.1
\$1,700,000	43.6	39.6	36.0	32.7	29.8	27.1	24.6	22.4
\$1,800,000	46.2	42.0	38.1	34.7	31.5	28.7	26.1	23.7
\$1,900,000	48.7	44.3	40.3	36.6	33.3	30.3	27.5	25.0
\$2,000,000	51.3	46.6	42.4	38.5	35.0	31.8	28.9	26.3
\$2,100,000	53.8	49.0	44.5	40.5	36.8	33.4	30.4	27.6
\$2,200,000	56.4	51.3	46.6	42.4	38.5	35.0	31.8	28.9
\$2,300,000	59.0	53.6	48.7	44.3	40.3	36.6	33.3	30.3
\$2,400,000	61.5	55.9	50.9	46.2	42.0	38.2	34.7	31.6
\$2,500,000	64.1	58.3	53.0	48.2	43.8	39.8	36.2	32.9
\$2,600,000	66.7	60.6	55.1	50.1	45.5	41.4	37.6	34.2
\$2,700,000	69.2	62.9	57.2	52.0	47.3	43.0	39.1	35.5
\$2,800,000	71.8	65.3	59.3	53.9	49.0	44.6	40.5	36.8
\$2,900,000	74.4	67.6	61.5	55.9	50.8	46.2	42.0	38.2
\$3,000,000	76.9	69.9	63.6	57.8	52.5	47.8	43.4	39.5

PREPARED BY DWANE LEGG ASSOCIATES
/526 OLD HARBOR RD.
ANCHORAGE, ALASKA 99504
PHONE 907-337-2303

CITY OF SEWARD



SEWARD, ALASKA 99664

February 10, 1983

City Manager	224-5214
City Clerk	224-5213
Finance	224-5216
Police	224-5201
Mayor	224-5202
Utility Information	224-5215

MEMORANDUM

TO: RON GARZINI, CITY MANAGER

FROM: JOSEPH GALE, FINANCE DIRECTOR

SUBJECT: POTENTIAL CONSUMER COST REQUIRED FOR REPAYMENT OF \$14,000,000 LOAN AT VARIED INTEREST RATES, OVER A 30 YEAR PERIOD.

The schedule set out below is based on information from tables provided by Dwane Legg Associates, of Anchorage, Alaska, dated January 31, 1983.

ANNUAL INTEREST RATE	REPAYMENT PER YEAR	COST, CENTS/KWH SOLD RANGE CONSUMPTION RATE		INCREASED COST RATIO TO CONSUMERS	
		LOW	HIGH	LOW	HIGH
10%	\$1,490,000	45.5¢	38.5¢	7.937	6.601
8%	1,240,000	37.9¢	31.8¢	6.498	5.452
6%	1,020,000	30.9¢	26.1¢	5.298	4.475
4%	810,000	27.6¢	20.7¢	4.732	3.549

By applying the ratios of the schedule column headed Increased Cost Ratio to Consumer/Low - High, to a consumer, using sufficient electrical power for an average monthly billing of \$100.00 at current Seward rates, the following schedule illustrates the increased average monthly billing.

The current Seward rate is .0512 per KWH plus a surcharge of .007127 per KWH for residential consumers.

INCREASE COST RATIO TO CONSUMER		CURRENT AVERAGE BILLING	INCREASED AVERAGE BILLING	
LOW	HIGH		LOW	HIGH
7.937	6.601	\$100	\$793.70	\$660.10
6.498	5.452	100	649.80	545.20
5.298	4.475	100	529.80	447.50
4.732	3.549	100	473.20	354.90

TABLE I

CITY OF SEWARD POWER LINE CONSTRUCTION
 REPAYMENT SCHEDULE IN MILLIONS OF DOLLARS PER YEAR

ANNUAL INTEREST RATE (%)		4	6	8	10	12	15	18
\$8,000,000	15 YEAR LOAN	.72	.82	.93	1.05	1.17	1.37	1.57
\$8,000,000	20 YEAR LOAN	.59	.70	.81	.94	1.07	1.28	1.49
\$8,000,000	25 YEAR LOAN	.51	.63	.75	.88	1.02	1.24	1.46
\$8,000,000	30 YEAR LOAN	.46	.58	.71	.85	.99	1.22	1.45
\$9,000,000	15 YEAR LOAN	.81	.93	1.05	1.18	1.32	1.54	1.77
\$9,000,000	20 YEAR LOAN	.66	.78	.92	1.06	1.20	1.44	1.68
\$9,000,000	25 YEAR LOAN	.58	.70	.84	.99	1.15	1.39	1.65
\$9,000,000	30 YEAR LOAN	.52	.65	.80	.95	1.12	1.37	1.63
\$10,000,000	15 YEAR LOAN	.90	1.03	1.17	1.31	1.47	1.71	1.96
\$10,000,000	20 YEAR LOAN	.74	.87	1.02	1.17	1.34	1.60	1.87
\$10,000,000	25 YEAR LOAN	.64	.78	.94	1.10	1.27	1.55	1.83
\$10,000,000	30 YEAR LOAN	.58	.73	.89	1.06	1.24	1.52	1.81
\$11,000,000	15 YEAR LOAN	.99	1.13	1.29	1.45	1.62	1.88	2.16
\$11,000,000	20 YEAR LOAN	.81	.96	1.12	1.29	1.47	1.76	2.06
\$11,000,000	25 YEAR LOAN	.70	.86	1.03	1.21	1.40	1.70	2.01
\$11,000,000	30 YEAR LOAN	.64	.80	.98	1.17	1.37	1.68	1.99
\$12,000,000	15 YEAR LOAN	1.08	1.24	1.40	1.58	1.75	2.05	2.36
\$12,000,000	20 YEAR LOAN	.88	1.05	1.22	1.41	1.61	1.92	2.24
\$12,000,000	25 YEAR LOAN	.77	.94	1.12	1.32	1.53	1.86	2.20
\$12,000,000	30 YEAR LOAN	.69	.87	1.07	1.27	1.49	1.83	2.18
\$13,000,000	15 YEAR LOAN	1.17	1.34	1.52	1.71	1.91	2.22	2.55
\$13,000,000	20 YEAR LOAN	.96	1.13	1.32	1.53	1.74	2.08	2.43
\$13,000,000	25 YEAR LOAN	.83	1.02	1.22	1.43	1.66	2.01	2.38
\$13,000,000	30 YEAR LOAN	.75	.94	1.15	1.38	1.61	1.98	2.36
\$14,000,000	15 YEAR LOAN	1.26	1.44	1.64	1.84	2.06	2.39	2.75
\$14,000,000	20 YEAR LOAN	1.03	1.22	1.43	1.64	1.87	2.24	2.62
\$14,000,000	25 YEAR LOAN	.90	1.10	1.31	1.54	1.78	2.17	2.56
\$14,000,000	30 YEAR LOAN	.81	1.02	1.24	1.49	1.74	2.13	2.54
\$15,000,000	15 YEAR LOAN	1.35	1.54	1.75	1.97	2.20	2.57	2.95
\$15,000,000	20 YEAR LOAN	1.10	1.31	1.53	1.76	2.01	2.40	2.80
\$15,000,000	25 YEAR LOAN	.96	1.17	1.41	1.65	1.91	2.32	2.74
\$15,000,000	30 YEAR LOAN	.87	1.09	1.33	1.59	1.86	2.28	2.72
\$16,000,000	15 YEAR LOAN	1.44	1.65	1.87	2.10	2.35	2.74	3.14
\$16,000,000	20 YEAR LOAN	1.18	1.39	1.63	1.88	2.14	2.56	2.99
\$16,000,000	25 YEAR LOAN	1.02	1.25	1.50	1.76	2.04	2.48	2.93
\$16,000,000	30 YEAR LOAN	.93	1.16	1.42	1.70	1.99	2.44	2.90

PREPARED BY DWANE LEGG ASSOCIATES
 7526 OLD HARBOR RD
 ANCHORAGE, ALASKA 99504
 JAN. 31, 1983

TABLE II

CITY OF SEWARD
TRANSMISSION LINE AMORTIZATION

CASE I--LOWER CONSUMPTION RATE

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
MWH /YEAR	33.0	36.3	39.9	43.9	48.3	53.1	58.5	64.3
ANNUAL PAYMENT	COST, CENTS/KWH SOLD							
\$500,000	15.2	13.8	12.5	11.4	10.3	9.4	8.6	7.8
\$600,000	18.2	16.5	15.0	13.7	12.4	11.3	10.3	9.3
\$700,000	21.2	19.3	17.5	15.9	14.5	13.2	12.0	10.9
\$800,000	24.2	22.0	20.0	18.2	16.6	15.1	13.7	12.4
\$900,000	27.3	24.8	22.5	20.5	18.6	16.9	15.4	14.0
\$1,000,000	30.3	27.5	25.0	22.8	20.7	18.8	17.1	15.6
\$1,100,000	33.3	30.3	27.5	25.0	22.8	20.7	18.8	17.1
\$1,200,000	36.4	33.1	30.1	27.3	24.8	22.6	20.5	18.7
\$1,300,000	39.4	35.8	32.6	29.6	26.9	24.5	22.2	20.2
\$1,400,000	42.4	38.6	35.1	31.9	29.0	26.3	23.9	21.8
\$1,500,000	45.5	41.3	37.6	34.2	31.0	28.2	25.7	23.3
\$1,600,000	48.5	44.1	40.1	36.4	33.1	30.1	27.4	24.9
\$1,700,000	51.5	46.8	42.6	38.7	35.2	32.0	29.1	26.4
\$1,800,000	54.5	49.6	45.1	41.0	37.3	33.9	30.8	28.0
\$1,900,000	57.6	52.3	47.6	43.3	39.3	35.6	32.5	29.5
\$2,000,000	60.6	55.1	50.1	45.5	41.4	37.6	34.2	31.1
\$2,100,000	63.6	57.9	52.6	47.8	43.5	39.5	35.9	32.7
\$2,200,000	66.7	60.6	55.1	50.1	45.5	41.4	37.6	34.2
\$2,300,000	69.7	63.4	57.6	52.4	47.6	43.3	39.3	35.8
\$2,400,000	72.7	66.1	60.1	54.6	49.7	45.2	41.1	37.3
\$2,500,000	75.8	68.9	62.6	56.9	51.7	47.0	42.8	38.9
\$2,600,000	78.8	71.6	65.1	59.2	53.8	48.9	44.5	40.4
\$2,700,000	81.8	74.4	67.6	61.5	55.9	50.8	46.2	42.0
\$2,800,000	84.8	77.1	70.1	63.7	58.0	52.7	47.9	43.5
\$2,900,000	87.9	79.9	72.6	66.0	60.0	54.6	49.6	45.1
\$3,000,000	90.9	82.6	75.1	68.3	62.1	56.4	51.3	46.7

PREPARED BY DWANE LEGG ASSOCIATES
7526 OLD HARBOR RD.
ANCHORAGE, ALASKA 99504
PHONE 907-337-2303
JAN. 31, 1983

TABLE III

CITY OF SEWARD
TRANSMISSION LINE AMORTIZATION

CASE II--HIGHER CONSUMPTION RATE

YEAR	1983	1984	1985	1986	1987	1988	1989	1990
MWH /YEAR	39.0	42.9	47.2	51.9	57.1	62.8	69.1	76.0
ANNUAL PAYMENT	COST, CENTS/KWH SOLD							
\$500,000	12.8	11.7	10.6	9.6	8.8	8.0	7.2	6.6
\$600,000	15.4	14.0	12.7	11.6	10.5	9.6	8.7	7.9
\$700,000	17.9	16.3	14.8	13.5	12.3	11.1	10.1	9.2
\$800,000	20.5	18.6	17.0	15.4	14.0	12.7	11.6	10.5
\$900,000	23.1	21.0	19.1	17.3	15.8	14.3	13.0	11.8
\$1,000,000	25.6	23.3	21.2	19.3	17.5	15.9	14.5	13.2
\$1,100,000	28.2	25.6	23.3	21.2	19.3	17.5	15.9	14.5
\$1,200,000	30.8	28.0	25.4	23.1	21.0	19.1	17.4	15.8
\$1,300,000	33.3	30.3	27.5	25.0	22.8	20.7	18.8	17.1
\$1,400,000	35.9	32.6	29.7	27.0	24.5	22.3	20.3	18.4
\$1,500,000	38.5	35.0	31.8	28.9	26.3	23.9	21.7	19.7
\$1,600,000	41.0	37.3	33.9	30.8	28.0	25.5	23.2	21.1
\$1,700,000	43.6	39.6	36.0	32.7	29.8	27.1	24.6	22.4
\$1,800,000	46.2	42.0	38.1	34.7	31.5	28.7	26.1	23.7
\$1,900,000	48.7	44.3	40.3	36.6	33.3	30.3	27.5	25.0
\$2,000,000	51.3	46.6	42.4	38.5	35.0	31.8	28.9	26.3
\$2,100,000	53.8	49.0	44.5	40.5	36.8	33.4	30.4	27.6
\$2,200,000	56.4	51.3	46.6	42.4	38.5	35.0	31.8	28.9
\$2,300,000	59.0	53.6	48.7	44.3	40.3	36.6	33.3	30.3
\$2,400,000	61.5	55.9	50.9	46.2	42.0	38.2	34.7	31.6
\$2,500,000	64.1	58.3	53.0	48.2	43.8	39.8	36.2	32.9
\$2,600,000	66.7	60.6	55.1	50.1	45.5	41.4	37.6	34.2
\$2,700,000	69.2	62.9	57.2	52.0	47.3	43.0	39.1	35.5
\$2,800,000	71.8	65.3	59.3	53.9	49.0	44.6	40.5	36.8
\$2,900,000	74.4	67.6	61.5	55.9	50.8	46.2	42.0	38.2
\$3,000,000	76.9	69.9	63.6	57.8	52.5	47.8	43.4	39.5

PREPARED BY DWANE LEGG ASSOCIATES
7526 OLD HARBOR RD.
ANCHORAGE, ALASKA 99504
PHONE 907-337-2303

CITY OF SEWARD



SEWARD, ALASKA 99664

February 10, 1983

MEMORANDUM

TO: RON GARZINI, CITY MANAGER

FROM: JOSEPH GALE, FINANCE DIRECTOR

SUBJECT: POTENTIAL CONSUMER COST REQUIRED FOR REPAYMENT OF \$14,000,000 LOAN AT VARIED INTEREST RATES, OVER A 30 YEAR PERIOD.

The schedule set out below is based on information from tables provided by Dwane Legg Associates, of Anchorage, Alaska, dated January 31, 1983.

ANNUAL INTEREST RATE	REPAYMENT PER YEAR	COST, CENTS/KWH SOLD RANGE CONSUMPTION RATE		INCREASED COST RATIO TO CONSUMERS	
		LOW	HIGH	LOW	HIGH
10%	\$1,490,000	45.5¢	38.5¢	7.937	6.601
8%	1,240,000	37.9¢	31.8¢	6.498	5.452
6%	1,020,000	30.9¢	26.1¢	5.298	4.475
4%	810,000	27.6¢	20.7¢	4.732	3.549

By applying the ratios of the schedule column headed Increased Cost Ratio to Consumer/Low - High, to a consumer, using sufficient electrical power for an average monthly billing of \$100.00 at current Seward rates, the following schedule illustrates the increased average monthly billing.

The current Seward rate is .0512 per KWH plus a surcharge of .007127 per KWH for residential consumers.

INCREASE COST RATIO TO CONSUMER		CURRENT AVERAGE BILLING	INCREASED AVERAGE BILLING	
LOW	HIGH		LOW	HIGH
7.937	6.601	\$100	\$793.70	\$660.10
6.498	5.452	100	649.80	545.20
5.298	4.475	100	529.80	447.50
4.732	3.549	100	473.20	354.90

S

B

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SENATE RESOURCES COMMITTEE
LEGISLATION CHECKLIST

IDENTIFICATION:

BILL NUMBER: SB 12

BILL NAME: Maximum length of salmon seine vessels.

SPONSOR(S): Ziegler (request)

RELATED BILLS PENDING:

DATE INTRODUCED: 1-18-83

HB 5

REFERRALS: Resources
L+C

INITIAL RESEARCH:

BILL SUMMARY COMPLETED:

SUMMARY BY LEGAL DIVISION:

SPONSOR CONTACTED FOR
BACKUP MATERIALS:

DEPT. OF LAW SUMMARY:

FISCAL NOTE:

AGENCY RESPONSE:

OTHER INTERESTED SENATORS OR
REPS. NOTIFIED:

BACKGROUND RESEARCH:

SIMILAR BILLS INTRODUCED IN PREVIOUS LEGISLATURES:

RESPONSES FROM INTERESTED PERSONS/GROUPS:

OTHER STATE OR FEDERAL PRECEDENTS, REGULATIONS, LAWS:

HEARING PREPARATION:

CHAIRMAN BRIEFED:

DATE AND PLACE SET:

STAFF MEMO TO COMMITTEE:

TELECONFERENCE:

BACKGROUND MATERIAL DISTRIBUTED:

PSA/PRESS RELEASE:

LIST OF WITNESSES:

SUGGESTED AMENDMENTS/COMMITTEE
SUBSTITUTES DRAFTED:

RELATING TO THE MAXIMUM LENGTH OF SALMON SEINE VESSELS.

SB 12

ZIEGLER

Repeals the statute limiting salmon seiners to 50 feet (official Coast Guard register length, and 58 feet overall length) except vessels that have fished for salmon with seines before January 1, 1962.

Fishermen in Southeast support - want to be able to fish with larger boats. Fishermen in Kodiak don't - have built their economy on fishing with 58 foot boats. Feel they might get cut out of too large a share if bigger boats are allowed to come in.

STATE OF ALASKA

DEPARTMENT OF PUBLIC SAFETY

DIVISION OF FISH & WILDLIFE PROTECTION

BILL SHEFFIELD, GOVERNOR

Robert J. Sundberg
Commissioner

P. O. BOX 6188, ANNEX
ANCHORAGE, ALASKA 99502

January 27, 1983

FEB 1 1983

Senator Bettye Fahrenkamp
Chairman, Senate Resources Committee
State Capitol
Pouch V
Juneau, Alaska 99811

Dear Senator Fahrenkamp:

I would like to present the following positions which the Division of Fish & Wildlife Protection, Department of Public Safety hold with regard to the subsequent Senate Bills under proposal:

S.B. 2 - Opposed

- (1) Would be nearly impossible to enforce as it would require vessels be measured while fishing, generally hard to do under most water conditions.
- (2) would also negate 16.05.520 which establishes a vessel identification number which is required to be displayed, thus making all effected vessels unidentifiable from any distance.
 - (a) Would negate 5 AAC 06.342, 09.342, 15.342, 21.342, 39.120(3)(c),(3), 39.120(4)(c); 39.120(5), 39.270(c), 39.381(b) and 39.374.
 - (b) Would make those sections in (a) above unenforceable as these sections all require a number emanating from a vessel license.

S.B. 5 - Neutral (with amendment)

Proposed Amendment:

Require all nonresidents to be guided or
in the company of 2nd degree kindred.

As written the bill will invite an increase in residency falsification on hunting licenses. These are not usually identified until after the season is over and consequently the people are already out of state.

Senator Bettye Fahrenkamp
Chairman, Senate Resources Committee

January 27, 1983

Assigning nonresidents to guides will increase control of the non-residents. We would propose that permits be issued to the guides in the areas where the Board determines a population of animals warrants allowing nonresidents to hunt.

Nonresident aliens are already required to use a guide and since that requirement became effective enforcement problems with nonresident aliens has declined sharply.

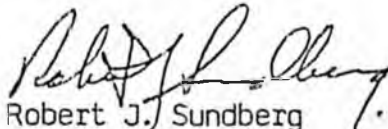
S.B. 12 - Neutral

This bill may prove to be detrimental in the future to some of the smaller fishermen.

S.B. 51 - Neutral

No Comment.

Sincerely,


Robert J. Sundberg
Commissioner

MAY 2, 1983

STATE OF ALASKA
PRELIMINARY STATEMENT OF FISCAL IMPACT

Bill No: SB 12 Date on Bill: _____
 Title: relating to the maximum length of salmon seine vessels; providing effective date
 Sponsor: By Ziegler by request
 Requestor: Senate 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:

	FY 83	FY 84	FY 85	FY 86
Revenue	0	0	0	0

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

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. Robert J. Stickles *RJS* Phone: 269-5532
 Division: Fish & Wildlife Protection Date: 3/4/83

Approved by Commissioner: *[Signature]* Date: 3/10/83
 Department: Public Safety

5. Distribution:

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

2/15/83

STATE OF ALASKA
THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

Seine Length

POUCH Y STATE CAPITOL
JUNEAU ALASKA 99811
907-465-1800

MEMORANDUM

April 7, 1980

SUBJECT: Salmon seine vessels
CSHB 1

TO: Representative Charles H. Parr

FROM: Kenneth E. Vassar
Legislative Counsel *KEV*

You have asked for an opinion relating to any constitutional questions which may arise under CSHB 1 (relating to the maximum length of salmon seine vessels). This bill amends the existing statute which places a maximum length on salmon seine vessels in the state of 58 feet overall length and 50 feet official Coast Guard register length. The amendment in the bill would provide that this limitation does not apply to salmon seine vessels in southeastern Alaska.

Since this bill, on its face, treats one area of the state differently from other areas, it raises questions relating to Article II, sec. 19, Constitution of the State of Alaska. That constitutional section provides in part:

The legislature shall pass no local or special act if a general act can be made applicable. Whether a general act can be made applicable shall be subject to judicial determination.

Essentially, an act challenged as local or special is analyzed in the same manner as an act challenged as violative of equal protection. Abrams v. State, 534 P.2d 91 (1975); State v. Lewis, 559 P.2d 630 (1977). However, there is one significant difference between the local legislation analysis and the equal protection analysis. Under the equal protection analysis, the act must fairly and substantially relate to a legitimate state interest or concern. Under the local legislation analysis, the interest or concern is, at least in part, determined to be "legitimate" only if it is

statewide in nature. That is, even though the act may treat certain areas of the state differently from other areas, it is not local or special if it fairly and substantially relates to a matter of statewide concern or interest. Thus, in Abrams, the court found the incorporation of the Eagle River-Chugiak Borough to be a matter which is not of statewide interest or concern and found the legislation authorizing the formation of that borough to be local legislation. On the other hand, in Lewis, the court found the capital move to be a matter of statewide concern, and legislation which fairly and substantially related to the capital move was not found to be local or special legislation.

The first question in this bill, then, is whether the length of salmon seine vessels in southeastern Alaska is a matter of statewide concern or interest. I think it probably is not. Perhaps it is conceivable that this bill is somehow related to boating safety, which would be a matter of statewide concern; however, nothing in the bill indicates this is the concern being addressed or, if it is, how it is fairly and substantially related to that concern.

Assuming that the length of salmon seine vessels in southeastern Alaska is not a matter of statewide concern, the next question is whether a general act can be made applicable to the problem being addressed. There is in existence in Alaska a board of fisheries with powers to regulate the means used for harvesting fish in the waters of the state. If there were no maximum length of salmon seine vessels in the statutes, the board of fisheries would probably have the authority to fix a maximum length under the powers it currently possesses; however, to resolve any doubt, a general act could be passed expressly giving the board that authority. If considerations of safety necessitate a maximum length or lack of a maximum length, the general act authorizing the board to establish maximum lengths could list those considerations as criteria for the board to follow. Alternatively, a new statute prescribing maximum lengths of vessels in various areas of the state might be fashioned using the same kinds of criteria, or other criteria which establish a fair and substantial relationship between the legislation and a legitimate state interest could be used.

In summary, I believe the bill in its present form poses significant problems under the local legislation prohibition in the state Constitution.

KEV:ljb

1143

1216 — ★



1244

REPEAL 58' LIMIT
3 YEARS
5 YEARS — TASKI
[REPERCUSSIONS]



'REASONABLE BASIS' FOR GEOGR.
DISCRIMINATION.

BOARD F DECISION BETTER

STATUTE IS TOO RIGID →

58' EXCEPT AS PROVIDED FOR
BY BOARD OF T+G REG'S

[PUBLIC INTEREST]
[PUBLIC NEEDS]
REASONABLE BASIS FOR DISCRIM.

~~SAFETY~~ CRITERIA

- ① SAFETY
- ② PROTECTION OF RESOURCE

MAKE SURE IN RECORD

THE INTENT — PURPOSE —

STAB REASON. BASIS.

EXCEPTION IS THE WAY TO GO.

718400

January 14, 1982

John Oaksmith
716 Totem Way
Ketchikan, Alaska 99901

The Honorable Eric G. Sutcliffe
Alaska State House of Representatives
Pouch "V", State Capitol Building
Juneau, Alaska 99811

RE: Alaska 58' Seine Vessel Size Limit

Dear Eric:

As you sort through the vast amount of bills I am sure that you will have, I'm positive that you will run across some sort of bill that will ask for the repeal of the 58' size that Alaska seiners have at the present time.

The original law was passed in the thirtys so the California, Oregon and Washington state fleers could not participate in the Alaskan seine fishery.

Some of my thoughts on why the law should be changed are:

1. We now have Limited Entry to "protect" the Alaskan fishermen from the outside fleet.
2. Some of the 58' Limit boats coming out of the yards in recent times are becoming alarmingly more topheavy. The owners are putting more equipment topsides because they don't have the room for the gear necessary for mutlliple fisheries.

A vessel here in SE, the "JOHNNIE A", is a 58' (49.9' on the keel) combination vessel that is as wide as a 108' Marco boat. There is a large Jacobsen Brothers crane instead of a boom and it is used for crabbing as well as seining. The boat cost was around \$1.3 million and looks like "4 pounds of ___ in a 3 pound bag". Icing down in the winter could be a real problem in the winter time, not necessarily for the present owner, but to a skipper or if he sold the vessel.


3. Most boats in the fisheries in Alaska are having to be used as multi-purpose vessels with inflation and interest costs on the rise. The seiners are starting to use their vessels for dragging and crabbing more and more. Being from Dutch Harbor/Unalaska, I don't have to tell you how unstable most "converted" vessels are in the crab industry and the same is basically true for the drag fishing industry. The 58' Limit boats are still being designed for the inside waters and for use during the summer months. If a larger

size were to be used (or could be used), a seiner could safely fish his vessel on the outside during the winter months and therefore, supplement his fishing income as well as develop a small size offshore bottom fishery.

I really believe that down the line, some lives could be saved by a change in this law. The main arguments that I hear at the present time against the repeal is from the present owners of 58' Limit boats. They just don't want it to happen. Sometimes, I feel as if I can see some of their points, but it just comes down to the fact that "change is bad". I don't believe that is true. The entire fishing community as a whole would benefit from a change to a larger size as well as the development of a small bottom fishery. The Fish and Game Advisory Board has stated for the past six or seven years that it is up to the Legislature to change the law every time the resolution has been brought before them. A size I feel that would be fair and still large enough to meet the requirements would be 70' to 75' in length. This would also leave more room below decks for refrigeration equipment and properly insulated holds.

Should you have any questions regarding this, please let me know. I hope you are successful in the coming session in accomplishing what you want to do. It was very enjoyable to see you and Kathy when I was in Juneau last week. If I can be of any personal help to you, please don't hesitate to let me know. Thanks.

Best regards,



John Oaksmith

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

JAY S. HAMMOND, GOVERNOR

P.O. BOX 3-2000
JUNEAU, ALASKA 99802
PHONE: (907) 465-4210

March 11, 1982

Mr. Pat Lawler, Assistant to
The Honorable Eric Sutcliffe
House Resources Committee
Mail Stop 3100

Dear Pat:

If the Attorney General's opinion is favorable and the committee decides to adopt an amendment to HB-400 that would lift the seine boat length restriction for Southeastern Alaska only, then I would suggest the following language.

*Section 1. AS 16.05.835 is amended to read:

Sec. 16.05.835. MAXIMUM LENGTH OF SALMON SEINE VESSELS. No salmon seine vessel may be longer than [50 FEET, OFFICIAL COAST GUARD REGISTER LENGTH, AND] 58 feet overall length except

- (1) vessels that have taken [FISHED FOR] salmon with seines in waters of the state before January 1, 1962, as 50-foot, official Coast Guard register length vessels; and
- (2) vessels that take salmon with seines in Southeastern waters of the state north of the latitude of Dixon Entrance and east of the longitude of Cape Fairweather.

*Section 2. Effective date.

I recommend the deletion of the reference to the 50-foot length in the leadin because it is confusing and provides a possible loop-hole relative to the 58-foot requirement. I believe the intent of the current statute is that no seiner can be longer than 58-feet, otherwise there would be no need for the January 1, 1962 grandfather clause. The amendment would clarify that intent. Register length is measured from the rudder post to the stem head and does not include additions to the stern or bow that are not permanent such as welded or glassed in place.

"Take" and "taken" should be substituted for "fished" as the term is defined in AS 16.05.940(18), while the verb "fish" is not

Paragraft. (2) accurately describes the Southeastern Alaska salmon management area.

If you have any questions, please call me.

Sincerely,

Robert C. Clasby, Regulation Specialist
Division of Commercial Fisheries

Handwritten notes and signatures:
Dixon Entrance
Cape Fairweather
Sutcliffe
Clasby
3/11/82
Pat Lawler
Eric Sutcliffe
J.S. Hammond

February 19, 1982

Honorable Eric Sutcliffe
Chairman, House Resources Committee
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Eric:

The members of our association are very concerned about House Bill 400, the bill repealing the limit on 58 foot seiners.

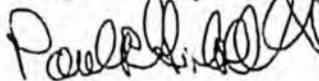
The points we would like to make are:

1. The fishery fleet presently has a tendency to be overcapitalized, repealing the 58 foot limit would only amplify that. Instead of income going to the communities, a lot more would be diverted to lending institutions for interest and principal payments;
2. All the salmon can be harvested by the 58 foot size and small^{er} boats;
3. The only other viable second^{ary} fisheries are crab - overcrowded already; shrimp - resource depleted; halibut - tremendously overcrowded;
4. Fear of the king crab fleet buying permits en masse and fishing their boats as catcher processors;
5. The boat harbors in the state are primarily designed for 58 foot and smaller vessels and are already overcrowded;
6. The only area pushing for repeal is Southeast Alaska where less than 50% of the seiners are privately owned, whereas virtually all seiners in the rest of the state are privately owned,
7. A large value loss per vessel will be realized on 58 foot boats (\$100,000-\$200,000 est.).

We would like to see the 58 foot limit left on Title 16, and no authority be given the Board to repeal the law on an area by area basis which would in effect give the whole state a defacto repeal of the 58 foot limit.

We are unanimously and adamantly opposed to the repeal of the 58 foot limit.

Respectfully,



Paul Gronhcldt
President

Peninsula Marketing Association

HUBERT G. McCALLUM
BOX 2, SAND POINT, ALASKA 99661

February 22, 1982

Representative Eric Sutcliffe
House of Representatives
Pouch V (MS 3100)
Juneau, Alaska 99811

Dear Mr. Sutcliffe:

It has been brought to my attention that a certain group of fishermen in Alaska would like to have the 58 foot salmon purse seine vessel limit repealed.

The retention of the 58' limit is of crucial economic importance to fishermen in the Sand Point Community for the following reasons:

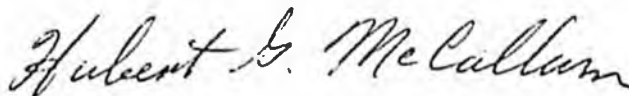
First, the 58' limit seiner law was enacted in the interest of conservation. This interest remains valid today.

Second, our present investments are in 58' limit seiners. We would be forced by competition to invest in a larger vessel, which, in turn, would not be compatible with the present purse seine length of 250 fathoms, thus creating a need for a larger and more expensive purse seine.

The Sand Point Advisory Committee voted unanimously to retain the 50 foot keel, or registered length; or 58 foot over-all length.

We would greatly appreciate your assistance in presenting our point of view on this matter.

Respectfully submitted,



Hubert G. McCallum, Member
Sand Point ADF&G Advisory Committee

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14

SENATE RESOURCES COMMITTEE
LEGISLATION CHECKLIST

IDENTIFICATION:

BILL NUMBER: SB 14

BILL NAME: Establishing state forests.

SPONSOR(S): Ziegler

RELATED BILLS PENDING:

DATE INTRODUCED: 1-18-83

REFERRALS: Resources
Finance

INITIAL RESEARCH:

BILL SUMMARY COMPLETED:

SUMMARY BY LEGAL DIVISION:

SPONSOR CONTACTED FOR
BACKUP MATERIALS:

DEPT. OF LAW SUMMARY:

AGENCY RESPONSE:

FISCAL NOTE:

OTHER INTERESTED SENATORS OR
REPS. NOTIFIED:

*SB 108
passed legislature*

BACKGROUND RESEARCH:

SIMILAR BILLS INTRODUCED IN PREVIOUS LEGISLATURES:

RESPONSES FROM INTERESTED PERSONS/GROUPS:

OTHER STATE OR FEDERAL PRECEDENTS, REGULATIONS, LAWS:

HEARING PREPARATION:

CHAIRMAN BRIEFED:

DATE AND PLACE SET:

STAFF MEMO TO COMMITTEE:

TELECONFERENCE:

BACKGROUND MATERIAL DISTRIBUTED:

PSA/PRESS RELEASE:

LIST OF WITNESSES:

SUGGESTED AMENDMENTS/COMMITTEE
SUBSTITUTES DRAFTED:

~~contact~~ notify: Jim Wilson 586-3420 per 2-3-83 call expressing
interest (privately employed)