

SCOMM

#9: 101

STATE OF ALASKA

THE LEGISLATURE

BUDGET AND AUDIT COMMITTEE

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M E M O R A N D U M .

TO: J. H. Hogan, Director
Legislative Finance Division

FROM: Milt Barker
Fiscal Analyst
Legislative Finance Division

SUBJECT: Economic & Fiscal Considerations re Permanent Fund

Basically, the alternatives confronting Alaska regarding the disposition of additional revenues from outside the State economy, namely, North Slope oil revenues, are five:

1. Additional government expenditures.
2. Transfer of the income to individual Alaskans through tax credits, negative income tax, bonuses, repeal of existing taxes, etc.
3. Loans to individual Alaskans for housing and residential improvements.
4. Investment in Alaska in profitable enterprises.
5. Investment outside Alaska in the stock market, bond market, money market, through equity participation in profitable ventures, etc.

Each of these alternatives has different impacts on the Alaskan economy which may be assessed using some employment multipliers developed by the Department of Labor (Exhibit 1). These multipliers would differ from economic or Keynesian multipliers relating to gross state product to the extent that various expenditures differ in their relative labor intensiveness. However, since we are dealing in the following paragraphs with broad macroeconomic categories, these differences should roughly average out. Also, employment multipliers might more closely conform to the effects on personal income which would be a better measure of Alaskan benefits than gross product since a large portion of the depreciation and the returns to capital contained in the measure of gross state product accrue to persons outside Alaska.

Displayed in Exhibit II are the various income flows that would occur with respect to the Alaskan economy for each of the five alternatives as well as an additional variant of Alaskan investment in which leverage is used, column (6). Year zero records the utilization of an additional dollar of revenue in excess of current government expenditures.

1. In the case of government expenditure, the multiplier of 1.52 is used which is the weighted average of the government consumption and investment multipliers obtained from Exhibit I. This average is a way of reflecting the fact that capital expenditures lead to additional operating expenditures.
2. Data is unavailable for estimating an Alaskan marginal propensity to consume. Nationally, as Exhibit III reveals, the average expenditure out of disposable income is about 92%-93% currently. Thus, we could assume that 90¢ out of every dollar of income transferred to Alaskans would be spent, while 10¢ would be saved. As Exhibit III also indicates, roughly 25% of all savings go into residential investment. However, since all savings include business as well as individuals, we'll assume half of all individual savings in Alaska flow into residential investment and half into business investment. Let us further assume that the ratio of sales to assets for such business investment is 1.28 which is the ratio contained in Exhibit IV for the largest 500 U.S. corporations. (This may be a conservative estimate of sales, since the larger corporations are probably more capital-intensive than the smaller businesses financed by Alaskan banks.) (Finally, let us assume that the sales developed out of this investment are exported outside Alaska.) Then we can apply the multipliers for consumption (1.84) to 90¢ on the dollar, household investment (1.77) to 5¢, and business investment (1.78) to 5¢, followed thereafter by the private export multipliers (1.78) applied to 6.4¢ of annual sales. (If one were to assume the sales were local, thus replacing imports, all the various multipliers would increase in value. This increase times the corresponding total State expenditures in each category, data not available, would measure the additional benefits for Alaska.)
3. For home loans we use the household investment multiplier 1.77.

GNP
Consumption
Values for
Valid Economic
Structures in future

Not necessarily
Valid assumption
Not desirable.

4. For Alaskan investment we use the business investment multiplier 1.78 followed by the private export multiplier 1.78 applied to \$1.28 of sales for every \$1.00 of assets as in Example (2).
5. For outside investment, we assume the State receives a 10% return.
6. The arithmetic for leveraged Alaskan investment is the same as Example (4) except we apply the multipliers to two dollars of investment, and assume one dollar comes out of Alaska's economy, the other from outside.

Having laid out all the income flows for these alternatives, they are discounted to year zero at 10% to determine their present value. Some difficult theoretical problems are avoided by assuming the social discount rate is the same as the market interest rate.

Two important caveats are in order if one wants to actually make a claim for the benefits derived here. The quantitative relationships all assume that marginal rates will be the same as average rates and that these rates will not change with the expenditure or investment of additional dollars.

How does all this relate to State finances and the permanent fund? What some would desire is the maximum gain to Alaska as a whole with the proviso that the gain accrue over time so as to provide a stable base for the government taxation as well as avoiding a boom-bust experience.

On this criteria, Alaskan investment, leveraged or not, is far and away the most desirable. There would be differences in benefits attached to small business loans, infrastructure development, and industrial ventures that other analyses will no doubt assess, but these all have benefits that accrue over time, with higher values in later years.

Outside investment produces no net gain but does assure continued government revenue over time; while government expenditure and home loans create a significant one time impact. Income transfers create an impact with some extension in time; however, it is obviously a very uneven impact, again conducive to a boom-bust scenario.

Of course, if one's criteria includes restrictions on economic development, Alaska investment will be less favored. Then, the alternative of greatest value and also of greatest extension through time is income transfers.

However, Exhibit I deals with the value of various alternatives to Alaska as a whole, and not in terms of the State revenues generated under the existing State tax structure. Exhibits V and VI display these same alternatives in terms of cash flows to State government. Alaska investment is assumed to be in the form of loans. In Exhibit V, we assume home loans and Alaska investment at 5% interest; while in Exhibit VI, 10% is assumed. It is also assumed that the State tax structure takes 6.9% of the benefits displayed in Exhibit I. This ratio was developed by comparing FY 75 Revenue Sources estimates of unrestricted revenue less investment earnings and oil revenues to personal income as estimated by the Division of Economic Enterprise for FY 75 and FY 76. (We have adjusted the unrestricted revenue and related it to personal income rather than gross product because there is a significant element of value added in the petroleum sector that is not captured by the use of employment multipliers. Petroleum, of course, is an important revenue source.)

Examining Exhibits V and VI, we again see that Alaskan investments are the most attractive alternatives, both with respect to the magnitude of State revenues and their continuity over time. If Alaskan investment is restricted, then the next most desirable alternative is, now from a State revenue point of view, outside investment rather than income transfers, the most valuable to the State as a whole. Not only is outside investment more attractive from the State revenue point

of view, but again, it avoids the boom-bust tendencies of income transfers when the entire State economy is considered.

As we see in Exhibit VI, if the State charges enough for home loans, this could be more attractive than outside investment from a State revenue point of view. However, loans, like income transfers, create large one-time expenditures. And, if rates are so high, the State, depending on its loan practices, might only be usurping the role of private banking.

This brings us to the question of the disposition of, not an additional dollar of State revenue, but additional billions of dollars. Certainly, home loans can only absorb a small amount of these sums. Any of the other alternatives conceivably could absorb these flows, but there could be doubt that Alaskan investment could in profitable enterprises.

Exhibit VII which is the same as Exhibit V, except that no interest at all is received by the State, suggests that even an unprofitable enterprise could still show the greatest benefit to the State as a whole. There even appears to be some room for corporate tax forgiveness, subsidy of the outside investor in the leverage situation, other forms of subsidy, etc., and to still have a net gain in State revenue which is also still greater than any alternative. Given this latitude, there might be enough Alaskan investments that could at least meet their costs to absorb large cash flows.

Certainly, all the alternatives we have been discussing are available to the General Fund which conceivably could have balances excess to the operating needs of State government, even with a Permanent Fund. However, the requirement in the proposed constitutional amendment that the principal of the permanent fund "shall be used only for . . . income producing investments" restricts the use of these funds to alternatives 3 - 6.

Thus, for the Permanent Fund, Alaskan investment in profitable enterprises yielding an income to the State is quantitatively the best alternative. For some, qualitative considerations may recommend outside investment. Home loans are least favored by this analysis but may merit consideration on other grounds or in specially-targeted programs.

A point that is sometimes raised concerning the benefits of investment in Alaskan enterprise is that while total incomes rise, they do not do so on a real per capita basis because of outside job-seekers who come north and development-induced inflation. Below is Alaskan personal income per capita in current dollars on the left and adjusted by the Anchorage Consumer Price Index (with 1967 as the base year) on the right.

PER CAPITA PERSONAL INCOME

<u>Year</u>	<u>Current Dollars</u>	<u>Real Dollars</u>
1970	4,644	4,237
1971	4,916	4,354
1972	5,195	4,482
1973	5,923	4,903
1974	6,890	5,145
1975	7,988	5,244

Source: Division of Economic Enterprise

On the whole, real incomes per capita can be seen to have risen throughout the period of heavy pipeline construction activity. However, the rapid inflation accompanying this activity has meant great hardship for individuals not participating in the boom economy.

<u>Year</u>	<u>% Change in Anchorage CPI</u>
1970	3.4
1971	2.3
1972	1.9
1973	7.9
1974	13.8
1975	11.1

The boom has lowered the unemployment rate although the average number of unemployed has increased:

<u>Year</u>	<u>% Unemployed</u>	<u>Average Unemployment</u>
1970	9.0	9,700
1971	10.4	12,100
1972	10.5	12,900
1973	10.8	13,900
1974	10.0	14,900
1975	8.0	14,500

Source: Research & Analysis, Alaska Dept. of Labor

Given the seasonality of much of Alaska's employment, 8% may be close to the minimum unemployment one can expect. If so, the greater number of unemployed merely reflects normal turnover, new entrants, layoffs, seasonally unemployed, etc., and strongly suggests that most Alaskan workers were able to participate in the boom.

Thus, the main drawbacks one may oppose to Alaskan investment are inflation and changes in lifestyle, environmental quality, etc.

Some will argue that there is no choice but Alaskan investment if State government is to continue at its established level after oil revenues are gone. For example, for FY 77 a General Fund budget of \$692 million was signed by the Governor. If we had no oil revenues, only our 6.9% take relative to personal income as discussed above, this budget would require \$10.0 billion in personal income. Estimated personal income for 1976 is only \$3.7 billion and, indeed, a good portion of this is derived from employment in the petroleum sector.

If Alaska presently had a permanent fund of \$2 billion earning 10% a year, this would reduce the necessary budget funding to \$492 million, requiring personal income of \$7.1 billion, still almost twice the current level.

If the rate of growth of State government matches or exceeds the rate of growth in personal income, the State will not be able to balance its budget without extraordinary resource income or else a severe upward revision of its ordinary tax structure.

<u>Year</u>	<u>Actual General Fund Budget</u>	<u>% Increase</u>	<u>Personal Income</u>	<u>% Increase</u>
1970	296		1,412	
1971	292	- 1.4	1,548	9.6
1972	321	9.9	1,697	9.6
1973	371	15.6	1,957	15.3
1974	468	26.1	2,398	22.5
1975	620 est.	32.5	3,232 est.	34.7
1976	700 est.	12.9	3,700 est.	14.5
6 year increase		136.5		162.0

Source: Budget Document & Division of Economic Estimation

Personal income growth has however outstripped budget growth somewhat in the recent past. From the above table, we see that the growth of personal income has been 18% greater than the growth of the budget over a six-year period. At this rate, it would take almost 50 years for personal income to reach a level able to finance the then current general fund budget through a 6.9% take from ordinary taxes with no permanent fund or resource revenues.

To some, this will argue strongly for Alaskan investments to step up the growth in incomes. Others may believe, particularly with the permanent fund in place, that government growth will abate. Private development of resources in Alaska without governmental stimulus may have a longer horizon than most anticipate.

Exhibit VII shows per capita state and local government employment for all states. Part of the answer in the long run to the problem of State finances may be to move toward a more normal ratio of government employment per capita.

Exhibit I

Since we assumed employment is proportional to local income and consumption, the marginal propensity to consume locally, s , would be the total employment generated directly and indirectly divided by total employment.

$$C - Mc = sY$$

Where C = Consumption
 Mc = Imports for Consumption
 s = Marginal Propensity to Spend Locally = Average Propensity
 Y = Income

The portion of the equation, $C - Mc$, generated 28,779 jobs in 1970 in Alaska (see Table 2, Col. 3). For the same time period average non-ag wage and salary employment was 90,865.

$$\begin{aligned} \text{Substituting} \quad 28,779 &= s \ 90,865 \\ s &= .3167 \end{aligned}$$

Therefore, in 1970 the short-run multiplier for an increase in employment in any of these sectors, export, government, or investment - was 1.46 ($\frac{1}{1-.3167} = 1.46$).

Furthermore, an increase in one of these sectors causes an indirect increase in the interindustrial linkages. A direct increase in employment from private exports causes increases in employment and income in the supplying industries. Therefore, the overall multiplier for a change in employment in the private export sector would be as follows:

$$dy = \frac{1}{1-s} \ 1.22 \ dx$$

Where 1.22 is the ratio of direct private export employment to total private export employment.
Private Exports $dy = \frac{1}{1-.3167} \ 1.22 \ dx = 1.78 \ dx$

For the other six components measured by the model the multipliers are:

Government Exports	$dy = 1.72 \ dx$
Consumption	$dy = 1.84 \ dx$
Business Investment	$dy = 1.78 \ dx$
Household Investment	$dy = 1.77 \ dx$
Government	$dy = 1.50 \ dx$
Government Investment	$dy = 1.74 \ dx$

It is interesting that in Alaska consumption appears to have the highest multiplier, 1.84, and government appears to have the lowest, 1.50. On a national scale this same relationship is assumed true with private consumption being the real mover of the economy.

Source: *Economic Analysis Vol. 1 Issue Ten; Research + Analysis, Alaska Dept. of Labor*

	(1) Private Exports Xp	(2) Govt. Exports Xg	(3) Consump- tion C	(4) Business Invest. Ib	(5) Household Invest. Ih	(6) Govt. Local Consump- tion Gc	(7) Govt. Local Investment Gs	(8) Total
Mining								
Direct	2506							2506
Indirect	247	2	41	26	10	39	22	387
Total	2753	2	41	26	10	39	22	2893
Direct %	91.0							86.6
Contract Construction								
Direct				2440	1434		3019	6893
Indirect								
Total				2440	1434		3019	6893
Direct %				100.0	100.0		100.0	100.0
Manufacturing								
Direct	5886		157	219		235	31	6528
Indirect	29	2	830	98	60	97	117	1233
Total	5915	2	987	317	60	332	147	7761
Direct %	99.5		15.9	69.1		70.8	21.1	84.1
Canneries*								
Direct	2794							2794
Indirect			729			1		730
Total	2791		729			1		3524
Direct %	100.0							79.3
Wood Products*								
Direct	2493		55			17		2565
Indirect	1		132	13	8	13	17	184
Total	2494		187	13	8	30	17	2749
Direct %	100.0		29.4			56.7		93.3
TC&PU								
Direct		191	2860			2368		5419
Indirect	562	13	1685	192	164	347	203	3166
Total	562	204	4545	192	164	2715	203	8585
Direct %		93.6	62.9			87.2		63.1
Trade Retail								
Direct			10320	12		763		11095
Indirect	150	4	1030	61	74	153	54	1526
Total	150	4	11350	73	74	916	54	12621
Direct %			90.9	16.4		83.3		87.9

Total, Direct and Indirect Employment to Demand
Sectors & Percentages of Direct to Total Employment
State of Alaska
(continued)

	(1) Private Exports Xp	(2) Govt. Exports Xg	(3) Consump- tion C	(4) Business Invest. Ib	(5) Household Invest. Ih	(6) Govt. Local Consump- tion Gc	(7) Govt. Local Investment Gs	(8) Total
Trade Wholesale								
Direct	16		29			68		113
Indirect	467	11	1133	156	114	239	170	2290
Total	483	11	1162	156	114	307	170	2403
Direct %	3.3		2.5			22.1		4.7
FIRE								
Direct			1379	186	706	71	68	2410
Indirect	104	2	329	37	33	53	36	594
Total	104	2	1708	227	739	124	104	3004
Direct %			80.7	81.9	95.5	57.3	65.4	80.2
Services								
Direct			8154	126	423	915		9618
Indirect	259	6	832	97	94	151	98	1537
Total	259	6	8986	223	517	1066	98	11155
Direct %			90.7	56.5	81.8	85.8		86.2
Government								
Direct						34981	569	35550
Indirect								
Total						34981	569	35550
Direct %						100.0	100.0	100.0
Total								
Direct	8392	195	22899	2983	2563	39401	3687	80120
Indirect	1818	40	5880	667	549	1079	700	10733
Total	10226	231	28779	3650	3112	40480	4387	90865**
Direct %	82.1	84.4	79.6	81.7	82.4	97.3	84.0	88.2

Indirect employment is obtained by an iterative process, 1.6% of mining goes to Contract Construction: 1.6 X 35.4 (percentage of contract construction to business investment) yields 0.57 percent sales from mining goes to business investment.

* Canneries and Wood Products are part of manufacturing.

** Differs from actual non-ag wage and salary because of rounding.

EXHIBIT II

BENEFITS TO THE STATE AS A WHOLE

Year	Government Expenditure	Income Transfers	Home Loans	Alaskan Investment	Outside Investment	Leveraged Alaskan Investment
0	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
1	1.52	1.83	1.77	1.78	.10	3.56
2		.11		2.27	.10	4.54
3		.11		2.27	.10	4.54
4		.11		2.27	.10	4.54
5		.11		2.27	.10	4.54
:		:		:	:	:
:		:		:	:	:
Net Present Value @ 10%	.38	1.66	.61	2.68	.00	6.36

Exhibit III

ECONOMIC EXPECTATIONS: LOOKING AHEAD FOUR QUARTERS

	—1975— —Actual— IVQ	—1976— Estimated			
		IQ	IIQ	IIIQ	IVQ
		(billions of dollars, annual rate)			
Gross National Product	1,572.5	1,611.0	1,654.0	1,712.0	1,781.0
Personal Consumption Expenditures	1,001.1	1,027.0	1,051.0	1,074.0	1,100.0
Durable Goods	137.6	142.0	149.0	155.0	165.0
Nondurable Goods	423.7	438.0	447.0	456.0	465.0
Services	439.7	447.0	455.0	463.0	470.0
Gross Private Domestic Investment	205.4	220.0	230.0	251.0	280.0
Producers' Durable Equipment	98.3	103.0	106.0	114.0	126.0
Nonresidential Structures	53.6	55.0	56.0	60.0	65.0
Residential Investment	55.4	60.0	65.0	72.0	81.0
Change in Business Inventories	-2.0	+2.0	+3.0	+5.0	+8.0
Net Export of Goods and Services	21.2	12.0	8.0	7.0	6.0
Govt. Purchase of Goods and Services ...	344.8	352.0	365.0	380.0	395.0
National Defence	87.4	89.0	92.0	95.0	95.0
Nondefence	42.5	45.0	47.0	50.0	52.0
State and Local	214.8	218.0	226.0	235.0	248.0
Personal Disposable Income	1,114.0	1,141.0	1,160.0	1,180.0	1,208.0
Personal Savings	88.6	90.0	85.0	82.0	84.0
Savings as % of Disposable Income	8.0%	7.9%	7.3%	6.9%	7.0%
Gross National Product (1972 dollars) ..	1,216.0	1,229.0	1,242.0	11,260.0	1,283.0
Implicit Price Deflator (1972 = 100)	129.3	131.1	133.2	135.9	138.8

Source: Department of Commerce and Moody's Estimates. Totals may not add because of rounding.

Exhibit IV

Performance of the 500

	1975	1974	1973
Combined sales			
(\$000)	865,233,382	833,089,679	667,105,711
Change in sales (%)	+3.9	+24.9	+19.6
Combined profits			
(\$000)	37,849,994	43,642,945	38,680,461
Change in profits			
(%)	-13.3	+12.8	+39
Combined assets			
(\$000)	668,478,042	630,271,081	555,462,284
Sales increases	338	472	490
Profit increases	231	347	425
Money losers	28	21	9
Median profit			
margin (%)	3.9	4.3	4.5
Median return on			
equity (%)	11.6	13.6	12.4
Median growth in earnings			
per share over			
previous decade (%)	6.59	9.45	9.67
Median total			
return (%)	+51.23	-22.35	-25.49
Median total return			
over previous			
decade (%)	3.08	1.83	5.22
Combined			
employment	14,412,992	15,318,046	15,532,083

EXHIBIT V

STATE REVENUES (LOANS @ 5%)

Year	Government Expenditure	Income Transfers	Home Loans	Alaskan Investment	Outside Investment	Leveraged Alaskan Investment
0	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
1	.10	.13	.17	.17	.10	.30
2		.01	.05	.21	.10	.36
3		.01	.05	.21	.10	.36
4		.01	.05	.21	.10	.36
5		.01	.05	.21	.10	.36
:		:	:	:	:	:
:		:	:	:	:	:
Present Value @ 10% of cash inflows only	.09	.21	.61	2.06	1.00	3.55

EXHIBIT VI

STATE REVENUES (LOANS @ 10%)

Year	Government Expenditure	Income Transfers	Home Loans	Alaskan Investment	Outside Investment	Leveraged Alaskan Investment
0	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
1	.10	.13	.22	.22	.10	.35
2		.01	.10	.26	.10	.41
3		.01	.10	.26	.10	.41
4		.01	.10	.26	.10	.41
5		.01	.10	.26	.10	.41
:		:	:	:	:	:
:		:	:	:	:	:
Present Value @ 10% of cash inflows only	.09	.21	1.11	2.56	1.00	4.05

EXHIBIT VII

STATE REVENUES (INVESTMENT WITH NO RETURN)

Year	Government Expenditures	Income Transfers	Home Loans	Alaskan Investment	Outside Investment	Leveraged Alaskan Investment
0	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
1	.10	.13	.17	.12	.10	.25
2		.01	.05	.16	.10	.31
3		.01	.05	.16	.10	.31
4		.01	.05	.16	.10	.31
5		.01	.05	.16	.10	.31
:		:	:	:	:	:
:		:	:	:	:	:
Present Value @ 10% of cash inflow only	.09	.21	.61	1.56	1.00	3.05

Table 11. Full-Time Equivalent Employment of State and Local Governments Per 10,000 Population, by Function and by State: October 1975

State	All functions	Education							Other education
		Total	Local schools			Institutions of higher education			
			Total	Instruc- tional staff	Other	Total	Instruc- tional staff	Other	
UNITED STATES, TOTAL	474.4	232.3	179.4	126.4	53.0	48.8	18.8	30.0	4.1
ALABAMA	449.7	214.2	154.3	113.9	40.4	50.4	17.9	32.5	9.6
ALASKA	722.0	311.4	234.3	153.5	80.3	67.2	31.2	36.1	9.9
ARIZONA	509.5	265.4	190.7	127.9	62.8	70.1	25.7	44.4	4.6
ARKANSAS	424.2	222.0	161.7	115.4	46.3	48.9	12.7	36.2	11.5
CALIFORNIA	496.5	228.7	169.6	115.0	54.7	56.9	21.7	35.2	2.2
COLORADO	538.7	297.2	206.0	143.7	62.4	88.9	27.1	61.8	2.3
CONNECTICUT	416.6	220.7	185.3	141.5	43.9	27.9	11.2	16.7	7.5
DELAWARE	532.0	278.6	198.7	143.3	55.4	75.6	25.0	50.6	4.3
DISTRICT OF COLUMBIA	726.4	204.4	178.0	119.4	58.6	26.4	10.8	15.7	-
FLORIDA	484.8	220.8	178.4	121.0	57.4	39.3	15.3	24.0	3.1
GEORGIA	522.7	235.7	182.4	127.4	54.9	46.1	16.1	30.1	7.2
HAWAII	489.4	217.2	152.9	112.4	40.5	62.3	25.2	37.1	1.9
IDAHO	507.7	249.5	186.4	139.6	46.8	57.1	20.7	36.4	6.0
ILLINOIS	446.0	225.3	174.8	123.3	51.5	48.1	20.0	28.0	2.5
INDIANA	435.4	235.1	177.9	122.0	55.9	52.2	19.7	32.5	4.9
IOWA	483.2	275.7	210.6	150.5	60.1	60.4	21.2	39.2	4.7
KANSAS	511.1	262.7	190.6	137.4	53.2	68.7	32.9	35.8	7.1
KENTUCKY	420.3	220.5	160.0	111.2	48.8	44.9	14.5	30.3	7.0
LOUISIANA	517.5	256.5	204.9	132.5	72.4	44.6	14.3	30.3	8.7
MAINE	445.9	242.5	194.8	143.4	51.5	38.9	10.7	28.3	-
MARYLAND	498.7	250.8	186.6	131.0	55.5	59.6	28.0	31.6	4.6
MASSACHUSETTS	457.0	202.3	176.0	131.9	44.1	23.6	9.8	13.8	2.6
MICHIGAN	446.8	243.3	185.3	125.9	59.4	55.4	19.4	36.0	2.6
MINNESOTA	480.2	258.5	201.3	144.6	56.7	54.0	23.8	30.2	3.2
MISSISSIPPI	468.2	235.9	176.2	126.6	49.5	53.9	19.8	34.1	5.8
MISSOURI	442.0	223.4	175.8	122.5	53.3	44.0	21.7	22.3	3.5
MONTANA	556.8	288.0	218.4	160.5	58.0	65.5	24.9	40.6	4.1
NEBRASKA	563.7	279.2	197.1	145.3	51.8	76.9	29.3	47.7	5.2
NEVADA	554.5	232.9	182.3	125.7	56.6	46.9	19.4	27.5	3.7
NEW HAMPSHIRE	432.0	208.8	159.2	125.6	33.6	43.9	14.3	29.6	5.7
NEW JERSEY	455.7	220.3	189.4	138.2	51.1	28.3	11.8	16.4	2.6
NEW MEXICO	563.2	309.9	213.8	154.0	59.8	87.9	20.1	67.8	8.2
NEW YORK	534.9	207.1	168.7	120.1	48.6	36.3	17.8	18.5	2.0
NORTH CAROLINA	442.7	224.5	160.5	107.5	53.0	58.6	22.2	36.4	5.4
NORTH DAKOTA	466.4	264.8	189.3	134.7	54.6	69.4	27.3	42.1	6.1
OHIO	409.6	209.5	166.6	116.6	50.0	40.9	14.8	26.2	1.9
OKLAHOMA	480.4	245.5	177.7	126.6	51.1	61.6	20.8	40.8	6.2
OREGON	532.5	277.4	197.6	136.3	61.3	75.3	35.7	39.6	4.4
PENNSYLVANIA	401.2	187.5	162.2	113.1	49.1	22.9	8.9	13.9	2.5
RHODE ISLAND	456.4	218.1	161.5	123.3	38.2	46.4	17.0	29.4	10.2
SOUTH CAROLINA	473.1	239.2	177.2	141.4	35.8	45.0	12.4	32.6	17.0
SOUTH DAKOTA	481.5	259.5	203.6	152.3	51.4	52.6	20.7	31.9	3.3
TENNESSEE	474.5	215.5	171.1	116.9	54.3	37.5	14.5	23.0	6.8
TEXAS	476.2	261.0	202.2	145.9	56.3	55.6	19.9	35.7	3.2
UTAH	497.3	294.1	182.7	130.1	52.6	105.3	23.9	81.4	-
VERMONT	485.6	272.8	198.9	150.2	48.7	67.6	33.4	34.2	6.2
VIRGINIA	487.2	265.0	207.2	145.9	61.3	52.1	19.3	32.8	5.7
WASHINGTON	502.2	246.3	176.0	123.7	52.3	67.0	24.8	42.2	3.3
WEST VIRGINIA	478.2	256.0	198.3	136.0	62.3	50.5	20.4	30.1	7.2
WISCONSIN	464.9	249.2	175.8	126.5	49.2	71.9	32.6	39.4	3.1
WYOMING	627.9	315.2	230.7	167.5	63.2	79.3	29.4	49.8	5.3

See footnotes at end of table.

Table 11. Full-Time Equivalent Employment of State and Local Governments Per 10,000 Population, by Function and by State: October 1975—Continued

State	Functions other than education										
	Total	Highways	Public welfare	Hospitals	Health	Police protection	Fire protection (local)	Sewerage (local)	Sanitation other than sewerage (local)	Parks and recreation (local)	Natural resources
UNITED STATES, TOTAL	242.1	26.7	15.9	44.3	8.8	25.5	10.1	3.7	5.7	6.9	8.2
ALABAMA	235.4	36.0	11.8	62.5	7.0	20.2	9.4	2.4	10.3	5.1	8.3
ALASKA	410.7	55.0	9.5	13.1	17.3	23.0	11.2	3.3	4.0	6.9	33.1
ARIZONA	244.1	28.0	8.1	33.0	7.2	29.3	8.3	3.0	7.1	8.1	10.8
ARKANSAS	202.3	35.6	9.4	46.9	8.4	16.0	6.5	2.3	4.9	2.3	13.0
CALIFORNIA	267.8	18.1	19.0	36.2	11.1	29.5	12.3	3.0	3.2	10.6	9.6
COLORADO	241.5	29.3	14.1	36.1	11.2	26.2	9.2	4.6	3.3	9.6	8.5
CONNECTICUT	195.9	26.4	8.9	29.0	7.2	25.2	13.6	4.0	4.6	6.6	3.3
DELAWARE	253.4	28.9	19.7	29.8	13.7	27.6	4.1	6.8	3.8	9.4	11.8
DISTRICT OF COLUMBIA	522.0	17.0	36.9	41.2	44.9	76.5	19.5	8.4	27.7	14.5	-
FLORIDA	264.0	21.3	10.7	52.6	9.6	28.5	10.7	4.8	8.3	10.4	11.4
GEORGIA	287.4	31.0	9.9	95.6	13.0	24.1	10.3	3.6	10.3	5.7	9.9
HAWAII	272.2	22.5	7.6	29.8	17.8	27.5	15.6	5.0	6.6	22.6	14.7
IDAH0	258.2	38.5	11.8	37.0	18.8	22.9	9.0	2.7	1.6	5.1	29.5
ILLINOIS	220.6	18.5	14.1	35.3	6.3	28.2	9.5	5.4	3.9	9.3	4.4
INDIANA	200.3	23.1	11.9	47.0	4.3	20.2	9.4	4.2	3.9	10.9	4.9
IOWA	207.5	34.8	16.4	45.9	3.4	17.7	6.2	3.6	2.3	4.3	10.7
KANSAS	248.4	43.1	13.5	49.6	6.4	22.0	10.0	2.9	4.3	4.4	11.3
KENTUCKY	199.8	32.0	15.5	31.7	7.0	18.1	8.2	3.9	5.6	2.4	11.8
LOUISIANA	261.0	32.6	13.9	63.7	6.8	26.1	10.1	4.1	10.3	6.2	14.4
MAINE	203.4	46.2	8.6	20.9	4.4	21.3	11.0	2.8	1.8	4.1	14.1
MARYLAND	247.9	24.5	12.1	40.1	15.1	30.4	11.2	5.6	6.0	10.0	6.8
MASSACHUSETTS	254.7	23.8	12.6	48.4	5.5	28.3	22.4	2.7	4.6	6.0	5.9
MICHIGAN	203.6	19.6	16.2	42.4	6.5	24.2	8.1	2.9	3.3	5.0	5.3
MINNESOTA	221.7	33.4	18.2	42.8	6.2	18.9	5.4	3.6	2.0	6.7	8.9
MISSISSIPPI	232.3	40.2	9.4	66.5	9.4	19.2	7.7	3.2	9.5	3.1	11.4
MISSOURI	218.6	25.3	13.8	52.0	7.5	26.2	9.5	3.6	2.3	5.0	8.2
MONTANA	268.7	48.4	17.3	34.8	7.3	25.0	6.3	2.2	4.5	2.6	22.1
NEBRASKA	284.5	36.4	18.7	48.1	8.6	20.7	8.0	2.8	1.9	6.5	16.9
NEVADA	321.6	35.5	12.0	45.6	9.3	39.7	19.1	2.9	1.1	11.8	13.4
NEW HAMPSHIRE	223.1	39.5	32.8	27.5	5.9	21.4	14.2	2.5	4.1	3.0	9.7
NEW JERSEY	230.4	24.7	16.0	30.2	6.6	35.0	10.8	3.2	5.2	6.5	3.3
NEW MEXICO	253.3	38.7	13.7	41.6	7.5	24.0	8.6	3.6	6.6	6.7	15.2
NEW YORK	327.8	25.6	27.1	67.9	13.4	34.1	11.2	3.5	9.1	8.0	4.3
NORTH CAROLINA	218.3	29.4	13.9	41.4	10.2	21.1	7.3	3.7	8.8	4.4	10.2
NORTH DAKOTA	201.6	37.7	13.2	25.1	5.5	17.2	6.3	1.4	4.3	1.9	17.7
OHIO	200.1	21.8	15.3	30.8	8.0	21.7	9.0	5.0	4.8	5.3	4.5
OKLAHOMA	234.9	34.1	22.2	43.1	6.5	21.4	11.3	3.1	7.9	5.1	9.1
OREGON	255.1	33.5	17.5	32.0	8.0	23.9	11.9	5.0	1.2	7.2	12.8
PENNSYLVANIA	213.6	29.0	22.8	30.2	4.8	24.6	6.1	3.7	4.5	4.8	4.7
RHODE ISLAND	238.3	21.3	17.7	39.5	8.8	25.5	19.8	3.5	4.1	4.5	6.0
SOUTH CAROLINA	233.9	26.7	13.6	60.7	16.2	20.1	5.6	3.2	10.2	3.6	10.0
SOUTH DAKOTA	222.0	44.6	13.9	26.9	5.9	19.7	4.9	2.3	3.0	4.0	17.3
TENNESSEE	259.0	30.7	13.3	60.2	9.5	21.6	11.8	3.6	9.9	3.2	9.2
TEXAS	215.2	29.8	11.5	44.2	7.3	21.6	10.0	3.8	6.9	6.3	8.2
UTAH	203.2	29.1	9.5	30.6	9.6	21.8	7.1	2.3	3.6	6.4	10.4
VERMONT	212.8	47.4	11.3	21.8	7.4	19.4	5.4	2.3	1.4	2.1	21.2
VIRGINIA	222.2	30.7	11.3	35.1	11.9	21.2	8.8	5.0	7.7	6.9	7.7
WASHINGTON	255.9	31.2	16.0	27.7	6.5	21.5	11.9	3.6	2.4	7.0	15.9
WEST VIRGINIA	222.2	49.4	17.8	45.0	7.4	19.0	5.1	2.7	5.0	1.8	16.3
WISCONSIN	214.2	27.6	13.8	40.4	6.5	23.0	9.3	4.1	4.5	7.2	6.4
WYOMING	312.7	53.7	12.3	76.5	7.6	26.3	6.2	2.4	7.2	3.6	24.8

See footnotes at end of table.

BILLIONS

10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0

40%

30%

20%

700

FY 75 76 77 78 79 80 81 82 83 84 85

NOTE: ASSUMING FY75 BASE AT 503 MILLION AND FY76 TOTAL
AT 700 MILLION = 39% ANNUAL GROWTH FACTOR 75-76

EFFECT OF ILLIQUID ASSETS ON GENERAL FUND CASH BALANCES - FY 76

1. No Sale of Illiquid Assets

Cash	\$717
Illiquid	(192)
Cash Available	\$525

2. V.A. Loans Sold at Par to Permanent Fund

Cash	\$717
Remaining Illiquid	
192-105=87	(87)
Available Cash	\$630

3. V.A. Loans Sold at 82.5% to A.H.F.C.

Cash	\$717
17.5% Loss from Discount	(18)
Remaining Illiquid	(87)
Cash Available	\$612

4. V.A. Loans Sold at 75% to Open Market

a) \$105 V.A. Loans on July 1, 1976

Cash	\$717
25% Loss from Discount	(26)
Remaining Illiquid	(87)
Cash Available	\$604

b) \$69 V.A. Loans on July 1, 1975 - No Treasury Purchases Thereafter

Cash	\$717
25% Loss from Discount	(17)
Remaining Illiquid	(87)
Cash Available	\$613

STATE OF ALASKA

THE LEGISLATURE

BUDGET AND AUDIT COMMITTEE

AUDIT DIVISION
POUCH W — ALASKA OFFICE BUILDING

FINANCE DIVISION
POUCH W/F — STATE CAPITOL

JUNEAU 99601

MEMORANDUM

TO: All Members
Budget & Audit Committee

DATE: July 27, 1976

FROM: Milt Barker
Legislative Finance

SUBJ: General Fund
Balance Projections

Enclosed are two sample general fund balance projections reflecting the proposed permanent fund contributions, preliminary results of FY 1976 revenue collections and an FY 1977 budget of \$700 million. Projection #1 assumes a 10% per annum growth in state appropriations while projection #2 assumes a 20% rate.

Also enclosed is the Department of Revenue's preliminary report of the FY 1976 unrestricted tax collections used for these projections. Added to their \$622 million of net tax receipts is \$71 million of oil royalties, facility-related (airports and ferries) charges, and service-related (court system) charges to arrive at the estimate of \$693 million FY 1976 unrestricted revenues used in the projections.

You may note that the general fund balance is allowed to fall to zero although roughly \$190 million of that balance is in the form of illiquid investments in loans & mortgages, and Alaskan CD's. The assumption here is that these investments will be turned over to the permanent fund at cost.

If you would like to see any additional scenarios developed with this model, e.g. delayed pipeline construction, another price for oil, etc., please let me know.

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

2

28-JUL-76

COMMENTS

NO DELAY IN PIPELINE CONSTRUCTION
RESERVE TAX FY 76 & 77 WITH CREDIT
\$13 OIL
NATIVE CLAIMS AND RESOURCE PAYMENTS INCLUDED
CURRENT TAXES

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL & PERMANENT FUNDS = 7.00%
ANNUAL RATE OF INTEREST ON NEW BONDS = 8.50%
MATURITY PERIOD ON NEW BONDS IN YEARS = 22.00
% OF CURRENT YEAR EXPEND. IN G.P. CASH BAL = 20.00%
% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 25.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 20.00%

YEAR	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUNDS	GENERAL FUND END OF YEAR	REVENUE PER FOR OF B/L
1976											452.0	
1977	722.0	43.9	765.9	693.0	0.0	0.0	7.0	700.0	65.9	0.0	421.0	0.0
1978	898.0	49.9	947.9	831.6	0.0	0.0	172.0	1005.6	-95.7	75.0	426.1	0.0
1979	1063.0	51.8	1114.8	997.9	0.0	0.0	235.2	1234.1	-119.3	177.2	306.8	0.0
1980	1228.0	53.4	1281.4	1122.5	0.0	0.0	292.3	1425.3	-143.9	264.9	127.0	0.0
1981	1384.0	57.2	1441.2	1437.0	0.0	0.0	350.0	1787.0	-175.8	474.9	-0.0	78.9
1982	1507.0	67.3	1574.3	1724.4	0.0	0.0	239.5	1963.9	-189.6	561.4	-0.0	189.6
1983	1630.0	65.7	1695.7	2069.3	0.0	0.0	242.3	2311.5	-324.9	264.4	-0.0	174.4
1984	1912.0	105.9	2017.9	2493.1	0.0	0.0	250.6	2733.7	-715.9	1049.2	-0.0	715.9
1985	1951.0	126.9	2077.9	2979.8	0.0	0.0	220.1	3199.8	-1121.9	1277.3	-0.0	1121.9
1986	1962.0	132.7	2136.7	3570.7	0.0	0.0	208.2	3785.9	-1649.2	1452.0	-0.0	1649.2
1987	2033.0	174.3	2207.3	4290.9	0.0	0.0	208.7	4499.5	-2292.2	1674.1	-0.0	2292.2
1988	1980.0	200.2	2180.2	5149.0	0.0	0.0	194.3	5343.3	-3163.1	1888.4	-0.0	3163.1
1989	1921.0	232.1	2148.4	6178.9	0.0	0.0	178.5	6357.4	-4209.0	2226.9	-0.0	4209.0
1990	1795.0	255.9	2050.9	7414.6	0.0	0.0	152.3	7566.9	-5515.9	2219.1	-0.0	5515.9

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
~~BUDGET FORECASTING MODEL~~

1

26-Jul-76

~~CONFIDENTIAL~~

NO DELAY IN PIPELINE CONSTRUCTION
RESERVE TAX FY 76 & 77 WITH CREDIT
\$15 BIL

NATIVE CLAIMS AND RESOURCE PAYMENTS INCLUDED
CURRENT TAXES

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL & PERMANENT FUNDS = 7.00%
ANNUAL RATE OF INTEREST ON NEW BONDS = 6.50%
MATURITY PERIOD ON NEW BONDS IN YEARS = 22.00
% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL = 20.00%
% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 25.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 10.00%

NON			PAYMENTS				SURPLUS		PERH-		GENERAL		REVENUE 500	
YEAR	INVESTMENT	INVESTMENT	TOTAL	BURDET	CHIEF	TEST	TO	TOTAL	OR	PERH-	FUND	END OF YEAR	OF	\$0 MIL
END	REVENUE	INTEREST	REVENUE	APPROPRIATION	MENTALS	SERVICE	FUNDS	EXPENDITURE	DEFICIT	FUND				
1977	726.0	43.9	769.9	693.0	0.0	0.0	7.0	700.0	69.9	0.0		521.9		0.0
1976	858.0	51.4	909.4	762.3	0.0	0.0	172.0	934.3	-24.9	75.0		497.0		0.0
1977	1063.0	60.4	1123.4	889.5	0.0	0.0	235.2	1074.7	48.7	177.2		545.0		0.0
1980	1272.0	76.7	1348.7	922.4	0.0	0.0	297.8	1220.1	128.6	306.9		674.2		0.0
1981	1554.0	103.9	1657.9	1014.6	0.0	0.0	350.0	1364.6	293.3	474.9		967.5		0.0
1982	1737.0	143.8	1880.8	1164.1	0.0	0.0	439.5	1455.5	425.3	561.6		1028.5		0.0
1983	1830.0	195.7	2025.7	1227.7	0.0	0.0	242.3	1469.9	555.8	861.6		2018.6		0.0
1984	1912.0	251.0	2163.0	1350.5	0.0	0.0	259.6	1601.1	561.9	1069.2		2300.5		0.0
1985	1967.0	325.7	2292.7	1445.5	0.0	0.0	220.1	1703.6	589.1	1277.5		3017.7		0.0
1986	1989.0	339.4	2328.4	1634.1	0.0	0.0	208.2	1842.3	506.2	1485.5		3533.0		0.0
1987	2033.0	409.3	2442.3	1797.5	0.0	0.0	208.7	2066.1	436.2	1694.1		4074.2		0.0
1988	1980.0	450.0	2430.0	1977.2	0.0	0.0	194.3	2172.5	258.5	1885.4		4537.5		0.0
1989	1921.0	475.2	2397.2	2174.9	0.0	0.0	178.5	2353.4	43.0	2066.9		4376.6		0.0
1990	1795.0	402.6	2277.6	2392.4	0.0	0.0	152.3	2544.7	-267.0	2219.1		4109.6		0.0
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						Net Receipts % of Estimated
Type of Tax	Receipts	Refunds	Net Receipts	Estimated	Estimated	
1 Property Tax	\$ 83,312,264.21	\$ 29,846.33	\$ 83,282,417.88	\$ 16,300,000.00	510.94	
36 Oil & Gas Reserve	223,146,615.52	-0-	223,146,615.52	212,000,000.00	105.26	
016 Alcohol Tax	7,841,757.91	-0-	7,841,757.91	7,831,800.00	100.12	
017 Cigarette Tax	1,733,717.28	106.76	1,733,610.52	1,745,200.00	99.34	
018 Cigarette Tax	2,883,692.30	15.62	2,883,676.68	2,904,700.00	99.28	
020 Elec & Telephone	926,355.18	-0-	926,355.18	740,000.00	125.18	
021 Highway Fuel Tax	25,930,950.35	5,632,467.26	20,298,483.09	18,767,700.00	108.16	
022 Aviation Fuel Tax	2,964,163.80	-0-	2,964,163.80	3,453,900.00	85.82	
023 Marine Fuel Tax	1,140,792.80	-0-	1,140,792.80	1,244,100.00	91.70	
036 Ind Income Tax	177,089,785.11	30,887,649.71	146,202,135.40	118,187,600.00	123.70	
037 Fiduciary Tax	52,762.21	877.05	51,885.16	50,000.00	103.77	
038 Corporation Tax	36,900,004.48	5,797,046.83	31,102,957.65	26,670,400.00	116.62	
046 Business Lic Tax	19,255,888.76	178,481.06	19,077,407.70	13,162,500.00	144.94	
051 Inheritance Tax	1,151.09	331.38	819.71	1,000.00	81.97	
052 Estate Tax	162,038.57	3,926.88	158,111.69	80,000.00	197.64	
057 School Tax	2,638,221.63	1,250.00	2,636,971.63	2,258,400.00	116.76	
061 Mines & Mining	89,155.55	20,036.10	69,119.45	65,400.00	105.69	
062 Raw Fish	1,819,434.69	50.00	1,819,384.69	1,431,700.00	127.97	
063 Cold Storage	789,924.75	1,125.36	788,799.39	840,000.00	93.90	
064 Freezer Ships	507,314.51	182.30	507,132.21	320,000.00	158.48	
065 Oil Prod Tax	26,186,859.76	-0-	26,186,859.76	25,254,000.00	103.69	
066 Oil & Gas Conserv	77,316.72	-0-	77,316.73	75,000.00	103.09	
068 Gas Prod Tax	1,714,259.00	-0-	1,714,259.00	1,760,000.00	97.40	
096 Prepaid Tax	299,404.47	73,144.27	226,260.20	-0-	.00	
102 Embalmers Lic	1,750.00	-0-	1,750.00	1,700.00	102.94	
106 Liquor Lic App	72,925.00	1,250.00	71,675.00	62,500.00	114.68	
107 Pub Liquor Lic	300.00	-0-	300.00	600.00	50.00	
110 Beverage Disp	473,953.00	19,500.00	454,453.00	466,100.00	97.50	
111 Club	21,575.00	400.00	21,175.00	21,100.00	100.36	
112 Common Carrier	12,150.00	-0-	12,150.00	13,400.00	90.67	
113 Restaurant	27,100.00	900.00	26,200.00	24,100.00	108.71	
114 Roadhouse	4,150.00	-0-	4,150.00	4,000.00	103.75	
115 Retail	250,750.00	16,250.00	234,500.00	228,300.00	102.72	
116 Retail Stock Sale	600.00	-0-	600.00	100.00	600.00	
117 Wholesale General	72,550.00	-0-	72,550.00	75,000.00	96.73	
118 Wholesale Malt Beverage	8,600.00	100.00	8,500.00	9,500.00	89.47	
119 Misc. Lic	13,311.61	-0-	13,311.61	16,500.00	80.68	
143 Motor Veh Dealer	4,485.00	-0-	4,485.00	6,000.00	74.75	
145 Amusement & Gaming	69,612.91	130.59	69,482.32	90,000.00	77.20	
146 Lottery Permits	5,101.03	10.00	5,091.03	5,400.00	94.28	
219 Motor Fgt Carrier	599,819.00	23,563.55	576,255.45	575,000.00	100.22	
220 Motor Veh Drivers	483,110.68	17,146.13	465,964.55	475,000.00	98.10	
221 Motor Veh Plates	10,582,578.58	404,873.91	10,177,704.67	9,850,000.00	103.33	
222 Motor Veh Titles	623,039.00	12,078.65	610,960.35	420,300.00	145.36	
402 Misc Revenues	84,695.51	1,047.27	83,648.24	70,000.00	119.50	
108 Brewery Liq Lic	100.00	-0-	100.00	-0-	.00	
109 Distillery Lic	150.00	-0-	150.00	-0-	.00	
Sub-Total	\$630,876,236.97	\$ 43,123,787.01	\$587,752,449.96	\$467,538,200.00	125.71%	
Fish & Game Licenses						
126 Vessels & Gear	\$ 578,619.00	\$ 20,346.50	\$ 558,272.50	\$ 509,400.00	109.59	
137-844 Comm Fish Res	167,310.00	5,083.33	162,226.67	140,500.00	115.46	
138-845 Comm Fish Non Res	190,020.00	5,262.37	184,757.63	153,700.00	120.21	
140 Comm Fish Ext Fee	3,960.00	-0-	3,960.00	6,600.00	60.00	
120-218 Sport Fish & Hunt	2,493,061.50	125,762.41	2,367,301.09	2,407,000.00	98.35	
Sub-Total	\$ 3,422,972.50	\$ 156,454.61	\$ 3,276,517.89	\$ 3,217,200.00	101.84%	
Total Tax	\$634,309,209.47	\$ 43,280,241.62	\$591,028,967.85	\$470,755,400.00	125.54%	
Interest						
575 Interest on Loans	\$ 666,135.24	\$ -0-	\$ 666,135.24	\$ 760,000.00	87.65	
576 Interest on Investments	25,700,171.32	-0-	25,700,171.32	18,000,000.00	142.78	
577 Interest on Deposits	5,244,654.95	-0-	5,244,654.95	3,500,000.00	149.85	
Total Interest	\$ 31,610,961.51	\$ -0-	\$ 31,610,961.51	\$ 22,260,000.00	141.98%	
TOTAL REVENUES	\$665,920,170.98	\$ 43,280,241.62	\$622,639,929.36	\$493,015,400.00	126.27%	

STATE OF ARIZONA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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05-Aug-76

COMMENTS

6 MONTH DELAY IN PIPELINE CONSTRUCTION
RESERVE TAX FY 76 & 77 WITH CREDIT
\$13 OIL
NATIVE CLAIMS AND RESOURCE PAYMENTS INCLUDED
CURRENT TAXES

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%
ANNUAL RATE OF INTEREST ON NEW BONDS = 6.50%
MATURITY PERIOD ON NEW BONDS IN YEARS = 22.00
% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL = 20.00%
% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 25.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 10.00%

YEAR END	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1976											452.0	
1977	726.0	43.9	769.9	693.0	0.0	0.0	7.0	700.0	69.9	0.0	521.9	0.0
1978	683.0	45.6	728.6	762.3	0.0	0.0	98.2	860.5	-131.9	46.2	390.0	0.0
1979	1063.0	50.5	1113.5	838.5	0.0	0.0	236.2	1074.7	38.8	148.4	428.8	0.0
1980	1272.0	66.2	1338.2	922.4	0.0	0.0	297.8	1220.1	118.0	278.1	546.8	0.0
1981	1490.0	90.1	1580.1	1014.6	0.0	0.0	340.4	1355.0	225.1	436.5	771.9	0.0
1982	1707.0	126.1	1833.1	1116.1	0.0	0.0	275.5	1391.5	441.5	623.0	1213.5	0.0
1983	1830.0	174.9	2004.9	1227.7	0.0	0.0	242.3	1469.9	534.9	823.2	1748.4	0.0
1984	1912.0	228.6	2140.6	1350.5	0.0	0.0	250.6	1601.1	539.5	1030.8	2287.9	0.0
1985	1951.0	281.7	2232.7	1485.5	0.0	0.0	229.1	1714.6	518.2	1238.9	2806.1	0.0
1986	1989.0	333.0	2322.0	1634.1	0.0	0.0	208.2	1842.3	479.8	1447.1	3285.8	0.0
1987	2033.0	381.0	2414.0	1797.5	0.0	0.0	208.7	2006.1	407.8	1655.7	3693.7	0.0
1988	1980.0	419.6	2399.6	1977.2	0.0	0.0	194.3	2171.5	228.2	1850.0	3921.8	0.0
1989	1921.0	443.6	2364.6	2174.9	0.0	0.0	178.5	2353.4	11.2	2028.5	3933.0	0.0
1990	1795.0	447.7	2242.7	2392.4	0.0	0.0	152.3	2544.7	-302.0	2180.7	3631.0	0.0

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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05-Aug-76

COMMENTS

6 MONTH DELAY IN PIPELINE CONSTRUCTION
RESERVE TAX FY 76 & 77 WITH CREDIT
\$13 OIL
NATIVE CLAIMS AND RESOURCE PAYMENTS INCLUDED
CURRENT TAXES

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%
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ANNUAL % INCREASE IN BUDGET APPROPRIATION = 20.00%

YEAR END	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1976											452.0	
1977	726.0	43.9	769.9	693.0	0.0	0.0	7.0	700.0	69.9	0.0	521.9	0.0
1978	683.0	44.1	727.1	831.6	0.0	0.0	98.2	929.8	-202.7	46.2	319.2	0.0
1979	1063.0	41.9	1104.9	997.9	0.0	0.0	236.2	1234.1	-129.2	148.4	190.0	0.0
1980	1272.0	42.8	1314.8	1197.5	0.0	0.0	297.8	1495.3	-180.4	278.1	9.6	0.0
1981	1490.0	50.2	1540.2	1437.0	0.0	0.0	340.4	1777.4	-237.2	436.5	0.0	227.6
1982	1707.0	65.1	1772.1	1724.4	0.0	0.0	275.5	1999.9	-227.8	623.0	0.0	227.8
1983	1830.0	83.0	1913.0	2069.3	0.0	0.0	242.3	2311.5	-398.6	823.2	0.0	398.6
1984	1912.0	103.2	2015.2	2483.1	0.0	0.0	250.6	2733.7	-718.6	1030.8	0.0	718.6
1985	1951.0	124.4	2075.4	2979.8	0.0	0.0	229.1	3208.8	-1133.5	1238.9	0.0	1133.5
1986	1989.0	147.0	2136.0	3575.7	0.0	0.0	208.2	3783.9	-1647.9	1447.1	0.0	1647.9
1987	2033.0	171.6	2204.6	4290.9	0.0	0.0	208.7	4499.5	-2294.9	1655.7	0.0	2294.9
1988	1980.0	197.5	2177.5	5149.0	0.0	0.0	194.3	5343.3	-3165.8	1850.0	0.0	3165.8
1989	1921.0	224.7	2145.7	6178.9	0.0	0.0	178.5	6357.4	-4211.6	2028.5	-0.0	4211.6
1990	1795.0	253.3	2048.3	7414.6	0.0	0.0	152.3	7566.9	-5518.6	2180.7	-0.0	5518.6

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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05-Aug-76

COMMENTS

ONE YEAR DELAY IN PIPELINE CONSTRUCTION
RESERVE TAX FY 76 & 77 WITH CREDIT
\$13 OIL
NATIVE CLAIMS AND RESOURCE PAYMENTS INCLUDED
CURRENT TAXES

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%
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% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 25.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 10.00%

YEAR END	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1976											452.0	
1977	726.0	43.9	769.9	693.0	0.0	0.0	7.0	700.0	69.9	0.0	521.9	0.0
1978	462.0	38.1	500.1	762.3	0.0	0.0	12.5	774.8	-274.7	10.5	247.2	0.0
1979	1063.0	37.6	1100.6	838.5	0.0	0.0	236.2	1074.7	25.9	112.7	273.1	0.0
1980	1272.0	52.3	1324.3	922.4	0.0	0.0	297.8	1220.1	104.1	242.4	377.2	0.0
1981	1479.0	74.8	1553.8	1014.6	0.0	0.0	338.8	1353.4	200.5	399.2	577.7	0.0
1982	1707.0	109.2	1816.2	1116.1	0.0	0.0	278.5	1394.5	421.7	585.6	999.4	0.0
1983	1830.0	156.6	1986.6	1227.7	0.0	0.0	242.3	1469.9	516.7	785.9	1516.0	0.0
1984	1912.0	209.0	2121.0	1350.5	0.0	0.0	250.6	1601.1	519.9	993.5	2036.0	0.0
1985	1951.0	260.5	2211.5	1485.5	0.0	0.0	239.1	1724.6	487.0	1201.5	2522.9	0.0
1986	1989.0	309.8	2298.8	1634.1	0.0	0.0	208.2	1842.3	456.5	1409.7	2979.5	0.0
1987	2033.0	356.0	2389.0	1797.5	0.0	0.0	208.7	2006.1	382.9	1618.4	3362.4	0.0
1988	1980.0	392.9	2372.9	1977.2	0.0	0.0	194.3	2171.5	201.4	1812.6	3563.8	0.0
1989	1921.0	414.9	2335.9	2174.9	0.0	0.0	178.5	2353.4	-17.5	1991.1	3546.3	0.0
1990	1795.0	416.9	2211.9	2392.4	0.0	0.0	152.3	2544.7	-332.7	2143.4	3213.6	0.0

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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05-AUG-76

COMMENTS

ONE YEAR DELAY IN PIPELINE CONSTRUCTION
RESERVE TAX FY 76 & 77 WITH CREDIT
\$13 OIL
NATIVE CLAIMS AND RESOURCE PAYMENTS INCLUDED
CURRENT TAXES

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%
ANNUAL RATE OF INTEREST ON NEW BONDS = 6.50%
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% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL = 20.00%
% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 25.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 20.00%

YEAR END	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1976											452.0	
1977	726.0	43.9	769.9	693.0	0.0	0.0	7.0	700.0	69.9	0.0	521.9	0.0
1978	462.0	36.6	498.6	831.6	0.0	0.0	12.5	844.1	-345.5	10.5	176.4	0.0
1979	1063.0	29.0	1092.0	997.9	0.0	0.0	236.2	1234.1	-142.1	112.7	34.3	0.0
1980	1272.0	34.6	1306.6	1197.5	0.0	0.0	297.8	1495.3	-188.7	242.4	0.0	154.4
1981	1479.0	47.3	1526.3	1437.0	0.0	0.0	338.8	1775.8	-249.4	399.2	-0.0	249.4
1982	1707.0	62.5	1769.5	1724.4	0.0	0.0	278.5	2002.9	-233.3	585.6	-0.0	233.3
1983	1830.0	80.4	1910.4	2069.3	0.0	0.0	242.3	2311.5	-401.2	785.9	-0.0	401.2
1984	1912.0	100.5	2012.5	2483.1	0.0	0.0	250.6	2733.7	-721.2	993.5	-0.0	721.2
1985	1951.0	121.9	2072.9	2979.8	0.0	0.0	239.1	3218.8	-1145.9	1201.5	-0.0	1145.9
1986	1989.0	144.4	2133.4	3575.7	0.0	0.0	208.2	3783.9	-1650.6	1409.7	-0.0	1650.6
1987	2033.0	169.0	2202.0	4290.9	0.0	0.0	208.7	4499.5	-2297.5	1618.4	0.0	2297.5
1988	1980.0	194.9	2174.9	5149.0	0.0	0.0	194.3	5343.3	-3168.4	1812.6	-0.0	3168.4
1989	1921.0	222.1	2143.1	6178.9	0.0	0.0	178.5	6357.4	-4214.2	1991.1	-0.0	4214.2
990	1795.0	250.6	2045.6	7414.6	0.0	0.0	152.3	7566.9	-5521.2	2143.4	0.0	5521.2

STATE OF ALASKA

THE LEGISLATURE

BUDGET AND AUDIT COMMITTEE

#101
AUDIT DIVISION
POUCH W-ALASKA OFFICE BUILDINGFINANCE DIVISION
POUCH WF-STATE CAPITOL

JUNEAU 99801

MEMORANDUM

TO: Honorable Clark Gruening DATE: September 22, 1977
Chairman
House Permanent Fund Committee

FROM: Milt Barker *MB* SUBJ: Permanent & General
Fiscal Analyst Fund Projections
Legislative Finance

At your request, I am enclosing six computer scenarios which display projected budget surpluses or deficits, followed by end-of-year permanent fund and general fund balances, and finally a column entitled "revenue required for general fund balance of \$0 million". This last column may also be interpreted as the required reduction in expenditures for a zero general fund balance.

However, visualizing it as additional required revenue, Table 1 was developed. In this table, the required permanent fund balance is determined by dividing the required revenue from the computer report by .07, the earnings rate on the permanent fund, to find the additional fund principal required to produce this revenue, and adding that to the projected balance. However, in those cases where 50% of the permanent fund earnings go to Alaska, Inc., the additional required principal will be twice as large.

The required Alaskan economy in terms of personal income to continue funding the budget is determined by dividing the additional required revenue by .079 and adding this additional personal income base required to the projected base shown on Table 1. The projected base was determined by dividing "other revenue" shown in the assumptions by .079; "other revenue" consists of all unrestricted revenue less severance taxes, property taxes, state and federal resource revenue, and Prudhoe income taxes. In other words, all those items which may relate somewhat to personal income. In FY 76, "other revenue" was roughly \$286.1 million which was 7.9% of the FY 76 personal income of \$3.6 billion.

The first scenario is a best guess of what will be with no statutory changes. It assumes 25% of royalty goes to the permanent fund and 5% to the renewable resources fund. Conceivably, the 5% could stop once \$250 million is reached. In all scenarios 2% of royalty goes to native claims until \$500 million is reached. The required general fund balance of \$0 million assumes the sale, transfer to the permanent fund, or liquidation of the state's unmarketable loan portfolio; this is one assumption you might want changed.

Scenario 2 adds Alaska Inc. at 50% of permanent fund earnings which moves forward the date of insolvency by one year. However, increasing the royalty contribution to 50% moves insolvency forward five years as in Scenario 3. If the rate were then cut back to 30%, the permanent fund would stand \$489.3 million higher in 1982, providing an additional \$17 million a year in revenue after deducting Alaska, Inc. Looking back to Scenario 2, it is clear that this will not cover the projected deficits beyond 1982. With 100% of royalties put in the permanent fund, as in Scenario 3A, the situation only gets worse.

As long as deficits or borderline surpluses are envisioned, it makes no sense to sock away a greater proportion of royalties, since in the mid-term at budget growth rates of 15%, we are relying on royalties to fund such budgets. If we could hold budget growth to some lower level, a greater proportion of royalties could be put in the permanent fund, thus reducing deficits in the long run when oil revenue halts.

A lower growth rate than 15% may be necessary anyway since, as table one indicates, the required permanent fund, or Alaskan economy given the present tax structure, to sustain such growth appears unrealistic. Yet, the compound growth rate from FY 68's general fund appropriation of \$103 million to FY 78'3 of \$819 million has been 23% per annum.

Scenarios 4 and 5 allow none of the permanent fund earnings to be used to support the budget, 4 by retaining all earnings in the permanent fund, 5 by paying all earnings to Alaska, Inc. Of course, the idea with 4 would be at some point to begin putting the earnings back in the general fund. If this is done at the point at which the general fund balance reaches zero, scenario 4 is then essentially the same as scenario 1, except that earnings and surplus are carried in the permanent fund rather than the general fund and, as a consequence of locking up these amounts, the general fund reaches zero a little sooner.

Honorable Clark Gruening

-3-

September 22, 1977

Scenario 6 retains 10% of the budget appropriation in the general fund balance where surpluses permit, all the rest of the general fund balance being transferred to the permanent fund. If you would rather the program maintain the general fund balance at the specified percentage of budget, regardless of surpluses or deficits, showing the additional revenue required to do so, this modification could be made.

Please let me know if you desire any additional scenarios using different assumptions.

MB:bf

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

21-SEP-77

COMMENTS

SLCAN

TAPS BUILDUP RESUMES MARCH 78

MEDIUM REVENUES (HAGGART CASE II)

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%
% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL. = 20.00%
% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 30.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 15.00%

YEAR	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLY- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL. OF \$0 MIL.
1977										4.0	652.7	
1978	794.0	56.4	850.4	853.8	0.0	0.0	119.0	972.8	-122.5	81.6	530.2	0.0
1979	1100.8	60.3	1161.1	981.9	0.0	0.0	206.9	1188.8	-27.7	216.6	502.6	0.0
1980	1269.1	70.7	1339.8	1129.2	0.0	0.0	237.8	1367.0	-27.2	374.9	475.4	0.0
1981	1583.2	87.7	1670.9	1298.5	0.0	0.0	261.4	1559.9	110.9	548.5	586.3	0.0
1982	1745.4	100.7	1855.1	1493.3	0.0	0.0	283.9	1777.2	78.0	738.0	664.3	0.0
1983	1925.9	130.2	2056.1	1717.3	0.0	0.0	327.6	2044.9	11.2	954.4	675.5	0.0
1984	2069.7	150.1	2219.8	1974.9	0.0	0.0	242.5	2217.4	2.4	1189.9	677.9	0.0
1985	2251.2	167.7	2418.9	2271.1	0.0	0.0	254.9	2526.0	-107.1	1444.8	570.2	0.0
1986	2403.9	176.6	2580.5	2611.8	0.0	0.0	274.5	2886.3	-305.8	1719.3	264.9	0.0
1987	2563.4	182.0	2745.4	3003.6	0.0	0.0	295.1	3298.7	-553.3	2014.4	-0.0	286.3
1988	2732.3	200.5	2932.8	3454.1	0.0	0.0	316.7	3770.8	-838.1	2331.1	-0.0	838.1
1989	2910.2	230.7	3140.9	3972.2	0.0	0.0	339.4	4311.6	-1170.7	2670.5	-0.0	1170.7
1990	3096.8	263.6	3360.4	4568.0	0.0	0.0	363.3	4931.3	-1570.9	3033.8	-0.0	1570.9

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
BUDGET FORECASTING MODEL

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COMMENTS

ALCAN

TAPS BUILDUP RESUMES MARCH 78

MEDIUM REVENUES (HAGGART CASE II)

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%

% OF CURRENT YEAR EXPEND. IN G.P. CASH BAL. = 20.00%

% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 30.00%

ANNUAL % INCREASE IN BUDGET APPROPRIATION = 15.00%

% OF PERMANENT FUND EARNINGS TO ALASKA INC = 50.00%

YEAR	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLIE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR OF	REVENUE FRO FOR GE BAL. SO MII
1977										4.0	652.7	
1978	794.0	56.3	850.3	853.8	0.0	0.0	120.5	974.3	-124.0	81.6	528.7	0.0
1979	1100.8	60.0	1160.6	981.9	0.0	0.0	212.2	1194.0	-33.2	216.6	495.5	0.0
1980	1269.1	69.8	1338.9	1129.2	0.0	0.0	248.2	1377.3	-38.4	374.9	457.1	0.0
1981	1583.2	85.7	1668.9	1298.5	0.0	0.0	277.6	1576.1	92.9	548.5	550.0	0.0
1982	1745.4	106.2	1851.6	1493.3	0.0	0.0	306.4	1799.7	52.0	738.0	601.9	0.0
1983	1925.9	124.6	2050.5	1717.3	0.0	0.0	357.2	2074.5	-24.0	954.4	577.9	0.0
1984	2069.7	141.6	2211.3	1974.9	0.0	0.0	280.0	2254.9	-43.6	1189.9	534.4	0.0
1985	2251.2	155.6	2406.8	2271.1	0.0	0.0	301.0	2572.1	-165.3	1444.8	369.0	0.0
1986	2403.9	160.2	2564.1	2611.8	0.0	0.0	329.9	2941.7	-377.5	1719.3	0.0	8.5
1987	2563.4	172.7	2736.1	3003.6	0.0	0.0	360.5	3364.0	-627.9	2014.4	0.0	627.9
1988	2732.3	200.5	2932.8	3454.1	0.0	0.0	392.8	3846.9	-914.1	2331.1	0.0	914.1
1989	2910.2	230.7	3140.9	3972.2	0.0	0.0	426.9	4399.1	-1258.2	2670.5	-0.0	1258.2
1990	3096.8	263.6	3360.4	4568.0	0.0	0.0	463.1	5031.1	-1670.7	3033.8	0.0	1670.7

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
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COMMENTS

ALCAN

TAPS BUILDUP RESUMES MARCH 78

MEDIUM REVENUES (HAGGART CASE II)

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%

% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL = 20.00%

% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 50.00%

ANNUAL % INCREASE IN BUDGET APPROPRIATION = 15.00%

% OF PERMANENT FUND EARNINGS TO ALASKA INC = 50.00%

YEAR	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL 50 MIL
1977										4.0	652.7	
1978	794.0	56.3	850.3	853.8	0.0	0.0	173.2	1027.0	-176.7	133.4	476.0	0.0
1979	1100.8	59.8	1160.6	981.9	0.0	0.0	305.5	1287.4	-126.7	358.3	349.3	0.0
1980	1269.1	69.3	1338.4	1129.2	0.0	0.0	360.6	1489.7	-151.3	622.2	197.9	0.0
1981	1583.2	84.5	1667.7	1299.5	0.0	0.0	404.0	1702.5	-34.8	911.5	163.1	0.0
1982	1745.4	104.0	1849.4	1493.3	0.0	0.0	447.6	1940.9	-91.5	1227.3	71.6	0.0
1983	1925.9	125.1	2051.0	1717.3	0.0	0.0	521.2	2238.5	-187.5	1588.1	-0.0	175.9
1984	2069.7	152.5	2222.2	1974.9	0.0	0.0	461.9	2436.8	-214.5	1980.5	0.0	214.5
1985	2251.2	185.3	2436.5	2271.1	0.0	0.0	501.6	2772.7	-336.2	2405.4	0.0	336.2
1986	2403.9	221.0	2624.9	2611.8	0.0	0.0	549.7	3161.5	-536.6	2862.4	0.0	536.6
1987	2563.4	259.7	2823.1	3003.6	0.0	0.0	600.7	3604.2	-781.2	3354.7	0.0	781.2
1988	2732.3	301.7	3034.0	3454.1	0.0	0.0	654.5	4108.6	-1074.6	3892.6	0.0	1074.6
1989	2910.2	347.2	3257.4	3972.2	0.0	0.0	711.4	4683.6	-1426.2	4448.2	-0.0	1426.2
1990	3096.8	396.5	3493.3	4568.0	0.0	0.0	771.7	5339.8	-1846.5	5053.6	-0.0	1846.5

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COMMENTS

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TAPS BUILDUP RESUMES MARCH 78

MEDIUM-REVENUES-(HAGGART-CASE II)

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%

% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL. = 20.00%

% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 2-100%

ANNUAL % INCREASE IN BUDGET APPROPRIATION = 15.00%

% OF PERMANENT FUND EARNINGS TO ALASKA INC = 50.00%

YEAR	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLIE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR OF	REVENUE REC FOR GF BAL SO MIL
1977										4.0	652.7	
1978	704.0	56.2	950.2	853.8	0.0	0.0	304.8	1158.6	-308.4	252.7	344.3	0.0
1979	1100.8	59.9	1160.7	981.9	0.0	0.0	538.9	1520.7	-360.0	712.5	-0.0	15.7
1980	1269.1	84.2	1353.3	1129.2	0.0	0.0	641.5	1770.6	-417.4	1240.3	-0.0	417.4
1981	1583.2	125.3	1708.5	1298.5	0.0	0.0	720.0	2018.6	-310.1	1819.0	-0.0	310.1
1982	1745.4	170.3	1915.7	1493.3	0.0	0.0	800.6	2293.9	-378.2	2450.5	-0.0	378.2
1983	1925.9	220.8	2146.7	1717.3	0.0	0.0	931.1	2648.4	-501.7	3172.1	-0.0	501.7
1984	2069.7	277.2	2346.9	1974.9	0.0	0.0	916.7	2891.6	-544.7	3957.0	-0.0	544.7
1985	2251.2	338.5	2589.7	2271.1	0.0	0.0	1003.1	3274.2	-684.5	4906.7	-0.0	684.5
1986	2403.0	405.1	2809.0	2611.8	0.0	0.0	1099.2	3711.0	-902.1	5721.7	-0.0	902.1
1987	2563.4	477.0	3040.4	3003.6	0.0	0.0	1201.2	4204.7	-1164.3	6705.4	-0.0	1164.3
1988	2732.3	554.7	3287.0	3454.1	0.0	0.0	1308.9	4763.0	-1476.0	7761.1	-0.0	1476.0
1989	2910.2	638.5	3548.7	3972.2	0.0	0.0	1422.6	5394.8	-1846.2	8892.3	-0.0	1846.2
1990	3096.8	728.6	3825.6	4568.0	0.0	0.0	1543.3	6111.4	-2285.8	10103.2	0.0	2285.8

STATE OF ALASKA
LEGISLATIVE FINANCE WORKING DOCUMENT
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COMMENTS

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TAPS BUILDUP RESUMES MARCH 78

MEDIUM REVENUES (HAGGART CASE 11)

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%

% OF CURRENT YEAR EXPEND. IN G.P. CASH BAL = 20.00%

% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 30.00%

ANNUAL % INCREASE IN BUDGET APPROPRIATION = 15.00%

% OF EARNING RETAINED IN PERMANENT FUND = % 100 %

% OF SURPLUS TO PERMANENT FUND = % 100 %

YEAR END	NON INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPL- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR OF	REVENUE PRO FOR GF BAL \$0 MIL
1977										4.0	652.7	
1978	794.0	56.2	850.2	853.8	0.0	0.0	122.0	975.8	-125.6	84.6	527.1	0.0
1979	1100.8	59.9	1160.7	981.9	0.0	0.0	217.6	1199.5	-38.7	230.2	485.4	0.0
1980	1269.1	69.9	1339.0	1129.2	0.0	0.0	259.5	1398.6	-49.6	410.2	438.8	0.0
1981	1583.2	86.3	1669.5	1298.5	0.0	0.0	296.2	1594.7	74.8	693.4	438.8	0.0
1982	1745.4	107.5	1852.9	1493.3	0.0	0.0	339.0	1832.3	20.6	958.6	438.8	0.0
1983	1925.9	127.1	2053.0	1717.3	0.0	0.0	402.3	2119.6	-66.5	1249.7	372.2	0.0
1984	2069.7	146.0	2215.7	1974.9	0.0	0.0	338.2	2313.1	-97.4	1580.9	274.9	0.0
1985	2251.2	162.5	2413.7	2271.1	0.0	0.0	374.5	2645.6	-231.9	1955.4	43.0	0.0
1986	2403.9	184.6	2588.5	2611.8	0.0	0.0	421.0	3032.8	-444.3	2376.4	-0.0	401.4
1987	2563.4	218.7	2782.1	3003.6	0.0	0.0	471.8	3475.3	-693.2	2848.2	-0.0	693.2
1988	2732.3	258.8	2991.1	3454.1	0.0	0.0	527.2	3981.3	-990.1	3375.4	-0.0	990.1
1989	2910.2	303.8	3214.0	3972.2	0.0	0.0	587.5	4559.7	-1345.8	3962.9	-0.0	1345.8
1990	3096.8	354.1	3450.9	4568.0	0.0	0.0	653.4	5221.4	-1770.6	4616.3	-0.0	1770.6

BUDGET FORECASTING MODEL.

MEDIUM REVENUES (HAGGART CASE 11)

$$\% \text{ OF SURPLUS TO PERMANENT FUND} = \frac{1}{100} \times$$

YEAR END	NON			BUDGET APPROPRIATION	SUPPLIE- MENTALS	DEPT. SERVICE	PAYMENTS		SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GEN BAL SO VIL.
	INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE				TO FUNDS	TOTAL EXPENDITURE				
1977										4.0	452.7	
1978	704.0	56.2	850.2	853.8	0.0	0.0	122.0	975.8	-125.6	81.6	527.1	0.0
1979	1100.2	59.7	1160.5	981.9	0.0	0.0	217.4	1199.2	-38.7	216.6	488.4	0.0
1980	1269.1	69.0	1338.1	1129.2	0.0	0.0	258.5	1387.7	-49.6	374.9	438.8	0.0
1981	1583.2	83.8	1667.0	1298.5	0.0	0.0	293.7	1592.3	74.8	623.3	438.8	0.0
1982	1745.4	102.6	1848.0	1493.3	0.0	0.0	334.1	1827.4	20.6	833.3	432.2	0.0
1983	1925.9	118.3	2044.2	1717.3	0.0	0.0	393.5	2110.8	-66.5	1049.8	372.2	0.0
1984	2069.7	132.0	2201.7	1974.9	0.0	0.0	374.2	2299.1	-97.4	1285.3	274.9	0.0
1985	2251.2	141.8	2393.0	2271.1	0.0	0.0	353.8	2624.9	-231.9	1540.2	43.0	0.0
1986	2403.4	155.5	2559.4	2611.8	0.0	0.0	391.9	3003.7	-444.3	1814.7	0.0	301.4
1987	2563.4	179.4	2742.8	3003.6	0.0	0.0	432.5	3436.0	-693.2	2109.8	0.0	693.2
1988	2732.3	207.1	2939.4	3454.1	0.0	0.0	475.5	3929.6	-990.1	2426.5	0.0	990.1
1989	2910.2	237.3	3147.5	3972.2	0.0	0.0	521.1	4493.3	-1345.8	2765.9	0.0	1345.8
1990	3096.8	270.3	3367.1	4568.0	0.0	0.0	569.6	5137.6	-1770.6	3129.1	-0.0	1770.6

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COMMENTS

ALCAN
TAPS BUILDUP RESUMES MARCH 79
MEDIUM REVENUES (HAGGART CASE II)

ASSUMPTIONS

ANNUAL RATE OF INTEREST ON GENERAL + PERMANENT FUNDS = 7.00%
% OF CURRENT YEAR EXPEND. IN G.F. CASH BAL = 20.00%
% OF ROYALTIES LEASES AND BONUSES DEPOSITED IN PERMANENT FUND = 30.00%
ANNUAL % INCREASE IN BUDGET APPROPRIATION = 15.00%
% OF PERMANENT FUND EARNINGS TO ALASKA INC = 50.00%
RESERVE AS % OF BUDGET ADDED TO REQUIRED GF BALANCE = 10.00%

YEAR	NOV INVESTMENT REVENUE	INVESTMENT INTEREST	TOTAL REVENUE	BUDGET APPROPRIATION	SUPPLE- MENTALS	DEBT SERVICE	PAYMENTS TO FUNDS	TOTAL EXPENDITURE	SURPLUS OR DEFICIT	PERM- ANENT FUND	GENERAL FUND END OF YEAR	REVENUE REQ FOR GF BAL OF \$0 MIL
1977										4.0	652.7	
1978	794.0	56.3	850.3	853.8	0.0	0.0	120.5	974.3	-124.0	524.9	85.4	0.0
1979	1100.8	59.5	1160.3	981.9	0.0	0.0	227.7	1209.5	-49.3	659.9	36.1	0.0
1980	1269.1	69.8	1337.9	1129.2	0.0	0.0	263.7	1392.9	-55.0	818.2	0.0	18.9
1981	1543.2	84.2	1667.4	1298.5	0.0	0.0	293.1	1591.6	75.8	991.8	75.8	0.0
1982	1745.4	103.4	1848.8	1493.3	0.0	0.0	321.9	1815.2	33.7	1181.3	109.4	0.0
1983	1975.9	120.4	2046.3	1717.3	0.0	0.0	372.7	2090.0	-43.7	1397.7	65.8	0.0
1984	2049.7	136.1	2205.8	1974.9	0.0	0.0	295.5	2270.4	-64.6	1633.2	1.1	0.0
1985	2251.2	154.1	2406.3	2271.1	0.0	0.0	316.5	2587.7	-181.4	1882.1	0.0	120.2
1986	2403.9	178.3	2582.2	2611.8	0.0	0.0	345.4	2957.2	-374.9	2162.6	0.0	374.9
1987	2563.4	203.8	2767.2	3003.6	0.0	0.0	376.0	3379.5	-612.4	2457.7	-0.0	612.4
1988	2732.3	231.5	2963.8	3454.1	0.0	0.0	404.3	3962.4	-898.6	2774.4	-0.0	898.6
1989	2910.2	261.7	3171.9	3972.2	0.0	0.0	442.4	4414.6	-1242.7	3113.8	-0.0	1242.7
1990	3096.8	294.6	3391.4	4568.0	0.0	0.0	478.6	5046.7	-1655.2	3477.1	0.0	1655.2

TABLE 1

PROJECTED ECONOMY (\$ MILLION PERSONAL INCOME)	FY	SCENARIO 1		SCENARIO 2		SCENARIO 3		SCENARIOS 4 & 5		SCENARIO 6	
		REQUIRED PERMANENT FUND (\$ MILLION)	REQUIRED ECONOMY PERSONAL INCOME (\$ MILLION)	REQUIRED PERMANENT FUND (\$ MILLION)	REQUIRED ECONOMY PERSONAL INCOME (\$ MILLION)	REQUIRED PERMANENT FUND (\$ MILLION)	REQUIRED ECONOMY PERSONAL INCOME (\$ MILLION)	REQUIRED PERMANENT FUND (\$ MILLION)	REQUIRED ECONOMY PERSONAL INCOME (\$ MILLION)	REQUIRED PERMANENT FUND (\$ MILLION)	REQUIRED ECONOMY PERSONAL INCOME (\$ MILLION)
2,845.6	78										
3,120.2	79										
3,550.6	80									1,358.2	3,789.8
3,860.7	81										
3,932.9	82										
4,073.4	83					4,899.5	5,540.4				
4,392.4	84					8,109.0	4,695.6				
4,770.8	85					12,011.1	9,026.5			7,036.6	7,051.8
5,008.8	86			1,962.1	5,116.3	18,194.3	11,801.2	Not	10,089.8	12,874.0	9,754.3
5,259.8	87	6,133.0	8,909.2	19,954.4	13,207.9	25,674.7	15,148.4		14,034.4	19,954.8	13,011.6
5,522.7	88	14,303.9	16,131.5	28,448.2	17,093.6	34,585.4	19,125.2	Applicable	18,055.6	28,448.6	16,897.3
5,798.9	89	19,394.7	20,617.8	38,619.1	21,725.4	45,196.7	23,852.1		22,834.3	38,619.5	21,529.2
6,088.8	90	25,475.2	25,973.6	50,768.1	27,236.9	57,810.7	29,462.2		28,501.4	50,768.5	27,040.6

ASSUMPTIONS

	1	2	3	4	5	6	7	8	9	10	11	12
FY	LA PRICE \$	LOWER 48 TRANSPORT \$	TAPS TARRIF \$	INCOME TAX PRUDHOE (\$ MILLION)	PRUDHOE PRODUCTION MMB	OIL & GAS PROPERTY TAX (\$ MILLION)	\$ FLOOR PRICE FOR OIL SEVERANCE TAX	OTHER REVENUE (\$ MILLION)	GAS SALES MM/MCF	GAS SALE PRICE ¢/MCF	COOK INLET OIL ROYALTY (\$ MILLION)	COOK INLET OIL SEVERANCE (\$ MILLION)
78	13.75	1.50	5.40	35.0	262.5	167.3	6.53	225.8	17.0	39.8	33.1	16.3
79	14.44	2.00	5.40	51.0	474.5	170.6	6.53	346.5	20.4	39.8	31.3	14.4
80	15.16	2.50	5.40	54.0	547.5	193.2	7.18	280.5	26.4	41.6	29.5	12.7
81	15.92	2.50	5.40	55.0	547.5	226.7	7.18	305.0	34.0	44.2	27.9	10.9
82	16.71	2.50	5.40	56.0	547.5	251.8	7.90	310.7	37.5	46.8	26.4	9.1
83	17.55	2.50	4.90	58.0	547.5	257.0	7.90	321.8	111.6	50.9	24.6	7.3
84	18.43	2.50	4.90	59.0	547.5	261.4	8.69	347.0	117.4	73.1	22.9	5.5
85	19.35	2.50	4.90	60.0	547.5	295.9	8.69	376.9	122.0	77.1	21.2	3.7
86	20.31	2.50	4.90	62.0	547.5	310.7	9.55	395.7	122.0	77.1	19.7	1.9
87	21.33	2.50	4.90	63.0	547.5	326.2	9.55	415.5	122.0	77.1	18.4	.1
88	22.40	2.50	4.90	64.0	547.5	342.5	10.51	436.3	122.0	77.1	17.1	--
89	23.52	2.50	4.90	66.0	547.5	359.7	10.51	458.1	122.0	77.1	16.0	--
90	24.70	2.50	4.90	67.0	547.5	377.6	11.56	481.0	122.0	77.1	14.9	--

FOOTNOTES:

1. Haggart Case II (5% annual increase) July 14, 1977 Memo
2. Haggart Case II
3. Haggart Case II as revised for FY 78-82 in his July 15, 1977 memo for pump station no. 8 slowdown
- 4, 5. Haggart Case II revised for FY 78 for pump station no. 8 slowdown
6. Haggart Case II revised for FY 78 for missing pump station no. 8
7. Haggart (10% increase every two years)
8. Department of Revenue; "Alaska's Oil & Gas Tax Structure"; p. IV-32; Alcan scenario
- 9-12. Haggart