ALASKA LEGISLATURE COMMITTEE FILES 1981-1982 8672

1909 SRES SB 608

1909

22. Reynolds Creek Hydroelectric Project - Funding for the initial environmental studies associated with this project could be deferred to a later year since the Black Bear Lake Hydroelectric Project will be capable of addressing the near to mid term needs of the communities on Prince of Wales Island.

23. Emergency Maintenance Fund - This fund will be capitalized out of program receipts received from revenues from the sale of power. Since consumers will be paying in their rates the revenues derived to capitalize this fund, and since it is not known specifically when the emergency maintenance fund may be drawn on, it is requested that the $500,000 for this appropriation be appropriated with interest earnings so that the value of the revenues collected from consumers is not diminished overtime.

24. Renewal and Replacement Fund - The $750,000 requested in FY 83 would be again program receipts derived from revenues from the sale of power. The appropriation of these program receipts should be with interest earnings so that the value of the revenues collected from consumers will not be diminished from the period of time they are collected until they are actually utilized for renewal and replacement of components of the project.

If you have any questions or would like any additional information, please call upon me.

Sincerely,

Eric P. Yould

Eric P. Yould
Executive Director

Attachment: as stated

cc: Chuck Conway
Ron Lehr
Jerry Reinwand
Commissioner Mueller

ALASKA STATE LEGISLATURE
HOUSE OF REPRESENTATIVES
RESEARCH AGENCY

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

(2)

February 18, 1982

MEMORANDUM

TO: Representative Brian Rogers
Attn: Nancy Lord

FROM: Jack Kreinheder JK
Research Staff

RE: Current Electric Power Generation Costs in Alaska Communities
Research Request 82-13 (additional information)

This memorandum contains the information you requested on current (or recent) power costs in areas to be served by planned hydro projects. In my memorandum to you dated February 9, estimates of the wholesale or busbar cost of power from various hydro projects were made. To make a reasonable comparison of these power cost estimates with current costs, it is necessary to look at the comparable cost of power generation for each utility from their current generation facilities, rather than retail or consumer power rates. The attached table summarizes these current power generation cost estimates for the major communities to be served by each power project.

The estimated power costs range from 1.6 cents per kilowatt hour (KWH) for the Chugach Electric Association, serving Anchorage and surrounding communities, to 19.4 cents per KWH for the Tlingit-Haida Regional Electric Authority, which serves Klawock and other villages. The average generation cost was about 6.9 cents per KWH.

These estimates are approximate figures because of limitations in the cost information we could obtain, as explained below. Time did not allow the inclusion of all utilities; for communities served by more than one utility, generation costs were calculated for the largest utility. The years used as a basis for these estimates range from 1979 to 1981, depending on the data available for each utility.

It is also important to consider the effect of inflation when comparing these current power cost estimates with the hydro cost estimates in the last memo, because the hydro estimates included the impact of inflation on operation and maintenance expenses and the repayment of State funds invested in the hydro facilities. Therefore, the current or recent power generation costs in the attached table have been inflated by

7 percent per year for the years 1986, 1990, 1995, 2000, 2010, and 2015, which are the years used in the previous memo. The 7 percent inflation adjustment matches the assumed rate of inflation used in projecting future operation and maintenance expenses in that memo.

It should be emphasized that the future cost figures in the attached table are not projections of the actual cost of power in these years, but are just current costs adjusted for inflation for the purpose of comparison. Actual power costs in future years will depend on load growth, fuel cost increases, and other factors.

The power generation cost estimates in the table include the cost of fuel, operation and maintenance of generating facilities, and debt service for utility facilities. It was not possible to separate the debt service for generating facilities from that for distribution or other facilities. However, depreciation was not included as a cost in an effort to balance this overstatement of power generation costs. The cost of power distribution, line maintenance, administrative expenses, and so on were not included because these costs would not be affected by the conversion to hydro power from present generating facilities. It should be noted that a small portion of the current generating costs would continue even under full conversion to hydro, because of the need to maintain backup generating capability in the event of a line failure or other problem with the hydro facility.

This memo completes our work on this research request. If you have any questions or would like additional information, please give us a call.

Prepared by
House Research Agency
February 18, 1982

CURRENT AND INFLATION-ADJUSTED POWER GENERATION COSTS IN COMMUNITIES TO BE SERVED BY HYDRO PROJECTS PLANNED OR UNDER CONSTRUCTION

			POWER GENERATION COST (Cents per KWH)						
Community	Hydro Project	Utility	Current	1986	1990	1995	2000	2010	2015
Anchorage	Susitna	Chugach Electric Association	1.6 (1980)	2.4	3.1	4.3	6.0	11.8	16.5
Fairbanks	Susitna	Golden Valley Electric Association	5.8 (1980)	8.7	11.4	16.0	22.4	44.1	61.7
Kenai Peninsula	Bradley Lake	Homer Electric Association	1.7 (1981)[1]	2.4	3.1	4.3	6.0	11.8	16.5
Ketchikan	Swan Lake	Ketchikan Public Utility	3.2 (1980)	4.8	6.3	8.8	12.3	24.2	33.9
Klawock	Black Bear Lake	Tlingit-Haida Regional Electric Authority	19.4 (1980)	29.1	38.1	53.3	74.6	147.0	205.8
Kodiak	Terror Lake	Kodiak Electric Association	7.4 (1979)	11.9	15.6	21.8	30.5	60.1	84.1
Petersburg	Tyee Lake	Petersburg Public Utility	5.7 (1981)		10.5	14.7	20.6	40.6	56.8
Valdez	Solomon Gulch	Copper Valley Electric Association	7.3 (1979)	11.8	15.5	21.7	30.4	60.0	84.0
Wrangell	Tyee Lake	Wrangell Public Utility	9.9 (1981)	13.9	18.2	25.5	35.7	70.3	98.4

SOURCE: Rural Electrification Association forms 7A and 7E, and utility estimates.

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[1] The Homer Electric Association buys over 99 percent of its power from Chugach Electric. Therefore, the cost shown is the wholesale cost of power purchased from Chugach, rather than the cost of power generation for the Homer Electric Association.

ALASKA POWER AUTHORITY

334 WEST 5th AVENUE - ANCHORAGE, ALASKA 99501

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

March 5, 1982

SB406

The Honorable M. E. Dankworth
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Dankworth:

You have requested information on funds which have been appropriated to the Power Authority in recent years which may be available for reappropriation. I understand that this is necessary due to the fact that the state's revenue projections for FY 83 have been considerably reduced. In addition preliminary indications from the Attorney General's office on the law suit of the Trustees for Alaska are that interest earnings, which were appropriated with funds appropriated in FY 82 for the Power Development Fund, may not have been properly appropriated and may not accrue to the projects for which they are appropriated. The following is a listing of those appropriations which we feel are available for reappropriation for other projects and purposes.

1. Angoon Title - Original appropriation was for $250,000 in Ch. 120 SLA 1980. This project does not appear that it will proceed in any form and the total amount of the appropriation could be used for other purposes.

2. Akutan - Ch. 54 SLA 1980 appropriated $1.1 million for a small hydroelectric project at Akutan. $126,000 was loaned to the City of Akutan for the purchase of a turbine for the project. The balance of this appropriation or $974,000 could be used for other purposes. I recommend that the appropriated amount be reduced to $126,000, since the project will not proceed to construction.

3. Bethel - $2 million was appropriated in Ch. 54 SLA 1980. The purpose of the appropriation was for a loan to the City of Bethel to purchase the Bethel Utilities Corporation. $2 million is insufficient to purchase the utility and the effective interest rate for loans from the power project loan fund is unacceptable to the City of Bethel. The City of Bethel does not appear to be interested in pursuing an application for the loan of these funds for this purpose. These funds could be made available for reappropriation for other purposes.

4. Green Lake - Ch. 90 SLA 1981 appropriated $60 million for the Green Lake Project. Ch. 92 SLA 981 repealed and reenacted

Section 1 of Ch. 90 SLA 1981 to appropriate $50 million for Green Lake in FY 82 and $10 million in FY 83. If the City and Borough of Sitka determines that they want to participate in the Energy Program for Alaska, the Power Authority would have to acquire the Green Lake project with the appropriated funds. It is not clear as yet what the definitive cost would be for acquisition since the resolution of construction claims, and the method of defeasance of bonds issued by the City of Sitka to finance the construction of the project have not as yet been determined. If funds were to be made available for reappropriation I would advise that the FY 83 appropriation contained in Ch. 92 SLA 1981 be reduced from $10 million to $2 million. Remaining funds would be sufficient to acquire the project with no impact to Sitka.

5. Solomon Gulch - $68 million was appropriated in Ch. 90 SLA 1981 for the acquisition of this project. Ch. 92 SLA 1981 deferred $10 million of the $68 million appropriation to FY 83. The cost of acquisition of this project should be more definitively defined within the next 3 weeks. At that time it will be clearly established what the necessary costs will be to pay off certain loans from the Federal Financing Bank which had been made to the Copper Valley Electric Association and what it will cost to defease certain low interest loans from the Rural Electrification Administration. In addition, there are approximately $6 million in outstanding construction contract claims which will have to be resolved. It appears that it is possible to designate up to $15 million of the $68 million which had been appropriated for the project for reappropriation for other projects. I would suggest that the FY 83 appropriation contained in Ch. 92 SLA 1981 be reduced to zero and the FY 82 appropriation be reduced to $53 million.

6. Lake Elva - Ch. 90 SLA 1981, Sec. 11 appropriated $4.5 million for the Lake Elva project. The Power Authority is not going to proceed with this project and is still investigating the Lake Tazimina project and other alternatives for this region. Some funds have been expended or obligated from the original appropriation, therefore I recommend that the appropriated amount be reduced to $50,000. The funds should be reappropriated to the Bristol Bay project as funds will be needed there.

7. Petersburg - Ch. 90 SLA 1981, Sec. 20 appropriated $1.5 million for a loan to the City of Petersburg for local transmission and distribution lines. It does not appear that the City of Petersburg is prepared to borrow the funds for the specified purposes at the current interest rate which is available for loans from the power project loan fund. It is possible that these funds are available for reappropriation

for other projects including the Lake Tyee Hyroelectric Project.

8. Wrangell - Ch. 90 SLA 1981, Sec. 21 appropriated $1.5 million to the City of Wrangell for the same purposes as described in number 7 above. For the same reasons it is possible that the funds would be available for reappropriation for other projects, including the Lake Tyee project.

9. Akutan - Ch. 90 SLA 1981, Sec. 34 appropriated $127,000 for a loan to the City of Akutan for electrification. As indicated in item 2 above, the loan had been made prior to the appropriation referenced in this section from a prior appropriation. Therefore, the funds appropriated in section 34 of this act could be reappropriated for other purposes.

10. Ouzinkie - Ch. 90 SLA 1981, Sec. 46 appropriated $700,000 for the Ouzinkie Waste Heat Project. This appropriation could be reduced to the amount of $250,000 since it is possible to complete the project for that cost.

You also asked me to specify and justify for you what would be the minimum appropriations which may be necessary for FY 83 for the power development program. I was also asked this question by Senator Fahrenkamp at a recent Senate Resources Committee hearing on SB-608. Attached is my response to Senator Fahrenkamp.

If you have any questions or would like additional information, please call upon me.

Sincerely,

Eric P. Yould
Executive Director

Attachment: as stated

cc: Chuck Conway
Ron Lehr
Jerry Reinwand
Commissioner Mueller

Resource Development Council
for Alaska, Inc.
444 West 7th Avenue, Anchorage, Alaska 99501
Box 516, Anchorage, Alaska 99510 - 907/278-9615

RESOLUTION ON ALASKA'S HYDROELECTRIC DEVELOPMENT

December 1981

WHEREAS in 1981 the Alaska Legislature recognized the seriousness of the energy needs in the state, and

WHEREAS after seven years and millions of dollars spent studying energy needs, not one dam had been completed, no windmills, no solar systems, nor any geothermal or tidal systems were in operation with the exception of some isolated government research projects, and individual alternative energy systems, and

WHEREAS the Alaska Legislature acknowledged the lack of an energy plan or any direction from the state administration and passed SB 25 and SB 26 relating to hydroelectric projects, and

WHEREAS the Governor permitted the bills to become law, and

WHEREAS hydroelectric power could be a long-term source of revenue to the state as other resources are depleted, and

WHEREAS SB 25 and SB 26 constitute a five year energy plan disgned by the legislature to assure the majority of Alaskans some 50-100 years of clean, safe and reasonably priced energy to replace our non-renewable energy resource which flows from Alaska at the rate of 1.5 million barrels a day, and

WHEREAS SB 25 and SB 26 also included over $50 million appropriated for the purpose of doing reconnaissance and feasibility studies on other possible sources of energy as well as a wide spectrum of grants for energy sources other than hydroelectric,

THEREFORE BE IT RESOLVED that the Resource Development Council strongly supports the legislation passed in 1981.

.....continued

BE IT FURTHER RESOLVED that the Resource Development Council supports the development of economically viable hydroelectric projects funded with state revenues, and

BE IT FURTHER RESOLVED that the Resource Development Council supports rates for hydroelectricity that reflect the operation and maintanence costs of the project supplying that power, and

BE IT FURTHER RESOLVED that the Resource Development Council will actively support continuation of the legislative intent to provide needed energy at reasonable costs in Alaska.

#

From Dept. of Labor

TABLE I.1

Official Alaska Population, 1980 and 1981,
By Census Area

Census Area	April 1, 1980 Population	July 1, 1981 Population
STATE OF ALASKA	401,851	422,187
Aleutian Islands	7,768	8,624
Anchorage, Municipality of	174,431	180,740
Bethel	10,999	10,864
Bristol Bay Borough	1,094	1,182
Dillingham	4,616	4,534
Fairbanks-North Star Borough	53,983	58,313
Haines Borough	1,680	1,712
Juneau, City and Borough of	19,528	21,080
Kenai Peninsula Borough	25,282	26,520
Ketchikan Gateway Borough	11,316	11,373
Kobuk	4,831	4,960
Kodiak Island Borough	9,939	9,728
Matanuska-Susitna Borough	17,816	19,123
Nome	6,537	7,565
North Slope Borough*	4,199	7,098
Prince of Wales Island - Outer Ketchikan	3,822	4,041
Sitka, City and Borough of	7,803	7,927
Skagway - Yakutat - Angoon	3,478	3,311
Southeast Fairbanks	5,676	5,803
Valdez- Cordova	8,348	8,846
Wade Hampton	4,665	4,726
Wrangell - Petersburg	6,167	6,541
Yukon - Koyukuk	7,873	7,576

* The 1981 population estimate for the North Slope Borough is based on censuses conducted by each of the cities inside the Borough except Barrow, along with a Borough-wide census of all villages and oilrelated work sites.

A degree of caution is needed in comparing the 1980 and 1981 population data given for the North Slope Borough. In 1980, the U.S. Bureau of the Census treated the Prudhoe Bay area as a unique site and departed from the definition of "residency" used for Alaska's population determinations. By doing this, the oil workers who could have been counted as census residents of the Prudhoe Bay area (based upon the amount of time spent at Prudhoe Bay) were "allocated" to a communited stated to be an oil worker's "usual place of residence". The difference between the Census Bureau's 1980 figure and the State's 1981 figure (which is based on a complete census of all oil-related work sites) is not based on a fundamental difference in residency definitions used by the Census Bureau and the State. The State's census program is recognized by the U.S. Census Bureau as being in accordance with its own definitions and concepts. Further, the Census Bureau accepts the state-certified census results in the annual population determinations that are used for federal revenue sharing. The difference between the 1980 and 1981 figures is based upon the procedural policy implemented by the U.S. Census Bureau that in effect did not treat Prudhoe Bay as a place in which people "resided".

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES AND BOROUGHS,
1980 and 1981, BY CENSUS AREA

	April 1, 1980 Population	July 1, 1981 Population
STATE OF ALASKA	401,851	422,187
Aleutian Islands Census Area	7,768	8,624
Akutan	169	189
King Cove	460	513
Saint Paul	551	591*
Sand Point	625	697
Unalaska	1,322	1,944**
Total Incorporated Places	3,127	3,934
Remainder	4,641	4,690
Anchorage, Municipality of	174,431	180,740
Total Incorporated Places	174,431	180,740
Remainder	0	0
Bethel Census Area	10,999	10,864
Akiachak	438	435
Akiak	198	197
Akolmiut	641	695*
Aniak	341	338
Atmautluak	219	226*
Bethel	3,576	3,549
Chefornak	230	230*
Chuathbaluk	105	104
Eek	228	226
Goodnews Bay	168	167
Kwethluk	454	451
Mekoryuk	160	176*
Napakiak	262	283
Napaskiak	244	24[illegible]
Newtok	131	175*
Nightmute	119	135*
Platinum	55	55
Quinhagak	412	409
Toksook Bay	333	33[illegible]
Tuluksak	236	23[illegible]
Tununak	298	301*
Lower Kalskag	246	244
Upper Kalskag	129	128
Total Incorporated Places	9,223	9,331
Remainder	1,776	1,533

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES AND BOROUGHS,
1980 and 1981, BY CENSUS AREA
(continued)

	April 1, 1980 Population	July 1, 1981 Population
Bristol Bay Borough	1,094	1,182
Total Incorporated Places	1,094	1,182
Remainder	0	0
Dillingham Census Area	4,616	4,534
Aleknagik	154	152
Clark's Point	79	78
Dillingham	1,563	1,670*
Ekwok	77	76
Manokotak	294	290
Newhalen	87	105*
New Stuyahok	331	327
Nondalton	173	171
Port Heiden	92	91
Togiak	470	511*
Total Incorporated Places	3,320	3,501
Remainder	1,296	1,033
Fairbanks-North Star Borough	53,983[1/]	58,313[1/]
Fairbanks	22,645	25,568**
North Pole	724	928*
Total Inc. Places (within borough)	23,369	26,496
Remainder	30,614	31,817
Haines Borough	1,680	1,712
Haines	993	1,017
Total Inc. Places (within borough)	993	1,017
Remainder	687	695
Juneau, City and Borough of	19,528	21,080
Juneau, City and Borough of	19,528	21,080
Total Inc. Places (within borough)	19,528	21,080
Remainder	0	0

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES AND BOROUGHS,
1980 and 1981, BY CENSUS AREA
(continued)

	April 1, 1980 Population	July 1, 1981 Population
Kenai Peninsula Borough	25,282	26,520
Homer	2,209	2,588
Kachemak	403	425
Kenai	4,324	4,558
Seldovia	479	505
Seward	1,843	1,943
Soldotna	2,320	2,445
Total Inc. Places (within borough)	11,578	12,464
Remainder	13,704	14,056
Ketchikan Gateway Borough	11,316	11,373
Ketchikan	7,198	7,200
Saxman	273	276
Total Inc. Places (within borough)	7,471	7,476
Remainder	3,845	3,897
Kobuk Census Area	4,831	4,960
Ambler	192	198
Buckland	177	211*
Deering	150	155
Kiana	345	356
Kivalina	241	249
Kobuk	62	64
Kotzebue	2,054	2,250
Noorvik	492	508
Selawik	361	372
Shungnak	202	208
Total Incorporated Places	4,276	4,471
Remainder	555	389
Kodiak Island Borough	9,939[2/]	9,728[2/]
Akhiok	105	103
Kodiak	4,756	4,678
Larsen Bay	168	167*
Old Harbor	340	334
Ouzinkie	173	170
Port Lions	215	218
Total Inc. Places (within borough)	5,757	5,670
Remainder	4,182	4,065

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES, AND BOROUGHS,
1980 and 1981, BY CENSUS AREA
(contained)

	April 1, 1980 Population	July 1, 1981 Population
Matanuska-Susitna Borough	17,816	19,123
Houston	370	583
Palmer	2,141	2,275
Wasilla	1,559	1,928
Total Inc. Places (within borough)	4,070	4,786
Remainder	13,746	14,337
Nome Census Area	6,537	7,565
Brevig Mission	138	149
Diomede	139	149*
Elim	211	228
Gambell	445	480
Golovin	87	94
Koyuk	188	203
Nome	2,301	3,039**3/
St. Michael	239	258
Savoonga	491	530
Shaktoolik	164	177
Shishmaref	394	425
Stebbins	331	357
Teller	212	229*
Unalakleet	623	672
Wales	133	143
White Mountain	125	135
Total Inc. Places	6,221	7,268
Remainder	316	297
North Slope Borough 4/	4,199	7,098
Anaktuvak Pass	203	235*
Barrow	2,207	2,539
Kaktovik	165	201*
Nuiqsut	208	270*
Point Hope	464	531*
Wainwright	405	410*
Total Inc. Places (within borough)	3,652	4,186
Remainder	547	2,912*

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES, AND BOROUGHS,
1980 and 1981, BY CENSUS AREA

	April 1, 1980 Population	July 1, 1981 Population
Prince of Wales-Outer Ketchikan Census Area	3,822	4,041
Craig	527	560
Hydaburg	298	356*
Kasaan	25	64*
Klawock	318	389*
Total Incorporated Places	1,168	1,369
Remainder	2,654	2,672
Sitka, City and Borough of	7,803	7,927
Total Incorporated Places	7,803	7,927
Remainder	0	0
Skagway-Yakutat-Angoon Census Area	3,478	3,311
Angoon	465	445
Hoonah	680	799*
Pelican	180	172
Skagway	768	819
Tenakee Springs	138	132
Yakutat	449	430
Total Incorporated Places	2,680	2,797
Remainder	798	514
Southeast Fairbanks Census Area	5,676	5,803
Delta Junction	945	945
Eagle	110	186*
Total Incorporated Places	1,055	1,131
Remainder	4,621	4,672
Valdez-Cordova Census Area	8,348	8,846
Cordova	1,879	2,223**
Valdez	3,079	3,279
Whittier	198	211
Total Incorporated Places	5,156	5,713
Remainder	3,192	3,133

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES, AND BOROUGHS,
1980 and 1981, BY CENSUS AREA
(continued)

	April 1, 1980 Population	July 1, 1981 Population
Wade Hampton Census Area	4,665	4,726
Alakanuk	522	534*
Chevak	466	491*
Emmonak	567	568*
Fortuna Ledge	262	243*
Hooper Bay	627	624
Kotlik	293	339*
Mountain Village	583	580
Pilot Station	325	323
Russian Mission	169	168
St. Mary's	382	432*
Scammon Bay	250	249
Sheldon Point	103	103
Total Incorporated Places	4,549	4,654
Remainder	116	72
Wrangell-Petersburg Census Area	6,167	6,541
Kake	555	583
Kupreanof	47	49
Petersburg	2,821	3,001**
Port Alexander	86	90
Wrangell	2,184	2,345**
Total Incorporated Places	5,693	6,068
Remainder	474	473
Yukon-Koyukuk Census Area	7,873	7,576
Allakaket	163	158
Anderson	517	500
Anvik	114	110
Fort Yukon	619	599
Galena	765	805*
Grayling	209	202
Holy Cross	241	233
Hughes	73	71
Huslia	188	230*
Kaltag	247	239
Koyukuk	98	95
McGrath	355	343
Nenana	470	592
Nikolai	91	88
Nulato	350	338

TABLE I.2

OFFICIAL ALASKA POPULATION,
CITIES, AND BOROUGHS,
1980 and 1981, BY CENSUS AREA
(continued)

	April 1, 1980 Population	July 1, 1981 Population
Yukon-Koyukuk Census Area (cont.)		
Ruby	197	190
Shageluk	131	127
Tanana	388	463*
Total Incorporated Places	5,216	5,383
Remainder	2,657	2,193

FOOTNOTES

1/ Although Eielson Air Force Base is located within the boundaries of the Fairbanks-North Star Borough, it has not been officially annexed to the Borough. Its resident population is, however, included in the total Borough population.

2/ Kodiak Island Coast Guard Station is located within the boundaries of the Kodiak Island Borough but it has never been annexed to the Borough. Its resident population is, however, included in the total Borough population.

3/ The 1981 State-assisted census of Nome was based on municipal boundaries as redefined after the 1980 federal census.

4/ The 1981 population estimate for the North Slope Borough is based on censuses conducted by each of the cities inside the Borough except Barrow, along with a Borough-wide census of all villages and oil-related work sites.

A degree of caution is needed in comparing the 1980 and 1981 population data given for the North Slope Borough. In 1980, the U.S. Bureau of the Census treated the Prudhoe Bay area as a unique site and departed from the definition of "residency" used for Alaska's population determinations. By doing this, the oil workers who could have been counted as census residents of the Prudhoe Bay area (based upon the amount of time spent at Prudhoe Bay) were "allocated" to a communited stated to be an oil worker's "usual place of residence". The differenc between the Census Bureau's 1980 figure and the State's 1981 figure (which is based on a complete census of all oil-related work sites) is not based on a fundamental difference in residency definitions used by the Census Bureau and the State. The State's census program is recognized by the U.S. Census Bureau as being in accordance with its own definitions and concepts. Further, the Census Bureau accepts the state-certified census results in the annual population determinations that are used for federal revenue sharing. The difference between the 1980 and 1981 figures is based upon the procedural policy implemented by the U.S. Census Bureau that in effect did not treat Prudhoe Bay as a place in which people "resided".

* Indicates a census conducted by a municipality in accordance with State guidelines.

** Indicates a census conducted under the auspices of, and certified by the State Demographer.

Greater Fairbanks
CHAMBER OF COMMERCE
FAIRBANKS
ALASKA 99701

To SENATE RESOURCES

RESOLUTION SUPPORTING SUSITNA RIVER
AND OTHER HYDRO-ELECTRIC PROJECTS

RESOLUTION 2-282

WHEREAS, the Greater Fairbanks Chamber of Commerce Board of Directors has previously gone on record in support of the Susitna River and other hydro-electric projects; and

WHEREAS, the Legislature in the last session took necessary steps to assure that some of our oil revenues would be invested in hydro-electric projects that will benefit a large majority of Alaskans; and

WHEREAS, hydro-electric projects generally provide clean, safe and reasonably priced energy for indefinite periods of time; and

WHEREAS, studies done by professional consulting firms indicate a projected need for additional electrical generating facilities within the State; and

WHEREAS, the lead time required for building hydro-electric projects is substantial; and

WHEREAS, most hydro-electric projects and especially Susitna River, have been studied extensively for a number of years; and

WHEREAS, the longer we delay start of construction, the more expensive these, or any other electric generating plants will become;

NOW, THEREFORE BE IT RESOLVED that the Greater Fairbanks Chamber of Commerce once again goes on record as strongly supporting the Susitna River and other hydro-electric projects and we strongly endorse the provisions and intent of sponsor substitute for Senate Bill number 608 and recommend the Bill be passed.

BE IT FURTHER RESOLVED that the Greater Fairbanks Chamber of Commerce does not support the provisions and intent of Senate Bill 646 which would result in additional delays of the projects and which would increase the cost to the consumers substantially over a

Item: Chamber of Commerce
FBx

State Resources
Page 3 of 2

number of years by having the consumer pay back to the State the cost of capital for construction of these projects, in addition to normal operation and maintenance costs.

BE IT FURTHER RESOLVED that the following members of the Board of Directors were present at the meeting in which this Resolution was unanimously adopted: Judy Allington, Bill Bubbell, Frank Chapados, Gary Danielson, Chuck Gray, Bill Green, Marc Langland, Tom Owen, Bill Whaley, Ralph Seekins, Roxie Palczer, Bill Pair, Jim Drew, Bernie Brown and Ron Davis.

Tom Owen

Tom Owen - Vice Chairman

R Davis

Ron Davis - President

Testified 2/22/82
608

TESTIMONY OF RURALCAP

SS SB608

APPROPRIATION TO THE POWER DEVELOPMENT FUND

OF THE ALASKA POWER AUTHORITY

My name is Matt Zencey and I am from RurALCAP, the Rural Alaskan Community Action Program. We appreciate the opportunity to testify today on SB608.

SS SB608 would commit $1.0 billion to the Alaska Power Authority's Power Development Fund, which implements the Energy Program for Alaska. This $1.0 billion is to be used for only Susitna and other hydroelectric projects even though the authority for the Power Development Fund includes other types of power projects.

The $1.0 billion is an awesome commitment of expected state revenues to a single purpose. As was clear from the debate over the Energy Program for Alaska last year, the Program is a way to distribute wealth to Alaskans by using subsidies to power projects, almost exclusively hydroelectricity, to produce below market energy prices.

The appropriation in SB608 is a distribution of wealth which is owned equally by all Alaskans. Everyone recognizes that Alaskans throughout the state have a right to ask if this appropriation is an equitable distribution of that wealth. Last year, 99.5% of appropriations to the Energy Program for Alaska (i.e. the Power Development Fund) went to urban areas. RurALCAP has noted in the past that the Energy Program for Alaska does not serve rural areas well. Will

regional equity in the distribution of wealth under this appropriation be better than it was last year? Will this be an equitable distribution of wealth owned equally by all Alaskans? This appropriation will do even less for rural areas than the Energy Project itself since the appropriation is restricted to hydroelectric projects. Based on what we see now, we must conclude that this appropriation will not be equitable.

As Alaskans consider uses for their wealth, a second point to consider is how reasonable and prudent the legislature's spending decisions are. The bulk of the appropriation is clearly intended to begin construction of a project which has not yet finished the review process set down by the legislature. As a result, there is still some question about what the legislature is committing itself to and how much it will cost. Does wise planning support this immediate commitment of nearly 30% of next year's hoped for revenues to a single project which is still under study? This action is extremely important since it involves a future commitment of even more money at a time when revenues are very uncertain. Projections of next year's revenues have already dropped by a third and they may drop even more. It is clear our surplus revenues cannot fund everyone's wish list. We must learn to live within these new limits and set priorities.

We believe the use of state wealth to bring secure energy at stable prices to all areas of the state is an important goal. The specific projects and programs to meet this goal in each area need careful evaluation, especially where literally billions are at stake. The most pressing energy needs for rural villages cannot be met by

appropriations such as SB608 because their needs are not for new electric power projects owned by a remote state government. The Power Authority's Village Energy Reconnaissance Studies and RurALCAP's work with villages have found an immediate need to improve the efficiency of the very expensive energy that is now being used in rural areas. This can be done by home weatherization and by other projects such as waste heat recovery and running diesel generators more efficiently. A lasting commitment to using an equitable share of state wealth for home weatherization and increased energy efficiency in rural areas would soothe the bitter inequity of appropriations under the current Energy Program for Alaska. RurALCAP is ready to work with the Legislature in making an on-going commitment to use state wealth to bring secure, affordable energy to <u>all</u> areas of the state.

Alaska Center for the Environment
1069 W. 6th Avenue
Anchorage, Alaska 99501
(907) 274-3621

February 24, 1982

TESTIMONY ON SB 608 FOR THE SENATE RESOURCES COMMITTEE

SUBMITTED BY THE ALASKA CENTER FOR THE ENVIRONMENT

My name is Cynthia Marquette and I am the Executive Director for the Alaska Center for the Environment. I am testifying today on SB 608.

The choice before us is to begin the design and construction of the Susitna Hydro-electric project or to consider the development of alternative, diversified power sources for Alaska's future and the promotion of a strong energy conservation plan.

There have been numerous alternatives proposed to Susitna, including possibly less-costly hydro-projects. Significant wind energy potential, abundant natural gas and coal reserves, and the possibilities of tidal power have also been suggested.

To pour State monies into the Susitna project at this point would be short-circuiting the rational, decision-making process that has already been funded by the Legislature. The Battelle Alternative Energy Study and the Susitna Feasibility studies should be completed and discussed thoroughly before any more funds are allocated for this project. To charge ahead before the results of these studies are known is not logical.

For the above reasons, the Center asks the Senate Resources Committee to hold off on SB 608. We also would like to urge that this particular issues - the Go, No-Go decision on Susitna - be put before the public on the fall ballot.

(more)

Traditionally the Center has supported and promoted small-scale, alternative technologies. Thousands of Alaskans have attended the Alternative Energy Conferences co-sponsored by the Center over the last three years. These Alaskans, combined with citizens who use the Denslow Memorial Alternative Energy Library on a daily basis reflect an eagerness on the part of many Alaskans to explore alternative energy sources throughout our State.

A rational decision must be made. Now is the time to consider the costs, both financial and environmental. Now is the time to look toward the future and consider creating an energy plan for Alaska that will focus on decentralized, diversified power sources combined with a strong conservation program. An energy plan that will benefit ALL Alaskans.

MAR 2 1982

MEMORANDUM

TO: Senator Fahrenkamp

FROM: Kurt S. Dzinich KSD

SUBJECT: Hydropower Electricity Costs

DATE: March 2, 1982

Discussions over the past few weeks surfaced the fact that there did not exist an analysis of long range power costs based on the proposed hydropower construction program. The attached analysis by the Alaska Power Adminstration is an analysis that projects expected power costs out to year 2005 based on some simplifying assumptions.

Because of the assumptions the program has its limitations and should not be used for predicting exact cost of power in the future. The program will only indicate the magnitude of future power costs under various repayment criteria. The analysis could be used to evaluate various repayment criteria against a given set of goal(s) such as lowest power cost, return on investment etc.

A review of the data shows that return of investment rate and repayment period will have a major influence on future cost of power.

KSD/bb

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

February 26, 1982

Mr. Kurt Dzinich
Senator J.M Kerttula
Capitol Building
Pouch V MS 3100
Juneau, AK 99811

Dear Mr. Dzinich:

Alaska Power Administration has developed a general computer program for comparing revenue requirements of power projects under various sets of repayment criteria. This program allows a user to look at any number of projects scheduled to be built in the next twenty years and calculates the annual revenue requirements and energy rates needed to meet these requirements.

We are enclosing an abstract of the program and analyses for projects which may be developed in the State during the next twenty years. The data for the projects was obtained from the latest information available to APA, however, there may be changes that we are not aware of. This should not affect the outcome of the analyses since the main purpose was to compare the different sets of repayment criteria and the same data was used in all the alternatives examined.

The output presented here includes analyses of revenue criteria in existing and proposed legislation as well as one representing a standard method of financing. Firm energy was used in each case and the rates listed for firm energy cost should not be construed to represent the actual energy cost when the projects are built. Additional costs such as administration and overhead have not been considered and they would be included in any actual rate determination.

This program was developed for APA studies, however, we would welcome its use by anyone interested in making comparisons of various methods of financing power projects. Please feel free to contact this office if you have any questions.

Sincerely,

for Robert J. Cross
Administrator

Enclosures

P R O G R A M A B S T R A C T

This program allows the user to calculate the future revenue requirements and energy costs for power projects financed under a broad range of financing criteria. The following methods may be selected.

1. Standard Financing (e.g. 7% for 25 years)
2. Annual Return on Investment (e.g. 10%)
3. Repayment of Investment Only (e.g. over a 20-year period)

The program reads input data on any number of projects expected to come on-line through the year 2005. This input data consists of project name, construction costs, OM&R costs, energy output, and on-line date. Projects may be fully loaded when brought on-line or they may have staged output. All costs are assumed to be January 1982

Output consists of a schedule of projects showing on-line dates, costs, energy, and a yearly tabulation of the revenue requirements and energy costs. A summary of the repayment methods follows.

STANDARD FINANCING - this method allows the user to specify any interest rate and any period of repayment. Revenue requirements would include the repayment of investment based on these rates plus the costs of OM&R.

ANNUAL RETURN ON INVESTMENT - this method allows the user to specify any return on investment desired. The user has the option of including OM&R costs in the annual revenue requirements or using the greater of a.)the annual return on investment or b.)the OM&R costs as the value to use for the annual revenue requirement. The latter option represents existing Alaska legislation.

REPAYMENT OF INVESTMENT ONLY - this method allows the user to specify any period for repayment of investment interest-free. An option allows the user to adjust future payments for inflation based on the Consumer Price Index -- representative of proposed legislation. Annual revenue requirements are based on the repayment costs plus OM&R costs.

A future inflation rate may be specified. This rate would inflate the construction costs for the projects to the mid-point of construction while the OM&R costs would increase at this annual rate thoughout the project life.

The user may use firm or average energy in the input as long as all projects are treated in the same manner. Using average energy will result in lower energy rates, however, the results are for comparison purposes only and are not meant to show the exact cost of energy. Administrative and overhead costs are not included in in these calculations and they would increase the cost of energy. The energy from the projects can also be at full load at project start or it may be built up over a period of years. Transmission facilities do not contribute to the overall production of energy therefore the energy associated with them is always zero.

The user also has the option of performing a present-worth study of the above financing methods. This analysis should only be completed if the period of study is extended through the life of the projects.

INFLATION

0%

ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

SCHEDULE FOR PROJECTS EXAMINED

YEAR	PROJECT NAME	1982 CONSTRUCTION COST ($1000)	ANNUAL OM&R\1 ($1000)	FIRM ENERGY (MWH)
1982	SOLOMON GULCH	49,500	280	40,780
1983	SWAN LAKE	90,000	690	85,000
1984	TYEE	99,000	1,050	127,000
	RAILBELT INTERTIE	131,000	4,700	0
	KAKE/PETERSBURG INTERTIE	8,000	28	0
	WEST CREEK	57,500	750	26,540
	PRESSURE REDUCING TURB.	10,900	225	52,000
1985	TERROR LAKE	174,000	830	129,000
1986	KENAI PENINSULA T/LINE	79,000	850	0
	JUNEAU-HOONAH INTERTIE	21,000	585	0
	TAZIMINA I	58,600	102	78,000
	CORDOVA INTERTIE	12,800	140	0
1988	BRADLEY LAKE	363,600	825	317,500
1990	TAKATZ	153,000	3,000	93,200
	BLACK BEAR	31,000	133	23,700
	ALLISON CREEK	38,400	224	37,250
	TAZIMINA II	52,800	128	110,000
1993	SUSITNA - WATANA	3,700,000	10,000	533,000
1994	WATANA LOAD INCR.	0	0	634,000
1995	WATANA LOAD INCR.	0	0	712,000
1996	WATANA LOAD INCR.	0	0	841,000
2002	SUSITNA - DEVIL CANYON	1,500,000	5,400	559,000
2003	DEVIL CANYON LOAD INCR.	0	0	665,000
2004	DEVIL CANYON LOAD INCR.	0	0	747,000
2005	DEVIL CANYON LOAD INCR.	0	0	569,000

\1 - First year cost only; future years increased by inflation

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ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 0%

ANNUAL REVENUE REQUIREMENTS:
0% ANNUAL RETURN ON INVESTMENT
ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	0	280	280	40,780	.7
1983	0	970	970	125,780	.8
1984	0	7,723	7,723	331,320	2.3
1985	0	8,553	8,553	460,320	1.9
1986	0	10,230	10,230	538,320	1.9
1987	0	10,230	10,230	538,320	1.9
1988	0	11,055	11,055	855,820	1.3
1989	0	11,055	11,055	855,820	1.3
1990	0	14,540	14,540	1,119,970	1.3
1991	0	14,540	14,540	1,119,970	1.3
1992	0	14,540	14,540	1,119,970	1.3
1993	0	24,540	24,540	1,652,970	1.5
1994	0	24,540	24,540	2,286,970	1.1
1995	0	24,540	24,540	2,998,970	.8
1996	0	24,540	24,540	3,539,970	.7
1997	0	24,540	24,540	3,539,970	.7
1998	0	24,540	24,540	3,539,970	.7
1999	0	24,540	24,540	3,539,970	.7
2000	0	24,540	24,540	3,539,970	.7
2001	0	24,540	24,540	3,539,970	.7
2002	0	29,940	29,940	4,098,970	.7
2003	0	29,940	29,940	4,763,970	.6
2004	0	29,940	29,940	5,510,970	.5
2005	0	29,940	29,940	6,079,970	.5
			444,336	55,739,000	.8

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

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ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 0%

ANNUAL REVENUE REQUIREMENTS:
THE GREATER OF:
10% ANNUAL RETURN ON INVESTMENT
OR ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	4,950	280	4,950	40,780	12.1
1983	13,950	970	13,950	125,780	11.1
1984	44,590	7,723	44,590	331,320	13.5
1985	61,990	8,553	61,990	460,320	13.5
1986	79,130	10,230	79,130	538,320	14.7
1987	79,130	10,230	79,130	538,320	14.7
1988	115,490	11,055	115,490	855,820	13.5
1989	115,490	11,055	115,490	855,820	13.5
1990	143,010	14,540	143,010	1,119,970	12.8
1991	143,010	14,540	143,010	1,119,970	12.8
1992	143,010	14,540	143,010	1,119,970	12.8
1993	513,010	24,540	513,010	1,652,970	31.0
1994	513,010	24,540	513,010	2,286,970	22.4
1995	513,010	24,540	513,010	2,998,970	17.1
1996	513,010	24,540	513,010	3,539,970	14.5
1997	513,010	24,540	513,010	3,539,970	14.5
1998	513,010	24,540	513,010	3,539,970	14.5
1999	513,010	24,540	513,010	3,539,970	14.5
2000	513,010	24,540	513,010	3,539,970	14.5
2001	513,010	24,540	513,010	3,539,970	14.5
2002	663,010	29,940	663,010	4,098,970	16.2
2003	663,010	29,940	663,010	4,763,970	13.9
2004	663,010	29,940	663,010	5,510,970	12.0
2005	663,010	29,940	663,010	6,079,970	10.9
			8,212,880	55,739,000	14.7

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

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Corrected copy

ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 0%

ANNUAL REVENUE REQUIREMENTS:
REPAYMENT OF INVESTMENT ONLY IN 33.33 Years
(Adjusted for Inflation)
ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	1,485	280	1,765	40,780	4.3
1983	4,251	970	5,221	125,780	4.2
1984	13,627	7,723	21,350	331,320	6.4
1985	19,411	8,553	27,964	460,320	6.1
1986	25,344	10,230	35,574	538,320	6.6
1987	26,365	10,230	36,595	538,320	6.8
1988	38,336	11,055	49,391	855,820	5.8
1989	39,861	11,055	50,916	855,820	5.9
1990	49,704	14,540	64,244	1,119,970	5.7
1991	51,663	14,540	66,203	1,119,970	5.9
1992	53,682	14,540	68,222	1,119,970	6.1
1993	166,764	24,540	191,304	1,652,970	11.6
1994	172,796	24,540	197,336	2,286,970	8.6
1995	179,017	24,540	203,557	2,998,970	6.8
1996	185,433	24,540	209,973	3,539,970	5.9
1997	192,080	24,540	216,620	3,539,970	6.1
1998	198,891	24,540	223,431	3,539,970	6.3
1999	205,943	24,540	230,483	3,539,970	6.5
2000	213,182	24,540	237,722	3,539,970	6.7
2001	220,677	24,540	245,217	3,539,970	6.9
2002	273,419	29,940	303,359	4,098,970	7.4
2003	281,551	29,940	311,491	4,763,970	6.5
2004	289,760	29,940	319,700	5,510,970	5.8
2005	298,110	29,940	328,050	6,079,970	5.4
			3,645,690	55,739,000	6.5

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

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ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 0%

ANNUAL REVENUE REQUIREMENTS:
STANDARD FINANCING For 40 Years at 7%
ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	3,713	280	3,993	40,780	9.8
1983	10,464	970	11,434	125,780	9.1
1984	33,447	7,723	41,170	331,320	12.4
1985	46,498	8,553	55,051	460,320	12.0
1986	59,355	10,230	69,585	538,320	12.9
1987	59,355	10,230	69,585	538,320	12.9
1988	86,628	11,055	97,683	855,820	11.4
1989	86,628	11,055	97,683	855,820	11.4
1990	107,271	14,540	121,811	1,119,970	10.9
1991	107,271	14,540	121,811	1,119,970	10.9
1992	107,271	14,540	121,811	1,119,970	10.9
1993	384,804	24,540	409,344	1,652,970	24.8
1994	384,804	24,540	409,344	2,286,970	17.9
1995	384,804	24,540	409,344	2,998,970	13.6
1996	384,804	24,540	409,344	3,539,970	11.6
1997	384,804	24,540	409,344	3,539,970	11.6
1998	384,804	24,540	409,344	3,539,970	11.6
1999	384,804	24,540	409,344	3,539,970	11.6
2000	384,804	24,540	409,344	3,539,970	11.6
2001	384,804	24,540	409,344	3,539,970	11.6
2002	497,318	29,940	527,258	4,098,970	12.9
2003	497,318	29,940	527,258	4,763,970	11.1
2004	497,318	29,940	527,258	5,510,970	9.6
2005	497,318	29,940	527,258	6,079,970	8.7
			6,604,747	55,739,000	11.8

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

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INFLATION

7%

ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

PROJECT COSTS UNDER
7% INFLATION

YEAR	PROJECT NAME	CONSTRUCTION COST ($1000)	ANNUAL OM&R\1 ($1000)
1982	SOLOMON GULCH	49,500	280
1983	SWAN LAKE	90,000	738
1984	TYEE	99,000	1,202
	RAILBELT INTERTIE	135,507	5,381
	KAKE/PETERSBURG INTERTIE	8,560	32
	WEST CREEK	57,500	859
	PRESSURE REDUCING TURB.	11,663	258
1985	TERROR LAKE	179,987	1,017
1986	KENAI PENINSULA T/LINE	96,778	1,114
	JUNEAU-HOONAH INTERTIE	25,726	767
	TAZIMINA I	67,091	134
	CORDOVA INTERTIE	15,681	184
1988	BRADLEY LAKE	445,426	1,238
1990	TAKATZ	229,612	5,155
	BLACK BEAR	46,523	229
	ALLISON CREEK	57,628	385
	TAZIMINA II	79,239	220
1993	SUSITNA - WATANA	6,357,289	21,049
2002	SUSITNA - DEVIL CANYON	4,738,223	20,896

\1 - OM&R will continue to increase at inflation rate

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ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 7%

ANNUAL REVENUE REQUIREMENTS:
0% ANNUAL RETURN ON INVESTMENT
ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	0	280	280	40,780	.7
1983	0	1,038	1,038	125,780	.8
1984	0	8,842	8,842	331,320	2.7
1985	0	10,478	10,478	460,320	2.3
1986	0	13,409	13,409	538,320	2.5
1987	0	14,348	14,348	538,320	2.7
1988	0	16,591	16,591	855,820	1.9
1989	0	17,752	17,752	855,820	2.1
1990	0	24,982	24,982	1,119,970	2.2
1991	0	26,731	26,731	1,119,970	2.4
1992	0	28,602	28,602	1,119,970	2.6
1993	0	51,653	51,653	1,652,970	3.1
1994	0	55,269	55,269	2,286,970	2.4
1995	0	59,138	59,138	2,998,970	2.0
1996	0	63,277	63,277	3,539,970	1.8
1997	0	67,707	67,707	3,539,970	1.9
1998	0	72,446	72,446	3,539,970	2.0
1999	0	77,517	77,517	3,539,970	2.2
2000	0	82,944	82,944	3,539,970	2.3
2001	0	88,750	88,750	3,539,970	2.5
2002	0	115,858	115,858	4,098,970	2.8
2003	0	123,968	123,968	4,763,970	2.6
2004	0	132,646	132,646	5,510,970	2.4
2005	0	141,931	141,931	6,079,970	2.3
			1,296,158	55,739,000	2.3

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

APA - 2/82

ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 7%

ANNUAL REVENUE REQUIREMENTS:
THE GREATER OF:
10% ANNUAL RETURN ON INVESTMENT
OR ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	4,950	280	4,950	40,780	12.1
1983	13,950	1,038	13,950	125,780	11.1
1984	45,173	8,842	45,173	331,320	13.6
1985	63,172	10,478	63,172	460,320	13.7
1986	83,699	13,409	83,699	538,320	15.5
1987	83,699	14,348	83,699	538,320	15.5
1988	128,242	16,591	128,242	855,820	15.0
1989	128,242	17,752	128,242	855,820	15.0
1990	169,542	21,982	169,542	1,119,970	15.1
1991	169,542	26,731	169,542	1,119,970	15.1
1992	169,542	28,602	169,542	1,119,970	15.1
1993	805,271	51,653	805,271	1,652,970	48.7
1994	805,271	55,269	805,271	2,286,970	35.2
1995	805,271	59,138	805,271	2,998,970	26.9
1996	805,271	63,277	805,271	3,539,970	22.7
1997	805,271	67,707	805,271	3,539,970	22.7
1998	805,271	72,446	805,271	3,539,970	22.7
1999	805,271	77,517	805,271	3,539,970	22.7
2000	805,271	82,944	805,271	3,539,970	22.7
2001	805,271	88,750	805,271	3,539,970	22.7
2002	1,279,093	115,858	1,279,093	4,098,970	31.2
2003	1,279,093	123,968	1,279,093	4,763,970	26.8
2004	1,279,093	132,646	1,279,093	5,510,970	23.2
2005	1,279,093	141,931	1,279,093	6,079,970	21.0
			13,423,564	55,739,000	24.1

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

APA - 2/82

Corrected 4/.

ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

FUTURE INFLATION - 7%

ANNUAL REVENUE REQUIREMENTS:
REPAYMENT OF INVESTMENT ONLY IN 33.33 Years
(Adjusted for Inflation)
ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	1,485	280	1,765	40,780	4.3
1983	4,251	1,038	5,289	125,780	4.2
1984	13,807	8,842	22,649	331,320	6.8
1985	19,825	10,478	30,302	460,320	6.6
1986	26,872	13,409	40,282	538,320	7.5
1987	28,090	14,348	42,439	538,320	7.9
1988	42,728	16,591	59,319	855,820	6.9
1989	44,744	17,752	62,496	855,820	7.3
1990	59,247	24,982	84,230	1,119,970	7.5
1991	62,135	26,731	88,866	1,119,970	7.9
1992	65,193	28,602	93,795	1,119,970	8.4
1993	259,198	51,653	310,851	1,652,970	18.8
1994	274,101	55,269	329,370	2,286,970	14.4
1995	290,005	59,138	349,143	2,998,970	11.6
1996	306,996	63,277	370,273	3,539,970	10.5
1997	324,984	67,707	392,690	3,539,970	11.1
1998	344,375	72,446	416,821	3,539,970	11.8
1999	364,925	77,517	442,442	3,539,970	12.5
2000	387,023	82,944	469,967	3,539,970	13.3
2001	410,463	88,750	499,213	3,539,970	14.1
2002	577,546	115,858	693,405	4,098,970	16.9
2003	618,741	123,968	742,709	4,763,970	15.6
2004	663,191	132,646	795,837	5,510,970	14.4
2005	711,008	141,931	852,940	6,079,970	14.0
			7,197,091	55,739,000	12.9

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

MRA - 2/82

ALASKA POWER ADMINISTRATION
FINANCIAL ANALYSIS PROGRAM

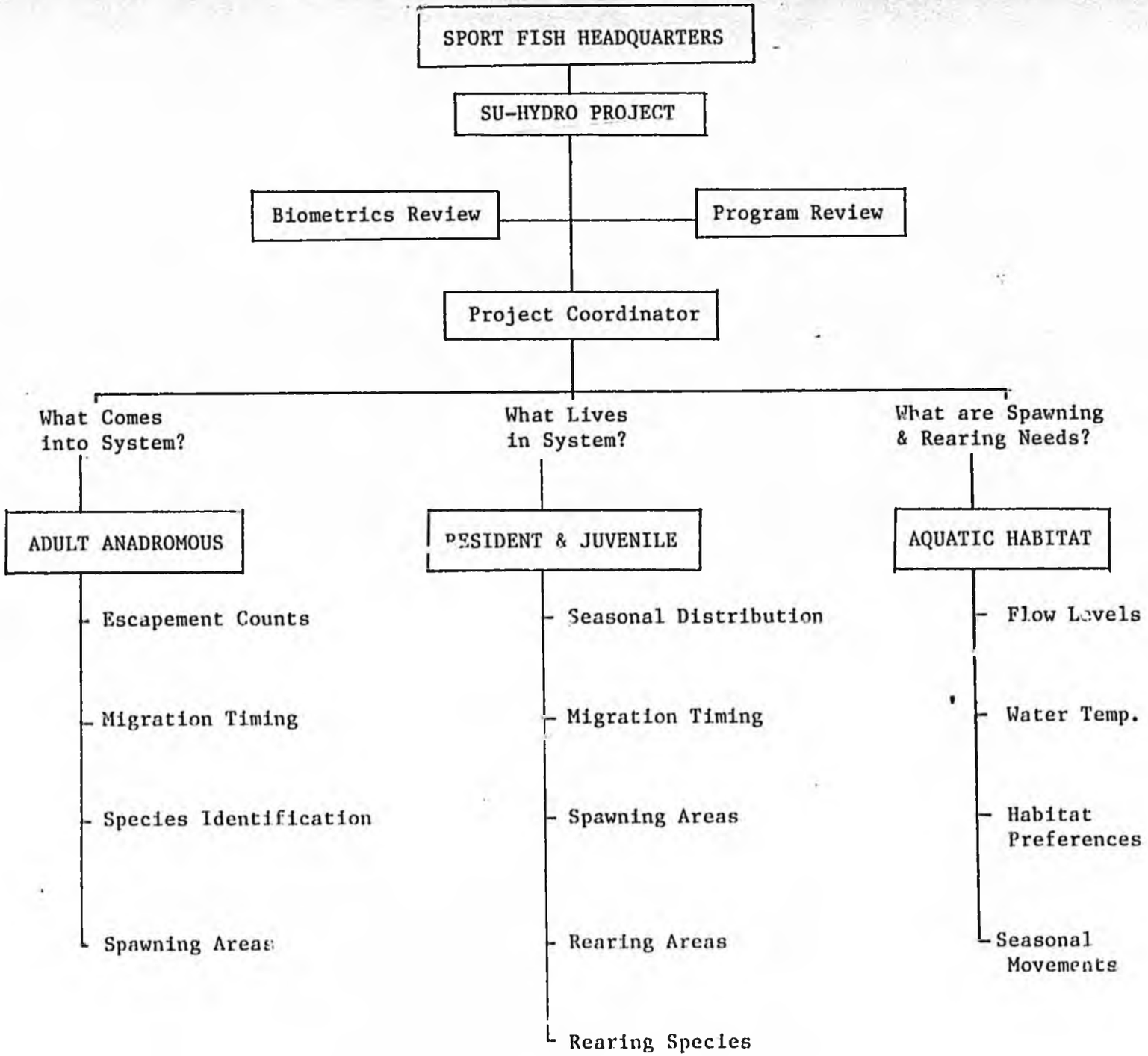
FUTURE INFLATION - 7%

ANNUAL REVENUE REQUIREMENTS:
STANDARD FINANCING For 40 Years at 7%
ANNUAL OM&R COSTS

YEAR	INVESTMENT PAYMENT ($1000)	OM&R ($1000)	ANNUAL REVENUE REQUIREMENT\1 ($1000)	FIRM ENERGY (MWH)	FIRM ENERGY COST\2 (c/kWh)
1982	3,713	280	3,993	40,780	9.8
1983	10,464	1,038	11,502	125,780	9.1
1984	33,884	8,842	42,726	331,320	12.9
1985	47,385	10,478	57,862	460,320	12.6
1986	62,782	13,409	76,192	538,320	14.2
1987	62,782	14,348	77,130	538,320	14.3
1988	96,193	16,591	112,784	855,820	13.2
1989	96,193	17,752	113,945	855,820	13.3
1990	127,172	24,982	152,154	1,119,970	13.6
1991	127,172	26,731	153,903	1,119,970	13.7
1992	127,172	28,602	155,774	1,119,970	13.9
1993	604,027	51,653	655,680	1,652,970	39.7
1994	604,027	55,269	659,296	2,286,970	28.8
1995	604,027	59,138	663,164	2,998,970	22.1
[illegible]	604,027	63,277	667,304	3,539,970	18.9
[illegible]	604,027	67,707	671,733	3,539,970	19.0
[illegible]	604,027	72,446	676,473	3,539,970	19.1
1999	604,027	77,517	681,544	3,539,970	19.3
2000	604,027	82,944	686,970	3,539,970	19.4
2001	604,027	88,750	692,776	3,539,970	19.6
2002	959,437	115,858	1,075,295	4,098,970	26.2
2003	959,437	123,968	1,083,405	4,763,970	22.7
2004	959,437	132,646	1,092,083	5,510,970	19.8
2005	959,437	141,931	1,101,368	6,079,970	18.1
			11,365,058	55,739,000	20.4

\1 - Excludes Administrative and overhead costs
\2 - If energy sales are less than firm energy available cost will be higher

APA - 2/82


SPORT FISH HEADQUARTERS
SU-HYDRO PROJECT
Biometrics Review
Program Review
Project Coordinator
What Comes into System?
What Lives in System?
What are Spawning & Rearing Needs?
ADULT ANADROMOUS
RESIDENT & JUVENILE
AQUATIC HABITAT
Escapement Counts
Migration Timing
Species Identification
Spawning Areas
Seasonal Distribution
Migration Timing
Spawning Areas
Rearing Areas
Rearing Species
Flow Levels
Water Temp.
Habitat Preferences
Seasonal Movements

III. ILLUSTRATIVE POPULATION PROJECTIONS

Introduction

This section presents illustrative projections to 1985 of the resident population of Alaska, classified by age, race, and sex. Three series of projections show the effects of applying three different assumptions (scenarios) concerning migration to the 1980 population as classified by age, race, and sex. The series have common assumptions concerning projected fertility and mortality. They also assume that military strength will remain at current levels. The major differences found in comparing data from each series are due to the effects of migration. For each series the migration assumptions are:

Series	Assumption
A	The number of people moving into the state exceeds the number leaving; similar to the migration pattern experienced between 1970 and 1978.
B	The number of people leaving the state exceeds the number moving into the state; similar to and continuing the migration pattern experienced between 1979 and 1981.
C	The number of people moving into the state equals the number leaving; zero net numbers of migrants, 1980 to 1985.

The projections are best viewed as showing what would happen if the specific migration patterns assumed for each series were to occur between 1980 and 1985. By reviewing both the assumptions and results for each series, someone can select the set of projections that most closely resembles one's own assumptions. Some help in selecting a series can be provided by briefly describing the scenarios underlying the three sets of migration patterns.

The most likely scenario, that represented by series A, shows steady but not explosive in-migration. It portrays Alaska as offering employment opportunities attractive to outsiders without the occurrence of a "pipeline boom." On the other hand, the least likely scenario is represented by series C, which shows zero net migration. Although this is very unlikely, the series serves a useful purpose by illustrating what would be likely to occur to the state's population from the effects of fertility and mortality alone. This series provides a basis from which to measure the effects of any other projection that does include migration. Series B, which shows continued but low levels of out-migration, could represent a scenario in which employment opportunities do not keep pace with the potential Alaskan labor force so that people are forced to go outside for work.

In general, the three series should accommodate a wide range of applications and needs. Still, someone may decide that not one of the scenarios represents one's own ideas of the future. However, even in this case the projections given here -- especially series C -- should be useful by providing a starting point from which alternatives can be generated.

The projections are given for April 1st of each year from 1981 to 1985 because the 1970 and census results, which form, respectively, a basis and calibration point for the projections, are for an April 1st date. Because of the necessity to use an April 1st date and the assumptions used, the total population given for 1981 in each series is different than the total population estimated for July 1st, 1981.

Comparative Results

Under these three sets of assumptions, comparisons of the expected demographic characteristics of Alaska by 1985 are informative. For example, the assumption of zero net migration (Series "C" found in Table III.1) projects a total population of nearly 442,000 by 1985, which represents an increase of approximately 40,000 people over the total population counted in the 1980 census. The scenario for positive net migration (Series A, found in Table III.2) projects, as expected, an even larger total population by 1985: nearly 465,000 people. Finally, even if the state experiences the scenario given in Series B, (found in Table III.3) and more people leave the state than move into the state, the total population by 1985 still shows an increase over 1980: 32,000 more people are expected to be residing in Alaska. Significantly, these comparisons show that "natural increase," the excess of births over deaths, is sufficient to guarantee an increase in population by 1985 even under the assumption of negative net migration given in Series B. Under all three scenarios, it is, in fact, natural increase and not migration that is the major force acting on the state's population.

In terms of other characteristics of the population, the three scenarios show very little divergence by 1985. For example, under Series A, B, and C, the percent of the population aged 65 and over is 3.10, 3.16, and 3.09, respectively. Similar equivalencies are found for the percent non-white, percent male, and percent aged 20-34.

Methodology

The Alaska population projections are based upon the cohort-component method, which is a standard demographic approach to forecasting. The logic of the cohort-component methodology calls for Alaska's population to be disaggregated

by age-sex-race groups and then projected by these groups. This disaggregation is necessary because populations have a variable age-sex-race structure and rates of components of demographic change such as mortality and migration vary by age,sex, and race. For each series, A, B, and C, the components of change are found, along with the preceding and resulting population by year 1980 to 1985, in Tables III.4, III.5, and III.6, respectively.

Because of a need to develop migration data for analytical purposes, the three sets of projections are actually taken from the 1970 census results for Alaska and "passed through" the 1980 census population classified by age, race and sex. This calibration resulted in a 1980 base population that varies slightly from the reported 1980 census data. A comparison of the differences is shown in Table III.7 and the model's results for 1980 are found in Table III.8.

Special procedures were used in the projections to deal with Alaska's military-related population so that members of the armed forces would not be projected into the future in the same manner as the civilian population. Another special procedure allows for dealing with college-related migration in a manner similar to the military.

An "inflation-deflation" procedure often found in demographic forecasts was not used for the projections given here. This procedure, which assumes an undercount in the census population forming the basis of a forecast scenario, usually applies correction factors to "inflate" the base population and additional factors to "deflate" the projected population. While this procedure can correct for assumed distortions in a base population's age, sex, and race structure it inhibits an evaluation of the components of change. It was because of the desire to develop an analysis of Alaska's components of change, and an assumption

7/

that errors did not create significant structural distortions in the 1970 and 1980 census results, that the "inflation-deflation" procedure was not used.

SENATE RESOURCES COMMITTEE
LEGISLATION CHECKLIST

BILL NUMBER SB 608

IDENTIFICATION:

BILL NAME: spec. approp. to APA for Susitna R. Hydro project

SPONSOR(S): Kerttulla
Donbavorth

RELATED BILLS PENDING:

DATE INTRODUCED: 1.11.82

REFERRALS: Resources, Finance

INITIAL RESEARCH:

INITIAL BILL SUMMARY COMPLETED ✓

SUMMARY BY LEGAL DIVISION:
DEPT. OF LAW SUMMARY:

SPONSOR CONTACTED FOR BACKUP MATERIALS: 1/20 - autumn - gen K's. office - will respond - 1/25 Kent Dominich, Senate advisory Council Memo.

FISCAL NOTE:

AGENCY RESPONSE: 1/25 - S.S. Antho.

OTHER INTERESTED SENATORS OR REPS. NOTIFIED:

BACKGROUND RESEARCH:

SIMILAR BILLS INTRODUCED IN PREVIOUS LEGISLATURES:

RESPONSES FROM INTERESTED PERSONS AND/OR GROUPS:
1/25 - Dave ARECA - chilled out of Bacoroff

OTHER STATE OR FEDERAL PRECEDENTS, REGULATIONS, LAWS:

HEARING PREPRATION:

CHAIRMAN BRIEFED:

DATE AND PLACE SET: Butro 2/22 2/24

STAFF MEMO TO COMMITTEE:

TELECONFERENCE 2/22 & 2/24

BACKGROUND MATERIAL DISTRIBUTED

PSA/PRESS RELEASE

LIST OF WITNESSES:
APA
ARECA
John Greeley

SUGGESTED AMENDMENTS/CS DRAFTED:

SENATE RESOURCES COMMITTEE
LEGISLATION CHECKLIST

BILL NUMBER SSSB 608

IDENTIFICATION:

BILL NAME: spec. approp. APA power dev. fund for Susitna hydro + other hydro projects

SPONSOR(S): Kettula
Dankworth

RELATED BILLS PENDING:

DATE INTRODUCED: 1/25/82

REFERRALS Resources, Finance

INITIAL RESEARCH:

INITIAL BILL SUMMARY COMPLETED ✓

SUMMARY BY LEGAL DIVISION:
DEPT. OF LAW SUMMARY:

SPONSOR CONTACTED FOR BACKUP
MATERIALS: 1/26-MARSHA (KERTULA) - REQUESTED MAT'L ON SS-TITLE CHANGE

FISCAL NOTE:

AGENCY RESPONSE:

OTHER INTERESTED SENATORS OR
REPS. NOTIFIED:

BACKGROUND RESEARCH:

SIMILAR BILLS INTRODUCED IN PREVIOUS LEGISLATURES:

RESPONSES FROM INTERESTED PERSONS AND/OR GROUPS:

OTHER STATE OR FEDERAL PRECEDENTS, REGULATIONS, LAWS:

HEARING PREPRATION:

CHAIRMAN BRIEFED:

DATE AND PLACE SET:

STAFF MEMO TO COMMITTEE:

TELECONFERENCE

BACKGROUND MATERIAL DISTRIBUTED

PSA/PRESS RELEASE

LIST OF WITNESSES:

Sen. Kertulla
Sen Dankworth - 3/1 No
Eric Yould - Alaska Power authority, Anchorage called 2/22/82
Dave Hutchins - AK Rural Elec. Coop. Assoc (Baranof)
3/3 Bill Ashton if time
✓3/1 Pete Quono / Dankworth (...)

SUGGESTED AMENDMENTS/CS DRAFTED:

✓3/1 ✓ specifics & other needs

✓3/1 F d b will have someone here to say a few words

III.1
Series A: Projected Population By Age, Race, and Sex

1981

Series A, Table III.1

Series A, Table III.1

Series A, Table III.1

Series A, Table III.1

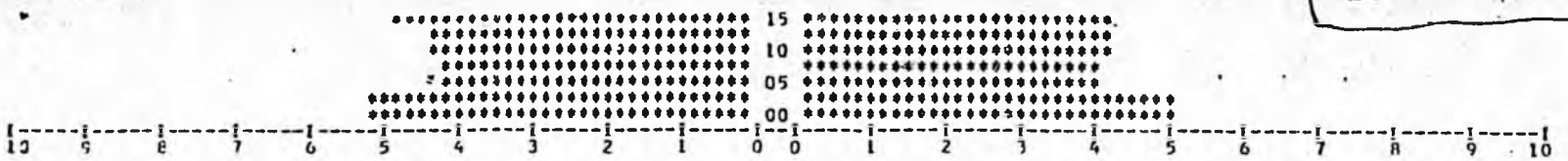
1982

1983 **1984** **1985**

14pt Bold

ASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION: SUMMARY TABLE BY RACE AND SEX: (1981)

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	407661	216318	191343	313132	167637	145495	94529	48681	45848	TOTAL
0- 4	41475	21201	20274	30293	15489	14804	11182	5712	5470	0- 4
5- 9	33333	17027	16306	23592	12054	11538	9741	4973	4768	5- 9
10-14	34650	17829	16821	25295	13058	12237	9355	4771	4584	10-14
15-19	36473	19519	16954	25692	13879	11813	10781	5640	5141	15-19
20-24	45979	25417	20562	34638	19137	15301	11341	6080	5261	20-24
25-29	48852	25161	23691	38970	20021	18949	9882	5140	4742	25-29
30-34	42942	23102	19840	35410	19265	16145	7532	3837	3695	30-34
35-39	32010	17721	14295	26547	14943	11604	5463	2778	2685	35-39
40-44	23293	12679	10614	18852	10404	8448	4441	2275	2166	40-44
45-49	18727	10133	8594	14998	8229	6769	3729	1904	1825	45-49
50-54	15877	8828	7049	12730	7247	5483	3147	1581	1566	50-54
55-59	12851	6836	6015	10412	5593	4819	2439	1243	1196	55-59
60-64	8941	4694	4247	7105	3787	3318	1836	907	929	60-64
65-69	5587	2918	2669	4123	2184	1939	1464	734	730	65-69
70-74	3311	1704	1607	2269	1163	1106	1042	541	501	70-74
75-79	1959	909	990	1235	576	659	664	333	331	75-79
80-84	932	389	443	546	249	297	286	140	146	80-84
85+	629	251	378	425	159	266	204	92	112	85+



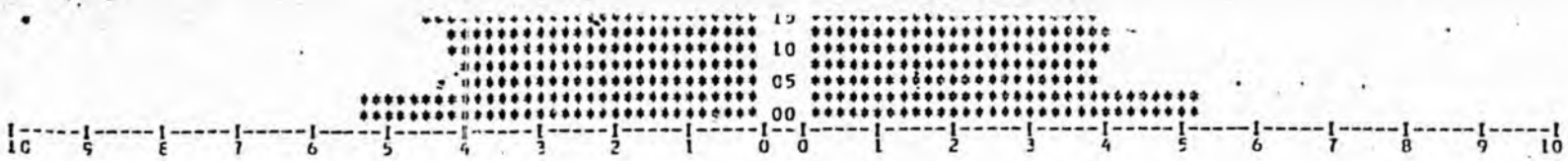
ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1982

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTA	417211	221281	195930	320647	171614	149033	96564	49670	46894	TOTAL
0- 4	43666	22322	21344	32056	16391	15665	11610	5931	5679	0- 4
5- 9	33520	17123	16397	23680	12099	11581	9840	5024	4816	5- 9
10-14	35063	17987	17076	25883	13310	12573	9180	4677	4503	10-14
15-19	36816	19716	17100	26002	14038	11964	10814	5678	5136	15-19
20-24	46777	26464	20313	35260	20288	14972	11517	6176	5341	20-24
25-29	48119	24316	24023	37967	18845	19122	10152	5251	4901	25-29
30-34	43461	23882	19579	35626	19858	15768	7835	4024	3811	30-34
35-39	34949	19041	15948	29200	16125	13075	5789	2916	2873	35-39
40-44	24377	13088	11289	19770	10738	9032	4607	2353	2254	40-44
45-49	19212	10418	8794	15328	8445	6883	3884	1973	1911	45-49
50-54	15082	8803	7279	12772	7244	5528	3110	1559	1551	50-54
55-59	13162	7008	6154	10551	5681	4870	2611	1327	1284	55-59
60-64	9466	4944	4522	7579	3998	3581	1887	946	941	60-64
65-69	5757	3025	2732	4285	2309	1976	1472	716	756	65-69
70-74	3486	1767	1719	2375	1206	1169	1111	561	550	70-74
75-79	1952	941	1011	1301	611	690	651	330	321	75-79
80-84	885	415	470	583	267	316	302	148	154	80-84
85+	621	241	380	429	150	279	192	83	109	85+

A

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION: SUMMARY TABLE BY RACE AND SEX: 1983

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	431461	228823	202638	332822	178146	154676	98639	50677	47962	TOTAL
0- 4	45976	23505	22474	33999	17384	16615	11980	6121	5859	0- 4
5- 9	34863	17810	17053	24823	12684	12139	10040	5126	4914	5- 9
10-14	35852	18402	17450	26647	13729	12918	9213	4673	4540	10-14
15-19	36357	19402	16955	25914	13880	12034	10443	5522	4921	15-19
20-24	49691	28085	20606	36934	21795	15139	11757	6290	5467	20-24
25-29	46670	22642	24028	36419	17344	19075	10251	5298	4953	25-29
30-34	46093	25474	20619	37755	21176	16579	8339	4298	4040	30-34
35-39	37877	20594	17295	31605	17448	14157	6274	3146	3128	35-39
40-44	26326	14204	12122	21672	11807	9865	4654	2397	2257	40-44
45-49	19818	10756	9062	15855	8755	7100	3963	2001	1962	45-49
50-54	16186	8911	7275	12893	7271	5622	3293	1640	1653	50-54
55-59	13571	7241	6330	10951	5913	5038	2640	1328	1312	55-59
60-64	9919	5184	4735	7911	4160	3751	2308	1024	984	60-64
65-69	6054	3144	2870	4547	2469	2078	1467	675	792	65-69
70-74	3607	1817	1790	2458	1238	1220	1149	579	570	70-74
75-79	2032	985	1047	1365	651	714	667	334	333	75-79
80-84	966	432	534	640	281	359	326	151	175	80-84
85+	610	235	375	434	161	273	176	74	102	85+



PERCENT OF TOTAL POPULATION

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1984

14 pt Bold

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	446931	237039	209892	346147	185330	160817	100784	51709	49075	TOTAL
0- 4	48203	24641	23559	36076	18447	17629	12124	6194	5930	0- 4
5- 9	36493	18630	18070	26533	13560	12973	10457	5340	5117	5- 9
10-14	35956	18372	17584	26520	13585	12935	9436	4787	4649	10-14
15-19	36447	19403	17044	26441	14141	12300	10006	5262	4744	15-19
20-24	50440	29776	20664	38553	23346	15207	11887	6430	5457	20-24
25-29	45185	21287	23898	34770	15910	18860	10415	5297	5118	25-29
30-34	49162	26946	22216	40403	22420	17983	8759	4526	4233	30-34
35-39	41041	22591	18450	34290	19170	15120	6751	3421	3330	35-39
40-44	28493	15349	13141	23594	12944	10750	4896	2505	2391	40-44
45-49	20372	11098	9274	16454	9138	7346	3919	1990	1929	45-49
50-54	16570	9064	7506	13122	7363	5759	3448	1701	1747	50-54
55-59	13912	7394	6518	11232	6049	5183	2680	1345	1335	55-59
60-64	10494	5529	4965	8320	4419	3901	2174	1110	1064	60-64
65-69	6200	3202	2998	4714	2523	2191	1486	679	807	65-69
70-74	3729	1873	1856	2559	1301	1258	1170	572	598	70-74
75-79	2107	1011	1096	1433	685	748	674	326	348	75-79
80-84	1032	452	580	704	298	406	328	154	174	80-84
85+	604	231	373	429	61	268	175	70	105	85+

A

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION: SUMMARY TABLE BY RACE AND SEX: 1985 14 pt Bold

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	464606	246466	218140	361497	193640	167857	103109	52826	50283	TOTAL
0- 4	32435	25782	24653	37995	19427	18568	12440	6355	6085	0- 4
5- 9	39831	20380	19501	29122	14886	14236	10759	5494	5265	5- 9
10-14	35241	17998	17243	25598	13074	12524	9643	4924	4719	10-14
15-19	37232	19785	17447	27523	14759	12764	9709	5026	4683	15-19
20-24	52051	31404	20647	40145	24895	15250	11906	6509	5397	20-24
25-29	44232	20201	24031	33903	15029	18874	10329	5172	5157	25-29
30-34	52699	28473	24226	43276	23566	19710	9423	4907	4516	30-34
35-39	44545	24662	19883	37255	20957	16298	7290	3705	3585	35-39
40-44	30395	16399	13996	25364	13856	11508	5031	2543	2488	40-44
45-49	21025	11628	9397	16998	9565	7433	4027	2063	1964	45-49
50-54	17147	9269	7879	13639	7512	6127	3509	1757	1752	50-54
55-59	14443	7709	6734	11600	6316	5284	2843	1393	1450	55-59
60-64	10878	5679	5199	8636	4542	4094	2242	1137	1105	60-64
65-69	6529	3353	3176	5000	2659	2341	1529	694	835	65-69
70-74	3939	1967	1972	2712	1378	1334	1227	589	638	70-74
75-79	2193	1058	1135	1502	726	787	684	332	352	75-79
80-84	1142	490	652	78	331	457	354	159	195	80-84
85+	568	229	369	434	162	272	164	67	97	85+

III.2
Series B: Projected Population By Age, Race, and Sex

Series B, Table III.2

Series B, Table III.2

Series B, Table III.2

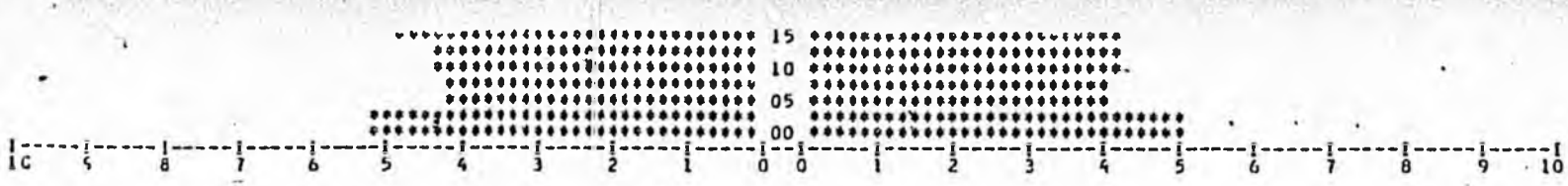
Series B, Table III.2

1981 1982 1983

1984 1985

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION: SUMMARY TABLE BY RACE AND SEX: 1981

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	407661	216318	191343	313132	167637	145495	94529	48681	45848	TOTAL
0- 4	41475	21201	20274	30293	15489	14804	11182	5712	5470	0- 4
5- 9	33333	17027	16306	23592	12054	11538	9741	4973	4768	5- 9
10-14	34650	17829	16821	25295	13058	12237	9355	4771	4584	10-14
15-19	36473	19519	16954	25692	13879	11813	10781	5640	5141	15-19
20-24	45973	25411	20562	34638	19337	15301	11341	6080	5261	20-24
25-29	48852	25161	23691	38970	20021	18949	9882	5140	4742	25-29
30-34	42942	23102	19840	35410	19265	16145	7532	3837	3695	30-34
35-39	32010	17721	14289	26547	14943	11604	5463	2778	2685	35-39
40-44	23293	12679	10614	18852	10404	8448	4441	2275	2166	40-44
45-49	18727	10133	8594	14998	8229	6769	3729	1904	1825	45-49
50-54	15877	8828	7049	12730	7247	5483	3147	1581	1566	50-54
55-59	12951	6836	6015	10412	5597	4815	2439	1243	1196	55-59
60-64	8941	4694	4247	7105	3771	3334	1836	907	929	60-64
65-69	5587	2918	2669	4123	2184	1939	1464	734	730	65-69
70-74	3311	1704	1607	2269	1163	1106	1042	541	501	70-74
75-79	1899	909	990	1235	576	659	664	333	331	75-79
80-84	832	389	443	546	249	297	286	140	145	80-84
85+	629	251	378	425	159	266	204	92	112	85+

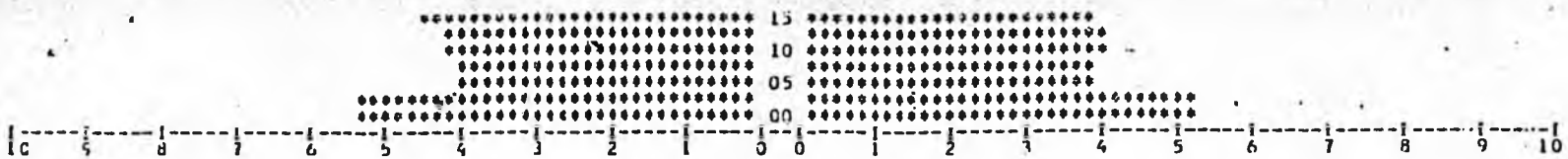


ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION: SUMMARY TABLE BY RACE AND SEX: 1982

	---TOTAL---			---WHITE---			--NONWHITE--			
SEX	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	AGE
TOTAL	414291	219814	194477	317877	170230	147647	96414	49584	46830	TOTAL
0- 4	43421	22197	21224	31815	16268	15547	11606	5929	5677	0- 4
5- 9	33277	16999	16278	23445	11979	11466	9832	5020	4812	5- 9
10-14	34819	17861	16958	25639	13184	12455	9180	4677	4503	10-14
15-19	36611	19607	17004	25797	13929	11868	10814	5678	5136	15-19
20-24	40612	20431	20181	35125	20281	14844	11487	6150	5337	20-24
25-29	47696	23898	23798	37572	18661	18911	10124	5237	4887	25-29
30-34	43056	23666	19390	35251	19657	15594	7805	4009	3796	30-34
35-39	34682	18871	15811	28909	15963	12946	5773	2908	2865	35-39
40-44	24134	12979	11155	19587	10634	8953	4547	2345	2252	40-44
45-49	19074	10342	8732	15200	8374	6826	3874	1968	1906	45-49
50-54	15774	8742	7032	12674	7138	5486	3100	1604	1546	50-54
55-59	13036	6918	6118	10479	5643	4836	2607	1325	1282	55-59
60-64	9402	4915	4487	7515	3969	3546	1887	946	941	60-64
65-69	5708	3001	2707	4236	2285	1951	1472	716	756	65-69
70-74	3456	1753	1703	2345	1192	1153	1111	561	550	70-74
75-79	1932	931	1001	1281	601	680	651	330	321	75-79
80-84	882	414	468	580	266	314	302	149	154	80-84
85+	619	259	360	427	156	271	192	83	109	85+

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1983 14 to Bold

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	420741	223419	197322	322502	172767	149735	98239	50652	47787	TOTAL
0- 4	45180	23097	22083	33208	16980	16228	11972	6117	5855	0- 4
5- 9	34024	17382	16642	24006	12267	11739	10018	5115	4903	5- 9
10-14	35025	17972	17053	25812	13299	12513	9213	4673	4540	10-14
15-19	35603	19011	16592	25165	13489	11676	10443	5522	4921	15-19
20-24	41437	21373	20064	25726	21120	14606	11711	6253	5458	20-24
25-29	45278	22051	23227	35115	16838	18307	10163	5243	4920	25-29
30-34	44578	24644	19934	36314	20383	15931	8264	4261	4003	30-34
35-39	36704	19944	16760	30474	16820	13654	6230	3124	3106	35-39
40-44	25615	13800	11815	20991	11418	9573	4624	2382	2242	40-44
45-49	15373	8506	6864	15437	8520	6917	3933	1986	1947	45-49
50-54	15057	8726	7131	12594	7101	5493	3263	1625	1638	50-54
55-59	13353	7117	6236	10733	5799	4934	2620	1318	1302	55-59
60-64	9741	5104	4637	7741	4084	3657	2000	1020	980	60-64
65-69	5895	3088	2807	4428	2413	2015	1467	675	792	65-69
70-74	3513	1762	1751	2384	1283	1101	1149	579	570	70-74
75-79	1986	965	1021	1319	711	608	667	334	333	75-79
80-84	950	425	525	624	274	350	326	151	175	80-84
85+	607	232	375	431	158	273	176	74	102	85+



PERCENT OF TOTAL POPULATION

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1984

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	427211	226637	200574	327127	175308	151819	100084	51329	48755	TOTAL
0- 4	46277	23964	22313	34768	17778	16990	12109	6186	5923	0- 4
5- 9	35421	18099	17324	25004	12778	12226	10419	5321	5098	5- 9
10-14	34489	17620	16869	25055	12834	12221	9434	4786	4648	10-14
15-19	35064	18701	16363	25096	13443	11653	9998	5258	4740	15-19
20-24	48076	28382	19694	36225	21976	14249	11851	6406	5445	20-24
25-29	42714	20146	22568	32459	14954	17505	10255	5192	5063	25-29
30-34	46264	25367	20897	37629	20903	16726	8635	4464	4171	30-34
35-39	38753	21310	17443	32086	17931	14155	6667	3379	3288	35-39
40-44	27089	14955	12933	22252	12080	10172	4836	2475	2361	40-44
45-49	19562	10641	8921	15692	8674	7018	3870	1967	1903	45-49
50-54	15990	8737	7253	12591	7060	5531	3399	1677	1722	50-54
55-59	13402	7169	6313	10840	5843	4997	2642	1326	1316	55-59
60-64	11103	5385	4798	8029	4285	3744	2154	1100	1054	60-64
65-69	5934	3103	2881	4508	2429	2079	1476	674	802	65-69
70-74	3567	1811	1706	2433	1242	1191	1164	569	595	70-74
75-79	2029	979	1050	1357	654	703	672	325	347	75-79
80-84	1003	439	564	675	285	390	328	154	174	80-84
85+	603	229	374	428	159	269	175	70	105	85+

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1985

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	433686	233070	200616	331777	177875	153902	101909	52195	49714	TOTAL
0- 4	49580	24883	23747	36165	18491	17674	12415	6342	6073	0- 4
5- 9	37311	19067	18244	26624	13609	13015	10687	5458	5229	5- 9
10-14	33101	16905	16196	23470	11987	11483	9631	4918	4713	10-14
15-19	35137	18681	16456	25424	13668	11756	9683	5013	4670	15-19
20-24	48347	29185	19202	36525	22698	13827	11862	6487	5375	20-24
25-29	40467	18566	21901	30380	13546	16834	10087	5020	5067	25-29
30-34	47987	25642	22045	38768	21137	17631	9219	4805	4414	30-34
35-39	40787	22551	18236	33645	18920	14725	7142	3631	3511	35-39
40-44	28078	15086	12992	23149	12594	10555	4929	2492	2437	40-44
45-49	19760	10099	9661	15815	8877	6938	3945	2022	1923	45-49
50-54	16247	8770	7477	12816	7051	5765	3431	1719	1712	50-54
55-59	13772	7350	6422	10995	5990	5005	2777	1360	1417	55-59
60-64	10403	5452	4951	8207	4341	3866	2202	1117	1085	60-64
65-69	6196	3201	2995	4699	2523	2176	1497	678	819	65-69
70-74	3727	1769	1958	2525	1293	1232	1202	576	626	70-74
75-79	2379	1309	1070	1395	677	718	684	332	352	75-79
80-84	1045	422	623	743	314	429	352	158	194	80-84
85+	596	226	370	432	159	273	164	67	97	85+

III.3
Series C: Projected Population By Age, Race, and Sex

Series C, Table III.3

Series C, Table III.3

Series C, Table III.3

Series C, Table III.3

1981 1982 1983

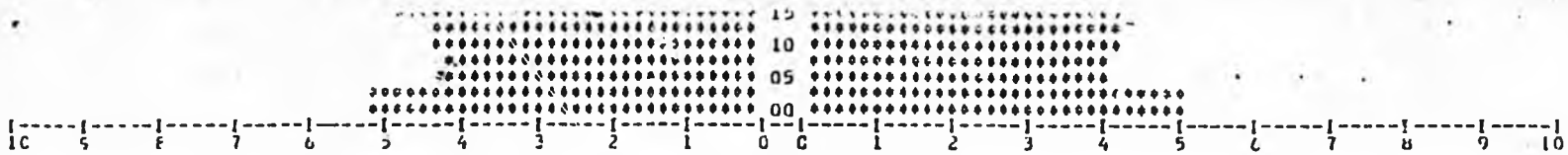
1984 1985

(title) Series 2: Projected Population [illegible] Age, Race, and Sex [illegible] 14 pt Bold 4 of These II-5 11 pt B.

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1981

	---TOTAL---			---WHITE---			--NONWHITE--			
AGE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	AGE
TOTAL	408311	216813	191498	313882	168051	145831	94429	48762	45667	TOTAL
0- 4	41454	21190	20264	30347	15517	14830	11107	5673	5434	0- 4
5- 9	33300	17010	16290	23645	12081	11564	9655	4929	4726	5- 9
10-14	34614	17811	16803	25351	13087	12264	9263	4724	4539	10-14
15-19	36548	19557	16991	25746	13907	11839	10802	5650	5152	15-19
20-24	46506	25746	20760	34763	19414	15349	11743	6332	5411	20-24
25-29	49157	25371	23786	39101	20092	19009	10056	5279	4777	25-29
30-34	43038	23182	19856	35510	19322	16188	7528	3860	3668	30-34
35-39	32079	17762	14317	26620	14985	11635	5459	2777	2682	35-39
40-44	23283	12677	10606	18893	10427	8466	4390	2250	2140	40-44
45-49	18692	10120	8572	15023	8244	6779	3669	1876	1793	45-49
50-54	15832	8801	7031	12746	7255	5491	3086	1546	1540	50-54
55-59	12817	6817	6000	10422	5598	4824	2395	1219	1176	55-59
60-64	8885	4672	4213	7111	3789	3322	1774	883	891	60-64
65-69	5511	2882	2629	4126	2186	1940	1385	696	689	65-69
70-74	3263	1680	1583	2272	1163	1109	991	517	474	70-74
75-79	1878	900	978	1235	576	659	643	324	319	75-79
80-84	829	386	443	546	249	297	283	137	146	80-84
85+	625	249	376	425	159	266	200	90	110	85+

-113



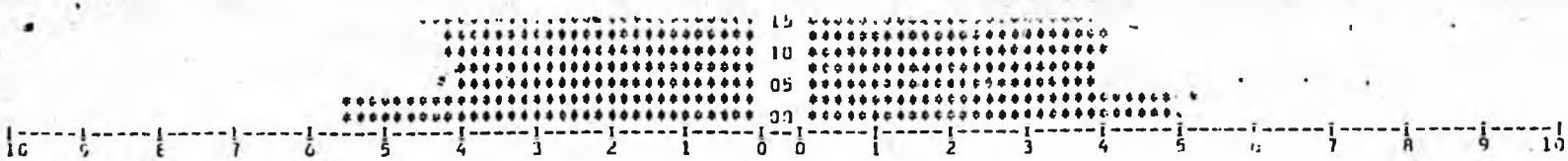
PERCENT OF TOTAL POPULATION

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX, 1982

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	416361	221104	195257	319997	171273	148724	96364	49831	46533	TOTAL
0- 4	43466	22213	21246	31992	16358	15634	11472	5860	5612	0- 4
5- 9	33241	17005	16236	23629	12073	11556	9662	4932	4730	5- 9
10-14	34842	17873	16969	25838	13286	12552	9004	4587	4417	10-14
15-19	34753	17603	17070	25745	14008	11937	13005	5672	5133	15-19
20-24	47418	26868	20550	35165	20239	14926	12253	6629	5624	20-24
25-29	48482	24403	24079	37874	18807	19067	10608	5596	5012	25-29
30-34	43368	23889	19479	35510	19807	15723	7838	4082	3756	30-34
35-39	34005	19065	15935	29132	16087	13045	5773	2913	2860	35-39
40-44	24251	13019	11232	19737	10717	9020	4514	2302	2212	40-44
45-49	17064	10348	8716	15308	9434	6974	3756	1914	1842	45-49
50-54	15747	8727	7020	12755	7234	5521	2992	1493	1499	50-54
55-59	13059	6950	6109	10542	5676	4866	2517	1274	1243	55-59
60-64	9346	4894	4452	7575	3996	3579	1771	898	873	60-64
65-69	5509	2862	2647	4282	2309	1973	1317	643	674	65-69
70-74	3372	1710	1662	2379	1206	1173	993	504	489	70-74
75-79	1912	923	989	1301	611	690	611	312	299	75-79
80-84	875	466	408	583	267	316	293	141	152	80-84
85+	615	237	378	430	158	272	185	79	106	85+

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1983 14 AB

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	424511	225504	199107	326322	17,610	151712	98289	50894	47395	TOTAL
0- 4	45203	23133	22139	33507	17132	16375	11785	6021	5764	0- 4
5- 9	34117	17479	16638	24356	12446	11910	9761	4583	4778	5- 9
10-14	35134	17930	17204	26191	13408	12693	8953	4542	4411	10-14
15-19	35813	19217	16696	25433	13628	11805	10380	5499	4891	15-19
20-24	48617	28024	20593	35879	21139	14740	12738	6885	5853	20-24
25-29	46180	22792	23388	35430	16872	18558	11050	5870	5180	25-29
30-34	45232	25071	20161	36911	20654	16177	8371	4417	3954	30-34
35-39	37131	20191	16940	30890	17050	13841	6241	3142	3099	35-39
40-44	25319	13715	11604	21290	11585	9705	4529	2330	2199	40-44
45-49	19410	10567	8843	15647	8637	7010	3763	1510	1853	45-49
50-54	15866	8732	7134	12754	7193	5561	3112	1539	1573	50-54
55-59	13342	7103	6239	10859	5865	4994	2483	1239	1245	55-59
60-64	9656	5085	4611	7868	4137	3731	1838	948	890	60-64
65-69	5766	3037	2729	4520	2453	2067	1246	579	667	65-69
70-74	3421	1724	1697	2453	1214	1239	968	490	478	70-74
75-79	1957	956	1001	1361	651	710	598	305	293	75-79
80-84	944	418	526	639	281	358	305	137	168	80-84
85+	602	230	372	434	161	273	168	69	99	85+



PERCENT OF TOTAL POPULATION

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX 1984

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	430881	229863	200231	332847	178051	154796	100234	51812	48405	TOTAL
0- 4	47193	24106	23045	35173	17984	17185	11980	6120	5860	0- 4
5- 9	35507	18244	17463	25546	13057	12492	10158	5187	4971	5- 9
10-14	34770	17763	17007	25592	13106	12486	9178	4657	4521	10-14
15-19	35362	18842	16520	25507	13657	11850	9855	5185	4670	15-19
20-24	49115	28535	20180	36512	22067	14445	12603	6868	5735	20-24
25-29	44153	20862	23288	32766	14926	17840	11384	5936	5448	25-29
30-34	47265	26004	21261	38127	21310	17117	9038	4694	4144	30-34
35-39	34435	21708	17727	32746	18296	14450	6689	3412	3277	35-39
40-44	27512	14792	12720	22729	12349	10380	4783	2443	2340	40-44
45-49	19729	10153	8976	16018	8856	7162	3711	1894	1817	45-49
50-54	16053	8801	7252	12835	7199	5637	3258	1603	1655	50-54
55-59	13539	7190	634	11339	5953	5385	2530	1240	1290	55-59
60-64	10251	5393	4858	8206	4365	3841	1995	1028	967	60-64
65-69	5418	3085	2833	4655	2498	2157	1263	587	676	65-69
70-74	3515	1769	1747	2543	1293	1250	973	476	497	70-74
75-79	2014	975	1039	1421	681	740	593	294	299	75-79
80-84	1012	440	572	702	298	404	310	142	168	80-84
85+	590	223	367	427	160	267	163	63	100	85+

ALASKA DEPARTMENT OF LABOR, RESEARCH AND ANALYSIS DIVISION; SUMMARY TABLE BY RACE AND SEX: 1985

14 of B

AGE	---TOTAL--- TOTAL	MALE	FEMALE	---WHITE--- TOTAL	MALE	FEMALE	--NONWHITE-- TOTAL	MALE	FEMALE	AGE
TOTAL	441756	234385	207371	339497	181580	157917	102259	52805	49454	TOTAL
0- 4	48952	25043	23949	36644	18735	17909	12348	6309	6040	0- 4
5- 9	37436	19335	18501	27405	14008	13397	10431	5327	5104	5- 9
10-14	34530	17123	16407	24155	12335	11820	9375	4788	4587	10-14
15-19	35501	18889	16612	26003	13959	12044	9498	4920	4578	15-19
20-24	44313	23662	19651	30960	22876	14084	12353	6786	5567	20-24
25-29	42333	19245	22788	30457	13417	17240	11376	5828	5548	25-29
30-34	49462	26819	22643	39869	21680	18189	9673	5139	4534	30-34
35-39	41776	23135	18641	34582	19441	15141	7194	3694	3501	35-39
40-44	28763	15462	13288	23821	12973	10848	4929	2489	2440	40-44
45-49	20360	11380	8980	16262	9129	7133	3790	1951	1839	45-49
50-54	14662	8003	7560	11352	7239	5513	3301	1694	1647	50-54
55-59	13009	7319	6490	11270	6141	5129	2639	1278	1361	55-59
60-64	10514	5510	5004	8446	4454	3992	2069	1056	1013	60-64
65-69	6231	3223	2978	4900	2615	2285	1301	608	693	65-69
70-74	3683	1846	1837	2676	1363	1313	1007	483	524	70-74
75-79	2041	1013	1071	1486	716	770	555	294	361	75-79
80-84	1104	475	629	780	333	450	324	145	179	80-84
85+	578	216	362	429	199	278	149	57	92	85+

Independence through Susitna Hydro

ENERGY SUPPLY

Harnessing the Susitna River as a source of power would make a dramatic statement for energy independence in Alaska.

Government studies differ in their projections of the percentage of energy demand the project would meet, but the Anchorage Municipal Power & Light utility estimates the Susitna would supply 60-80 per cent of the railbelt area's needs for electrical power when the project first comes on line.

The two dams in the system would generate up to 6.1 billion kilowatt hours of firm annual energy to Fairbanks, Anchorage and points beyond served by utilities in those areas.

More important, the river would supply a reliable, perpetual energy source-little affected by fluctuations in fuel prices, oil embargos or decreasing supplies of finite, nonrenewable fuel sources. Construction of a single project in southcentral Alaska would mean that fewer rivers would be impacted by numerous smaller dams.

PLANNING

Attention to the Susitna River as a power potential intensified in the 1970s when environmentalists and others urged that a proposed dam on the Rampart River be rejected in favor of a hydroelectric facility on the Susitna.

Today, extensive studies are being conducted under a $30 million contract to a private consulting firm--Acres American--through the Alaska Power Authority.

When complete, the study will identify environmental and social aspects of the Susitna project, and the means to mitigate any potential adverse effects. The Department of Fish & Game is conducting detailed studies of fish and wildlife resources in the project area.

Design and engineering as well as other techniques will be developed to assure that valuable fish and wildlife species will flourish.

Recreation potential for the lakes that would be formed by the two dams also will be studied, with potential plans for developing fishing, boating and other activities for tourists and Alaskans.

With continued good planning, the Susitna project can be a model for the nation in providing environmental protection, recreation benefits and economic stability.

JOBS

Construction of the Watana and Devil Canyon dams will provide jobs for Alaskans for nearly 11,000 man years. The project will invest more than $850 million in skilled and unskilled labor, at 1978 wage levels.

It will provide employment stability for Anchorage, Fairbanks and other areas where unemployment levels have reached more than 12 per cent

For more than a decade, Susitna will help free Alaska from chronic boom-bust economy ills. And once the dams are built, they will provide operation and maintenance jobs with a $1.4 million annual payroll, according to Corps of Engineers 1978 estimates.

A recreation industry in the private sector could grow around the estiated 15,000-190,000 visitors the project area could attract with full recreation facility planning.

PETROLEUM

More than any other factor, oil dictates our economy. The U.S. imports nearly half its supply from foreign nations, principally those in the politically unstable OPEC cartel.

OPEC prices have driven the cost of oil up from $3.65 just 10 years ago to $33, and higher, today. And the state Department of Revenue estimates the wellhead price of crude oil could reach $150 a barrel in 1995-about the time the Susitna Hydropower project could be on line.

That will mean consumers will pay from $5.50-$6 for gasoline and home and commercial heating fuel. For Alaska utilities, these cost increases would mean ever-rising bills to the consumer.

And while U.S. petroleum reserves are dwindling, national energy policy mandates deregulation of oil and gas prices and prohibits utilities from burning these fuels in new facilities.

Alternative energy supplies must be found for the future ... and in Alaska, one of the most promising is the Susitna Hydro project.

ALASKA POWER AUTHORITY

SB608

334 WEST 5th AVENUE - ANCHORAGE, ALASKA 99501

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

FEB 10 1982

January 25, 1982

Bettye Fahrenkamp
4016 Evergreen
Fairbanks, Ak. 99701

Dear Ms. Fahrenkamp:

With this letter, I am announcing a third revision to the Susitna Hydroelectric Project Plan of Study (POS). The revision consists of a schedule adjustment that changes the submittal of the Federal Energy Regulatory Commission (FERC) license application from June 30, 1982 to September 30, 1982. This plan revision has been made for several reasons.

First and foremost, it is believed that the quality of certain aspects of the license application will be materially improved by the postponement. Specifically, the assessment of fishery impacts will benefit from data derived during ADF&G's winter program, and there will be additional time available to further define both the fish and wildlife mitigation plans. Also, since the winter of 1980-81 was atypically mild, the inclusion of data from the winter of 1981-82 will enhance the environmental data base.

Second, a relocation of the original schedule will permit additional opportunity for agency review of the proposed project and mitigation plans. Agency suggestions received by June 15, 1982 can be more fully addressed and plans can be revised as necessary.

Third, this schedule revision is not expected to delay the eventual issuance of the license application by FERC, nor the initiation of project construction. An improved license application will facilitate its acceptance and processing by FERC, and it is believed that the three month postponement will be more than compensated for by the increased ease with which the improved application will be processed. The postponed license application submittal will not affect the schedule of design activities programmed in parallel with the licensing process. Therefore, the initiation of project construction will not be delayed.

This POS revision, like the original POS, is predicated on the assumption that the Board of Directors of the Alaska Power Authority, the Governor and the Legislature will determine that the Susitna Project has sufficient merit to warrant the filing of a FERC license application. If the determination and decision are to the contrary, of course, the entire issue of license application submittal schedules will become moot.

Sincerely,

Eric P. Yould

Eric P. Yould
Executive Director

SB 608

TO: Billy Berrier
Director
Legal Services

DATE: 3/17/82

Attn: Pegues

FROM: Bettye Fahrenkamp
Chairman

RE: Final Committee Substitute
SSSB 608

The Committee today completed work on SSSB 608. Attached is a work draft in which they would like to have incorporated the following additions:

#1 Page 2, line 4, a new section 8 to read:

"The sum of $1,100,000 is appropriated from the general fund to the Alaska Power Authority for a feasibility study and initiation of design for the Hoonah intertie."

#2 Renumber the following sections 8 - 11 accordingly.

#3 Page 2, line 14, a new "renumbered" section 13 to read:

"The sum of $35,000,000 is appropriated from the general fund to the Alaska Power Authority for construction of the Bradley Lake hydroelectric project."

#4 Page 2, following #3 above, to read:

"The sum of $200,000 is appropriated from the general fund to the Alaska Power Authority for a new power distribution system in Tenakee Springs."

#5 Renumber the follwing sections accordingly.

#6 Page 3, line 7, delete "9" and "10" and insert "10" and "19" in their place.

#7 Page 3, line 9, delete "8" and insert "9" in its place.

#8 Page 3, line 9, delete "10 - 15" and insert "11 - 18" in its place.

#9 Page 3, line 9, delete "17 - 18" and insert "20 - 21" in its place.

#10 Page 1, under Funding Information delete "$55,900,000" and insert "$92,200,000" in its place.

When the bill is completed please return to Room 211 Capitol Building. If you have any questions please contact Rosa King at 465-3834.

#14

SENATE AMENDMENT

By Senator Dick Eliason

To: Senate Resources Committee SENATE BILL No. CSSSSB 608

To: _____ HOUSE BILL No. _____

PAGE: LINE:

1 27 Add new Section ~~7~~

The sum of $200,000 is appropriated from the general fund to the Alaska Power Authority for a new power distribution system in Tenakee Springs.

Renumber subsequent sections accordingly.

Revised 3/17/82 12:30pm Pegues 3-17-82

#2

Original sponsors: Kerttula, Dankworth, Bennett, et al

Funding Information

General Fund	~~$55,900,000~~	55,900,000 / 1,100,000
Other Funds	-0-	35,000,000 / 200,000
	~~$55,900,000~~	92,200,000
	92,200,000	92,200,000

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SPONSOR SUBSTITUTE FOR SENATE BILL NO. 608 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making special appropriations for various power projects and energy-related purposes; and providing for an effective date."

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

* Section 1. The sum of $25,600,000 is appropriated from the general fund to the power development fund of the Alaska Power Authority (AS 44.83.380 - 44.83.425) for the Susitna River hydroelectric project (AS 44.83.300 - 44.83.360). Governor budget

* Sec. 2. The sum of $200,000 is appropriated from the general fund to the Department of Fish and Game for assessment of the fisheries enhancement potential of the Susitna River system. add on what possible

* Sec. 3. The sum of $600,000 is appropriated from the general fund to the Office of the Governor to complete alternatives studies and additional work necessary to make key decisions on construction of the Susitna River hydroelectric project.

* Sec. 4. The sum of $200,000 is appropriated from the general fund to the Alaska Power Authority for railbelt windpower feasibility studies.

* Sec. 5. The sum of $500,000 is appropriated from the general fund to the Alaska Power Authority to continue Chakachamna fisheries and habitat studies.

* Sec. 6. The sum of $1,200,000 is appropriated from the general fund to the Office of the Governor for an assessment of the economic and engineering feasibility of generating and transmitting gas-fired power from the North Slope to the railbelt.

#21

* Sec. 7. The sum of $500,000 is appropriated from the general fund to the Alaska Power Authority for design and right-of-way activities for a possible Kake-Petersburg intertie.

* Sec. 8. The sum of $300,000 is appropriated from the general fund to the Alaska Power Authority for feasibility analysis of alternatives that can lower the cost of power for Angoon.

* Sec. 10. The sum of $2,500,000 is appropriated from the general fund for payment as a grant to the City of Cordova for an electric generation unit.

* Sec. 11. The sum of $1,250,000 is appropriated from the general fund to the Alaska Power Authority for a substation and distribution system for Cantwell.

* Sec. 12 The sum of $2,000,000 is appropriated from the general fund to the Alaska Power Authority for the Lower Kuskokwim power plan.

#1 = 13 #2 = 14

* Sec. 12.5 The sum of $2,000,000 is appropriated from the general fund to the Alaska Power Authority for installation of waste heat facilities in rural villages.

* Sec. 15. The sum of $2,000,000 is appropriated from the general fund to the Alaska Power Authority for feasibility studies in rural villages.

* Sec. 17 The sum of $1,600,000 is appropriated from the general fund to the division of energy and power development, Department of Commerce and Economic Development, for reconnaissance studies in rural villages.

* Sec. 18. The sum of $14,000,000 is appropriated from the general fund to the division of energy and power development, Department of Commerce and Economic Development, for residential energy conservation and weatherization programs.

* Sec. 19 The sum of $1,200,000 is appropriated from the general fund to the division of energy and power development, Department of Commerce and Economic Development, for grants to regional nonprofit corporations for village energy planning and education.

* Sec. ~~17~~ 20. The sum of $100,000 is appropriated from the general fund to the Office of the Governor for a longitudinal cost-benefit analysis of energy conservation and weatherization program.

* Sec. ~~18~~ 21. The sum of $150,000 is appropriated from the general fund to the division of energy and power development, Department of Commerce and Economic Development, to continue work on the long-term energy plan.

* Sec. ~~19~~ 22. The appropriations made in secs. ~~9~~ 10 and ~~16~~ 19 of this Act shall be disbursed in accordance with AS 37.05.315 - 37.05.319.

* Sec. ~~20~~ 23. The appropriations made in secs. 1 - ~~9~~ 11, ~~10 - 15~~ 18, and ~~17~~ 20 - ~~19~~ 21 of this Act are for capital projects or are related to capital projects and do not lapse in accordance with AS 37.25.010.

* Sec. ~~21~~ 24. This Act takes effect immediately in accordance with AS 01.10.-070(c).

(REVIEW DRAFT: SUBJECT TO REVISION)

SUSITNA HYDROPOWER: A REVIEW OF THE ISSUES

Prepared for the Alaska State Legislature

History of the Susitna Proposal
The Acres Plan of Study
Overview of the Electric Power Industry
Planning for New Generating Capacity
Existing Railbelt Utilities
Federal and State Regulation

By Arlon R. Tussing
Lois S. Kramer
Barbara F. Morse

15 April 1980

ARLON R. TUSSING & ASSOCIATES, INC.
Anchorage, Juneau, Seattle

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CHAPTER I: HISTORY OF THE SUSITNA PROPOSAL

During the first half of the Twentieth Century hydroelectric generation, with its high reliability and its freedom from recurring fuel costs, was the preferred source of electricity wherever suitable damsites existed, and one of the chief missions of the Interior Department's Bureau of Reclamation was to identify potential hydropower sites, particularly on the Western federal lands.

Origins of the Susitna project.

Alaska's rivers were included in the federal site identification program, but they were too remote from the continent's population centers to be affected by the federal dam-building program of the 1930's, which resulted in major developments on the Tennessee, Columbia, Colorado and other Lower 48 river systems. The push for large hydro projects in Alaska seems to date from the late 1940's.

> [In 1950,] the Department of the Interior provided $150,000 to be used by the Bureau of Reclamation to update its Alaskan investigations of 1948. The results of these studies were to be used as a basis for legislation authorizing the development of the territory's water resources.
>
> In its final report, published in 1952, the Bureau of Reclamation identified a large number of possible hydroelectric power sites throughout Alaska. The Bureau pointed out that, among all the potential rivers, the Susitna River was the most strategically located of all Alaska streams because of its proximity to Anchorage and Fairbanks and the connecting railbelt. The Susitna River basin occupies the northern half of the Cook Inlet area. It is bounded on the west and north by the Alaska Range, and on the east by the Copper River Plateau. The Susitna River enters Cook Inlet 25 miles west of Anchorage. The main stream originates in a series of glacier-bearing peaks some 90 miles south of Fairbanks and 200 miles north of Anchorage of which Mt. Hayes at 13,940 feet is the highest.