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FACING UP TO THE FUTURE

JAY S. HAMMOND
GOVERNOR



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

Fellow Alaskans:

Ever since the September, 1969, oil lease sale, the State has poured hundreds of millions of dollars worth of non-recurring "nest egg" wealth from oil revenue into the funding of a rapidly expanding State bureaucracy. All the while, the lion's share of Alaskan taxpayers have been lulled into indifference because their own taxes have not been raised to foot the bill for the expansion. I think it's high time they were told. That is why I wrote this series of newspaper articles. I hope you will take the time to read them--not for my sake, but for your own and for the sake of your children. If I leave nothing else in my wake, I want to buy for our kids a piece of a better tomorrow. It's my hope that Alaska, Inc. will accomplish that dream.

Sincerely,

A large, stylized handwritten signature of Jay S. Hammond, written in dark ink.

Jay S. Hammond
Governor



"... There are only two reasons why a politician will fly in the face of politics. Either he's stupid or he thinks he's right. I would hope you take time to plow through this series of articles so that you may draw your own conclusions. Don't do it for my sake. Do it for your own and for the sake of your children."

"... We've been trying to fund a Rolls-Royce government on a V.W. income and have had to dig deeply into our 'nest-egg' inheritance wealth in order to do it."

FACING UP TO THE FUTURE

Part One of a Five-Part Series

by

Governor Jay S. Hammond

Introduction to "The Big Problem"

More important than gas pipeline routing, the North Slope Haul Road or even the wolf controversy is an economic issue which, until recently, has been almost ignored--much less understood. Yet it will do more to determine the future of Alaska than all other circumstances put together. It explains why the state is on far shakier financial ground now than it was in 1960; what happened to the \$900 million nest egg; what will inevitably happen to all but the shell of the next nest egg--and the next and the next--unless drastic changes are made now; why almost no industry in Alaska now "pays its way"; why, unless we reduce per capita government costs or increase per capita taxes, we simply cannot afford new industry if it encourages population growth; why government growth has ballooned so dramatically; why most Alaskans here now are being subsidized by future Alaskans; why we've encouraged outsiders to "rip us off and then run"; why taxpayers no longer foot the bill; why we cannot at this time reduce taxes without making things worse; why we might reduce the pain of appropriate tax increases through the so-called "Alaska, Inc." proposal; and why, unless Alaskan citizens clearly understand it, we politicians are not likely to do a great deal about any of the above.

What I am talking about, of course, is the manner in which we have paid for expanded government. Instead of a prudent "pay as we go policy" which limited government growth to that which we could afford to pay for from on-going income, we have been feeding growing government with non-renewable resource "nest egg" wealth--i.e., the \$900 million--which, unlike taxes, we will receive but once.

We have been something like a man who, with an annual income of \$10,000 traded up for a Rolls Royce by turning in his VW plus some \$20,000 from a "nest egg" inherited from his Great Aunt Minnie. When he finds he cannot pay the installments, much less for the gasoline and upkeep from the salary he makes, he can either (1) get rid of the Rolls, (2) find a more lucrative job, or (3) start hocking his home to pay for the car. Should he opt for number three, most would think he was stupid--except the people who sold him the Rolls or those who got to ride in it and liked it far more than the old VW.

Thus, it is with the state of Alaska. We've been trying to fund a Rolls Royce government on a VW income and have had to dip deeply into our "nest egg" inheritance wealth in order to do it. Moreover, it's highly unlikely the public, and in turn politicians, will permit us to trade back down to the VW. Most, of course, say they want to trim back. But, for goodness sakes, not at the expense of my special program. My program is not adequate now! Get rid of some bodies; spend more.

efficiently; reduce salaries; or wipe out some other guy's project; but don't reduce my crucial service.

Government growth, of course, is not only salaries and personnel. Government growth is a new ferry, increased revenue sharing, aid for school construction, airfields, boat harbors, pioneer homes, old age assistance, and even maintenance of the North Slope Haul Road. Every motherhood measure obligates additional government growth. Like growth in the private sector, not all government growth is bad. It's whether the growth is subsidized that's important. Of course, all programs cannot "pay their own way". Most need subsidized help from other fund sources. But that subsidy should come from income rather than nest egg wealth.

Since some demands for new services are legitimate and compelling, government is going to continue to grow, and no one is going to dramatically reduce government costs while increasing government services. Minor tinkering can take place; but don't lose sight of the political issue because of smokescreening. The key issue is how to assure government does not continue to grow in a manner future Alaskans cannot afford.

Through this series of articles I'll provide information which caused me to conclude that this is by far the most crucial issue facing future

Alaskans. Unfortunately, however, like the hidden string in a necklace, it is virtually undetectable; though just as functionally imperative. It links past, present and future circumstances inexplicably together. Yet it is fast unraveling. Unless we thread together those circumstances with a new, stouter and enduring economic string, inevitably the unsound present string will break, showering all sorts of glittering dreams for Alaska's future through the floorboards. We can forget doing things appreciably better than they have been done elsewhere for we may never again have the opportunity or funds to string those dreams back together.

Smart politics suggests we sit back and hope the problem goes away rather than grapple with it. I cannot do that. There are only two reasons why a politician will fly in the face of politics. Either he's stupid or he thinks he's right. I would hope you'd take time to plow through this series of articles so that you may draw your own conclusions. Don't do it for my sake. Do it for your own and for the sake of your children. The course of events will be altered only if you insist that it is. It is my hope that this series of articles will help motivate concerned Alaskans to begin making those requisite rude noises.

In the next article, I'll present some information which hopefully will help fan those flames.

" . . . Were we actually a business corporation, shareholders would throw us out on our ears."

FACING UP TO THE FUTURE

Part Two of a Five-Part Series

by

Governor Jay S. Hammond

The State's Balance Sheet

Many seem to think Alaska has money to burn. That's not surprising since we've really been burning it. However, the way we've used money to stoke up state government has been much like feeding one's home fires the home: certainly, one can stay warm and cozy while walls and roofing remain; however, long before you've burned the last board, the wind whistles in.

At long last many are starting to feel the draft. Though I may make a pest of myself in the process, I'm going to hold the door open until I have the attention of all. It's time we either turned down the heat under expanding government or hauled in more appropriate tax fuel.

Alaska started throwing its "floor boards" into the blaze when we sold an oil lease and, instead of putting that wealth into income-producing investments or capital construction, used it for increased on-going government salaries and services. With the \$900 million Prudhoe lease wealth, we started burning our "home's" siding and studs.

Certainly, until we run out of lands to lease or oil to pump, we could keep the bureaucratic boilers sufficiently fueled to divert attention from snow seeping in. But unless we start using more appropriate fuel, inevitably some day the roof will cave in.

It's been mighty pleasant to bask in the warmth from burning those "floor boards" rather than having to haul more tax fuel in from outside. But this is depleting capital wealth from our savings account rather than using on-going income. As such, it is inappropriate fuel. Appropriate fuel comes from on-going taxes or income from investment of capital wealth. Hopefully prudent investment income from the permanent fund will permit a reduction in taxes. But we are by no means able to do so at present without simply shoveling more of our depleting basic wealth into on-going government instead of the permanent fund. I find few who want to do this, but once permitted to use readily available inappropriate fuel, it's hard for politicians either to turn down the heat by reducing state services or switch to the more appropriate fuel from new taxes. It can only be done if Alaskans understand what has happened and demand that we do something about it.

We politicians have had the best of all possible worlds: The capability of expanding services without having to raise taxes. That's where the \$900 million went. That's where most of our future non-renewable resource dollars will go unless we shift now to another approach. Small wonder

that many think we Alaskans are flush. Yet actually Alaska is on far shakier financial ground now than in 1960. To recognize this clearly one need but imagine the state a business corporation and all residents "shareholders".

If one considers taxes paid to the state as income received for services rendered, in 1960 "Alaska, Inc." operated in the black. We took in more money than we spent. Moreover, on-going costs of state government were 98% funded from on-going taxes. The remaining 2% costs were paid by statehood transitional monies. In fiscal year 1969, before we began "burning" the \$900 million, we still were using mostly appropriate fuel. 64% of recurring government costs were obtained from recurring revenues. 36% was fueled from non-recurring oil lease "nest egg" wealth.

By FY 1976, however, we were funding only 39% of government's recurring costs from appropriate sources. We are now required to shovel more than 400 million "nest egg" dollars from Prudhoe leases and future severance taxes into the remaining 61% of operational costs.

In 1960 the state spent about \$600 per capita while it took in about \$800 in taxes. "Dividends" of about \$200 per resident shareholder were "earned". Not bad "corporate" performance; especially since our assets then were vastly greater than our liabilities and almost all of our non-renewable resource wealth was still banked in the ground accruing

interest. By contrast, in 1977, our non-renewable resource assets have begun to deplete while renewable assets such as fisheries are deep in the doldrums. Liabilities, on the other hand, have vastly increased. Bonded indebtedness has skyrocketed, and by FY 1976 we had long since stopped paying as we went for expanding government. In 1976 we had income of only about \$1,450 per person while we spent almost \$1,750. Thus, "dividends" earned per resident stockholder had fallen from \$200 each to minus \$1,065—61% of the \$1,750 it now costs the state to provide services for each Alaskan. That's a deplorable performance for a presumably lucrative enterprise. Were we actually a business corporation, shareholders would throw us out on our ears. Instead, viewers see the plate glass, the deep piled carpets, the shiny new buildings and throngs of employees as evidence of a profitable venture which, somehow curiously still does not provide them with "adequate" service.

From a business standpoint, Alaska's government is in far worse shape than in 1960. Now we're deep in the red and kept from swamping only because we've used hundreds of millions of our non-recurring resource "nest egg" wealth to bail us out.

But who's complaining? At least we've raised nobody's taxes. While such may be good politics, is it good business? You might con unsuspecting voters into acceptance; but not shareholders whose "dividends" would reflect such incredibly poor performance.

For example, I suspect that had each citizen gotten a piece of Prudhoe through dispersal of dividends earned by sound investment of the public's \$900 million, we would either know precisely what happened to that nest egg wealth, or it would still be intact yielding dividend checks to the shareholders. Under those circumstances, we would more likely have been willing to pay as we went for state services since the dividends would have helped offset the bite of more appropriate taxes or at least would have inclined shareholders to demand we politicians turn down the heat under state spending.

Perhaps it's time we created "Alaska, Inc." and gave Alaskans some direct shares of the resource wealth which all own. Perhaps only by so doing can we hope that they in the future will insist upon better accountability and performance by those of us tending the fires. It may be the only way to get us back on to more appropriate fuel before we've burned up the floor, the ceiling, the walls and the roof does cave in on our kids.

" . . . This may well be the last chance we will have to shift to a more appropriate means of funding state government."

FACING UP TO THE FUTURE

Part Three of a Five-Part Series

by

Governor Jay S. Hammond

Something's Got To Give

Make no mistake, I'm opposed to new taxes. Isn't everyone? However I'm even more opposed to spending one dollar more of our depleting, non-renewable resource "nest egg" wealth for expanding government salaries or services. Most people seem to agree. At least when I ask if there's anyone in the audience who thinks we should put one more dollar of "nest egg" wealth into on-going government, the answer is always a resounding "no"!

By voting overwhelmingly to place at least 25 percent of our "nest egg" wealth into a permanent fund, Alaskans have demonstrated their awareness that we should not pay for the expansion of government with such monies since they will come to us but once. Instead, government should be allowed to grow only to the extent we're willing and capable of paying for from either income from investments of "nest egg" wealth or appropriate taxes.

Until recently, many Alaskans did not think of our "nest egg" oil wealth as the same as an "inheritance" because Prudhoe Bay should turn over

more of that "inheritance" to us in each of the next several years at least. Yet, despite the fact that our receipt of "inheritance" is stretched out over a longer period of time, it is just as inappropriate to feed it into the growth of government over the long run as it would have been to do so had it been conveyed to us in one lump sum.

Since we started selling oil leases, we've lived in a politician's paradise. We've been able to pump up governmental salaries and services without going to the public for one more tax dollar. By voting to create a permanent fund savings account, the public has, however, indicated a growing awareness that there's something wrong with what we've been doing. I believe, and I ardently hope, that the public will press to place ultimately all of our "inheritance" wealth into this savings account. Some argue that even severance taxes should be considered "nest egg" inheritance wealth since they come from a depleting non-renewable resource and, thus, someday inevitably will be gone. Despite the growing public awareness that our expanding government has grown from feeding off of our inheritance rather than income, few understand just how hooked on this practice we have become and how difficult it will be to wean government off of "inheritance" wealth and back onto a pay-as-you-go basis. For example, while almost everyone tells me that they do not wish to put one more "nest egg" inheritance dollar into on-going government, they are aghast to learn that just to keep government services at their current level next year will require that we put a minimum of about \$477 million

such inheritance dollars into the budget. That is, if the legislature holds the line to the budget level I submitted. Contrary to public misconception, I did not ask for any new taxes should that budget level not be exceeded. I merely said that, should the legislature increase that budget, I propose various measures to increase state income in order to meet those costs. I am not opposed to expanding state services if we have income to pay for them. However, I do not believe the public wants us to dip even deeper into our depleting "nest egg" inheritance to provide that income.

I recognize that in my budget message I handed legislators, butt first, a loaded gun cocked and held to my forehead. If most legislators are more concerned with political games than the broad public interest, you can expect several "motherhood" measures to pass this session while taxes remain set at the current 1961 levels.

Most legislators know I mean it when I say I cannot in good conscience permit any increase in our already dangerous dependency upon "nest egg" inheritance wealth to meet government costs appropriately paid through current income. This may well be the last chance we will have to shift to a more appropriate means of funding state government, or at least hold down that government growth until appropriate means are available to permit its further expansion.

Perhaps the legislature will choose to discharge that gun in order to wipe me out politically by passing those "motherhood" measures and compelling me to alienate almost everyone. However, I am banking on principle outweighing politics for I believe most legislators are just as concerned as you tell me you are. If they are not, here is what will undoubtedly happen. Bills increasing benefits to old timers, teachers, taxpayers, municipalities, school districts, the poor, and the bush will all pass while no taxes will be increased on the public.

Even if we could put all of our "nest egg" inheritance wealth into sound investments, the income from those investments would not for many years permit us to shift totally to paying as we went for government. However, unless we start to suppress government growth and to increase the percentage by which we pay as we go for government, we will simply feed one \$900 million "nest egg" after another into government's gullet.

I find few who do not agree that is inevitable. Most agree something should be done to preclude it. What? Some say slash government services to a level at which we can "pay as we go" such as we did back in 1960 when only state income and not one dollar of state non-renewable "nest egg" wealth was used to run government. But that would require we slash \$477,000,000 this year alone in government services. The alternative, of course, to not "going" so far is to start "paying" more. One or the other or both are necessary if we ever are to shift back to sound

financial practice.

In my two years as governor, it has become increasingly apparent that unless we are able to make that shift, we have commenced a countdown to chaos which will make New York's financial plight seem trivial by contrast. One means of possibly helping us make that shift is a proposal I've put forth which would make each Alaskan a shareholder in our resource stocks. It's my hope that, by giving John Q. Alaskan a "piece of the action", we'll also be giving him an increased awareness of the improper uses those resource dollars are often put to. I call this grass roots revenue sharing proposal "ALASKA, INC.". I'll begin outlining it in the next article in this series.

" . . . If Alaska, Inc. would do what many believe it might . . . isn't it worth gambling one-sixteenth of the income from our non-renewable resource wealth?"

FACING UP TO THE FUTURE

Part Four of a Five-Part Series

by

Governor Jay S. Hammond

"Alaska, Inc." - One Possible Solution

The "Alaska, Inc." proposal is not something which the public can or should accept without examination. It will only come about if the public concludes it provides the best, perhaps the only, means by which we can possibly shift now to an appropriate "pay as you go system" before it is too late. It will come about not because we politicians have told the public it should, but because the public concludes, as have I, that it may be the only way to assure that at least a portion of our non-renewable resource wealth is returned in some discernible benefit form to Alaskans both here now and in the future.

However, the only way it's likely to happen is if the people demand it. Otherwise, expect business as usual. Save for that small percentage of non-recurring resource wealth which must by constitutional mandate go into the permanent fund, inevitably ever greater amounts of our non-recurring wealth will be used to fund state government spending before most politicians would dream of offending the electorate by suggesting new taxes.

Therein lies the most compelling arguments in behalf of dispersing dividends to citizen shareholders in "Alaska, Inc.". We are blessed as no other state has been; we can afford to try something different. In fact, it may be we cannot afford not to.

The basic question as to how we use our income from investment of our resource inheritance wealth is this: Do you believe as I that all Alaskans should share equally in at least a portion of that income? If you do, "Alaska, Inc." may be the only means by which this can be done.

The "Alaska, Inc." bill we are introducing will be a blueprint for discussion. It should not be acted on this year. I submit it to provide merely something to build upon or be torn asunder. It incorporates features and procedures designed to ease administrative costs; reduce fraud; provides no inducement for persons to come to Alaska; permits options which reduce the federal tax bite; permits us to shift to appropriate tax schedules without undue cost to most Alaskans now here.

It obligates but a minor portion of the income earned from permanent fund investments. The great bulk of such income can still be used for expanding government. Hopefully, however, once the public is conditioned to the "Alaska, Inc." concept, there would be ever greater restraints placed upon those who would spend monies from depleting non-renewable resources. I would hope that ultimately 100 percent of such revenues were placed into the permanent fund. However, we cannot do that in one jump.

It will take a long time to wean ourselves away from siphoning "nest egg" inheritance oil dollars into state salaries and services. However, even the modest amounts of money committed under present law to the permanent fund should at least start to turn down the tap.

The blueprint bill which we will introduce provides that a person who has been physically present in Alaska during the majority of each of five years would be eligible to receive a dividend check for a share of earnings derived from investments of permanent fund oil money. Shareholders would make application by signing an affidavit attached to state income tax forms. That affidavit would attest, under penalty of losing all future benefits for perjury, that one had met the qualifications which, along with physical presence, required that one be registered to vote. There will be an option to defer receiver dividends for those who find that under such deferral they could reduce the federal tax bite. Persons 65 years of age who qualified would initially receive two shares. Subject to the effective date of the legislation, for each subsequent five years during which an individual met the qualifications, an additional share would be conveyed. Children, upon achieving the age of 18 and otherwise meeting eligibility requirements, would receive one share for each accumulative five year period subsequent to the date of the act.

Possibly we should provide that those imposing costs on the state should have the dividends used to defray those costs. For example, we might

charge room and board of those housed in our correctional facilities.

There are some of course who's earned income is such that state dividends could be largely offset by federal income taxes. An option to defer receipt of dividends until retirement age or some such time could go a long way to offset the federal tax bite. A tax audit option also should be considered.

Since oil royalties and lease bonuses make up but a portion of revenues derived from oil, there will still be a significant amount of oil revenues from severance taxes available for spending through general fund appropriations, just as now. Under a constitutional amendment establishing the permanent fund, only 25 percent of just lease bonuses and royalties would have to go into the permanent fund. If leases bonuses and royalties made up 50 percent of the annual income to the state from oil, that means that only one-eighth of our annual income from oil would be placed into the permanent fund. In turn, under our "Alaska, Inc." proposal, but one-half the earnings from permanent fund investments, or one-sixteenth of the potential earnings from our oil wealth, would be dispersed in dividends to qualified Alaskans. If "Alaska, Inc." would do what many believe it might insofar as suppressing government growth to the level people would permit themselves to be taxed; creating public pressures to place additional depleting non-renewable resource wealth into the permanent fund; assuring that all Alaskans received some discernible benefit from their share of our resource wealth and that those flocking to Alaska in the

future really paid their way rather than requiring the state to subsidize their presence; if it even possibly could do these, isn't it worth gambling one-sixteenth of the income from our non-renewable resource wealth? or, should we permit it to go the way of the \$900 million instead?

While the initial dividends to be paid Alaskan shareholders might be modest, by increasing the amount of oil wealth within the permanent fund or the percentage allocated to dividends. Those dividends could be significant. They could more than offset the additional costs to most Alaskans now here of appropriate taxes to which we must begin to shift if we ever hope to start "paying as we go" for government—or not going!

"... The more I have considered the objections raised and explored possible alternatives, the more I have become convinced it may be the only means by which we can possibly once more begin to 'pay our way'."

FACING UP TO THE FUTURE

Part Five of a Five-Part Series

by

Governor Jay S. Hammond

In Defense of "Alaska, Inc."

Of course, there have been objections raised to the "Alaska, Inc." concept. I was reluctant to float it out because I knew it would be vulnerable politically. Yet, the more I have considered the objections raised and explored possible alternatives, the more I have become convinced it may be the only means by which we can possibly once more begin to "pay our way".

Among the main objections I have heard raised is the suggestion that to pay dividends directly to Alaskan shareholders would pander to the public's "greed". But even if such would be the case, would it not be refreshing to have the public's so-called "greed" working to suppress the growth of government and state budgets to counter special interest "greed"? Of course, one man's presumed "need" becomes the other fellow's "greed". Regardless of the terminology, it would be interesting to have the modifying influence of the public's "greed" or "need" countering that of special interests or the pork barrel process. Another objection has been that such a program would create pressure from the public to exploit our resources at a less than prudent pace. But those pressures could not be worse than the pressures we are faced with now. It would be much easier to

resist public pressures to lease out all our oil lands as quickly as possible simply to achieve a larger dividend than it is under the present circumstances to resist putting up new oil leases each time the growth of government demands an increase in revenues. Such was the case when I took over this administration. Faced with a \$200 million shortfall, I had little choice but to cast around for some immediate revenues. Obviously, I could not double the income tax. The only thing I could assuredly do was to find another oil province to lease and hope we could raise enough money. Thus, I was almost compelled to put up the Beaufort Sea leases simply to meet the state's payroll, despite the fact the time was not the most auspicious nor the price potentially top dollar. That's a lousy way to be forced to do business. However, unless we shift to funding government from appropriate tax dollars it's only a matter of time before this governor or the next will be forced to start selling lands to pay off the help.

Some have suggested that if you believe that all Alaskans should share equally in our non-renewable resource wealth, perhaps we should simply sell it all and disperse shares directly to Alaskans rather than placing that wealth into a permanent fund. I disagree most emphatically. That wealth does not belong to simply those of this generation. It belongs to Alaskans now and in the future.

Some have said the program would be difficult to administer and would lead to fraud and litigation. By using an affidavit attached to one's income

tax return, we not only will increase the number of income tax filings but simplify the process of application. Moreover, it is unlikely that many will be inclined to cheat if they are made aware that if by so doing they would foreclose the opportunity to ever again participate in the program. Since initially all who qualified would receive but one modest share, it is unlikely there'd be much inducement for an individual to jeopardize his potential long-term earnings by perjuring himself. An additional safeguard could be structured into the act by simply requiring that applicants must submit, upon demand, evidence supporting their contended qualifications. Such evidence might consist of affidavits from two prospective shareholders who, if found to have perjured themselves, would also lose forevermore prospective benefits. Procedures such as these would certainly cut down on the potential for abuse.

While dispensing dividend checks to Alaskans may seem unusual, if one thinks about it, no matter how we use State monies, they are dispersed in "dividends" from a gigantic people's owned business corporation we could call "Alaska, Inc." If we use the money to cut taxes, a "dividend" is granted taxpayers. Use it to expand services; recipients of these services receive a "dividend". If we use it for municipal revenue sharing, "dividends" are conveyed to municipal dwellers.

While some investment earnings from "nest egg" wealth in the Permanent Fund could and will no doubt be used for the above purposes, all such "dividends" are selectively dispersed. What about the individual who

lives outside a municipality? Or who makes too little income to pay taxes? Or who receives no welfare benefits and few, if any, State services? Does not he also deserve a "dividend" from that wealth which belongs to all Alaskans? Perhaps the only way he can ever expect to see a share of that wealth is if he actually receives a dividend check. Perhaps we should take a page from the Native Land Claims Act. The Natives foresaw that the only way some of their corporate shareholders might see any part of their wealth was to distribute a portion in the form of a direct dividend check. However, they are distributing a portion of their capital nest egg wealth. I propose something far more modest: a distribution not of the "nest egg" wealth itself but a part of its earnings.

It seems to me that no matter how we use the income from our "nest egg" wealth, a major objective should be to see that at least a portion of it is distributed equitably. Should someone come forth with a more equitable means of assuring that all Alaskans can have a "piece of the action" than direct dividend checks, I welcome that information. To date nobody has.

Some say municipal revenue sharing's the way we should go. I don't think most Alaskans agree. However, there's an easy way to find out. Let people exercise local option. Should they elect to have all dividends go to the municipality rather than to themselves, so be it. However, I suspect most would like to have a chance to decide for themselves how

they would spend at least a small part of their wealth rather than leave all of such decisions up to elected officials.

Polls have shown that confidence in the way public monies are spent is inversely proportionate to the distance you remove those monies from the public's control. Thus, the public has least confidence that the federal government spends their money wisely. Somewhat more confidence in state government; and far more in local government since they at least have those who will spend it within their arms length. "However, if you really want my dollars spent wisely," says the average citizen, "let me say where they are spent." I think it's high time we listened.



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

May 28, 1977

Representative Clark Gruening
Chairman
House Special Committee on
the Alaska Permanent Fund
Alaska State Legislature
Juneau, Alaska 99811

Dear Representative Gruening:

I am pleased by your offer of cooperation and your suggestions for coordination of energy and effort on the Permanent Fund. This is an excellent opportunity for the executive and legislative branches to work together on what is unquestionably one of the most important issues facing Alaskans.

I have designated the Division of Policy Development and Planning as the coordinating agency for this project. The division will (1) maintain close contact with the legislative committees and their work; (2) pull together data from executive agencies which are only peripherally involved with issues which concern the Permanent Fund; (3) act as a clearinghouse for specific work requests for executive agencies from the legislative committees; (4) act as a source of information for regular progress reports on legislative action during the interim; (5) generally coordinate between the various departments which will be designated as lead agencies for specific projects; for example, the Department of Natural Resources, for renewable resources questions, and the Department of Revenue for investment implementation and structures; and (6) coordinate with the Growth Policy Council and the Public Forum on the public participation process which has been proposed.

I look forward to working with you and your committee on this project.

Sincerely,

A large, stylized handwritten signature of Jay S. Hammond, written in dark ink, slanted upwards to the right.

Jay S. Hammond
Governor

Alaska State Legislature

Representative
CLARK GRUENING
940 Tyonek Drive
Anchorage, Alaska
99501

907-274-2446



Chairman
SPECIAL COMMITTEE ON
THE ALASKA PERMANENT FUND
Chairman
WAYS and MEANS SUBCOMMITTEE
Member
FINANCE COMMITTEE
LEGISLATIVE COUNCIL

House of Representatives

POUCH V JUNEAU 99811

May 23, 1977

The Honorable Jay Hammond
Governor of Alaska
Pouch A
Juneau, Alaska 99811

Copy
PF - Correspondence

Dear Governor Hammond:

The need for an integrated approach by the executive and the legislature to implement the Permanent Fund is becoming obvious. Cooperation is desirable to avoid needless duplication and to ensure that the Permanent Fund does not fall victim to partisan politics or feuding between branches or agencies of state government.

While several of the executive agencies will be involved with individual Permanent Fund issues (structures, distribution of income, citizen participation, economic analyses, etc.), it would be extremely valuable to have one agency or individual within the Governor's office designated as the Permanent Fund policy and planning coordinator.

With certain departments such as Revenue, Natural Resources and the Division of Policy Development and Planning, the legislature would have direct liason. For the other agencies the coordinator could (1) maintain close contact with the legislative committees and their work; (2) pull together data from executive agencies which are only peripherally involved with issues which concern the Permanent Fund; (3) act as a clearinghouse for specific work requests for executive agencies from the legislative committees; and (4) act as your source of information for regular progress reports on legislative action during the interim. The legislative committees also plan to designate staff members as coordinators, to ensure the closest possible cooperation between the two branches.

The members of the House Permanent Fund committee (and probably Senate members as well) are interested in using the Alaska Public Forum to obtain public participation in the decisions the Legislature will be making as to the objectives and alternative structures for the Permanent Fund. In cooperation with members of the Growth Policy Council and all other involved members of the executive branch, the legislature would formulate the relevant policy questions on how the Permanent Fund, the Renewable Resources Fund and disposal of income from these funds fit into the larger question of management of public wealth.

The Honorable Jay Hammond
May 23, 1977

In the final implementation of the Permanent Fund, cooperation will ensure that no substantial divisions in intent and direction will occur. This coordination between branches should involve regular meetings between executive and legislative staff members in order that information be exchanged in time for the particular needs and deadlines of each group involved. This is particularly crucial in matters of citizen participation, so that the public is aware that their government is working on the Permanent Fund, rather than a public perception that each agency and committee is pursuing its own objectives separately.

The role of the Permanent Fund in the wise management of public wealth is the most important issue this legislature will face next session. Our work on this issue can be a model for future executive and legislative cooperation.

Sincerely,

A handwritten signature in cursive script, appearing to read "Clark Gruening".

Representative Clark Gruening, Chairman
House Special Committee on the Alaska Permanent Fund

CG/br



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

July, 1977

MAILER MEMORANDUM NO. 77-4

FROM: Charles H. Meacham, Director
International Fisheries and External Affairs

On the personal invitation of Governor Hammond the U. S. State Department Ocean Affairs Advisory Committee, Fisheries Section, will hold its 1977 summer meeting in Kodiak, Alaska, on July 6 and 7.

In extending the invitation, Governor Hammond said, "We welcome the opportunity to show this prestigious committee, and the U. S. fishing industry Alaska's dynamic fisheries potential. This committee is a direct line to State Department officials responsible for negotiating fisheries treaties and is of vital importance to Alaska. An opportunity to observe first-hand the Western Alaska salmon industry in full operation will be a valuable experience for the members of the committee, while illustrating Alaska's special need for adequate fisheries protection."

The U. S. State Department delegation will be headed by Assistant Secretary Patsy Mink accompanied by Deputy Assistant Secretary for Oceans and Fisheries Affairs John Negroponte.

Enclosures:

U.S. Observers Start Work on Foreign Vessels, U. S. Maritime Monthly, May, 1977
Tanner Crab Sales Decline in Japan, ibid
Japan Paying High Prices for Alaska Red Salmon, ibid
Law of the Sea, Southeast Alaska Empire, June 27, 1977
Alaska Fishermen Double Crab Take, ibid
Japanese Fishing Boat Leaves Sitka After Citation, ibid, April 11, 1977
Whaling Commission Slashes the Quotas, ibid, June 24, 1977
Pollock Roe Prices Double, The Fisherman, May 6, 1977
Dogfish Operation for Poles Approved, ibid
China Warns Tokyo, Seoul on Sea Pact, The Japan Times Weekly, April 30, 1977
Taiyo Fishery Goes Up in Corp. Earners' List, ibid, June 4, 1977
Fishery Talks Suspended, ibid, April 23, 1977

New Fees Proposed for Foreign Vessels, Fishing Gazette, April, 1977
 Fish Processor to Expand Kodiak Operation, The Anchorage Times,
 May 19, 1977
 Sablefish Prices Peak on Japanese Markets, Western Fisheries, April, 1977
 Trade Agreement Includes Fisheries, ibid
 Argentina Wants Japan Immigrants, The Japan Times, May 9, 1977
 Japanese Group Wins Argentine Fishing Deal, ibid, May 18, 1977
 Central, Metropolitan Governments Take Action on Soaring Fish Prices,
 ibid, May 21, 1977
 Podgorny Receives Diet Mission, ibid, April 22, 1977
 Fishery Cities are Hardest Hit by Soviet-Proposed Quota Cuts, ibid,
 May 27, 1977
 Companies are Hotly Competing in Fish Habitat Development, ibid
 Japan Formally Accepts Quota Proposed by Russia on Salmon, ibid,
 April 22, 1977
 Gov't Approves Bill for 200-Mile Zone, ibid
 Quota Agreement Reached; Signing to Proceed Today, ibid, May 27, 1977
 Soviets Seize Japanese Boat, ibid
 Eager Fishermen Head for Grounds off Aleutians, ibid, May 13, 1977
 International Fishing in New Era, ibid, May 30, 1977
 Fishermen Told to Adjust Boats, ibid
 Silver Salmon Flourish in Warm Inland Sea, ibid
 Fishery Talks Over, ibid
 Japan Demands Larger Hauls From Soviet 200-Mile Zone, ibid, May 26, 1977
 Diet to Get Fishery Pact Legislation This Week, ibid
 Basic Territorial Issue Policy Reflected in Interim Pact, ibid,
 May 29, 1977

May, 1977

U.S. Observers Start Work On Foreign Vessels

The first of an estimated 160 United States observers have been placed on foreign fishing vessels that are permitted to fish within the 200-mile fishery conservation zone.

Under the terms of permits issued under the Fishery Conservation and Management Act of 1976, observers are placed on foreign fishing vessels to collect biological data, information on their catch, information on the types of gear used, and information on the fishing effort of the vessels. In addition, they will monitor compliance with the regulations and terms of the fishing permit.

Observer trips will cost between \$2,000 and \$10,000, including all direct and management overhead support costs of the Department of Commerce, Coast Guard, Navy, and Customs Service. These costs will be paid by the foreign nations which have observers on board their ships.

U.S. observers will board the ships either before they leave their home ports, from Coast Guard vessels at sea, or when the foreign ships enter U.S. ports to pick up the observers.

Tanner Crab Sales Decline In Japan

The sale in Japan of imported snow (tanner) crab from Alaska has recently dipped below the level for the same season last year in spite of the low prices (reportedly \$.16-.48 per pound) less than a year ago. The wholesale prices at Tokyo Central Wholesale Market in early March were reported to be \$1.93/lb. for size "4L", \$1.69/lb. for size "3L", \$1.45/lb. for size "2L". Informed sources attributed the declining sale of snow crab to excessive imports which so far have totaled 4,000 tons.

Southeast Alaska Empire, Juneau, Alaska, Monday, June 27, 1977

Law Of The Sea

UNITED NATIONS, N.Y. (AP) - U.N. delegates agree that the sixth session of the U.N. Conference on the Law of the Sea is nearing a climax.

They predict that over the Fourth of July weekend an effort will be made to produce the third highly tentative text in as many years for a general treaty on all aspects of sea law.

The document seems likely to be called "the composite text." It will succeed the "revised single negotiating text" of 1976 which replaced the "single negotiating text" of 1975.

"We've reached a critical stage," U.S. delegate Elliot Richardson told The Associated Press.

Southeast Alaska Empire, Juneau, Alaska, Monday, June 27, 1977

Alaska Fishermen Double Crab Take

ANCHORAGE (AP). — Alaska fishermen have more than doubled last year's Bering Sea tanner crab catch and gained a foothold in the sea's eastern crab fishery.

State Department of Fish and Game biologist Jack Lechner of Kodiak told the North Pacific Fisheries Management Council on Saturday that the 1977 harvest probably will reach 50.5 million pounds, compared with 22.3 million pounds last year and 5 million in 1975.

Last winter Kodiak fishermen outlined expansion plans and appealed to the council to cut back the Japanese quota in favor of the Alaska fleet.

The council is required under the U.S. 200-mile fisheries zone law to make available to foreign fishermen those stocks which are not utilized by American fishermen. The panel opted to wait and see what the Alaska fleet could do this season.

"I'm delighted at what Alaskan fishermen have accomplished," said council member Charles Meacham after the report from Lechner.

Council Chairman Elmer Rasmuson said congratulations also should be extended to

processors "who have risen to the occasion by processing this big harvest."

Meacham said expansion of the domestic effort means the council logically can recommend a cut in the foreign quota next year. The law states that the foreign take in any fishery can be cut back or eliminated if the domestic fleet and processors demonstrate the ability and willingness to harvest the resource.

THE JAPAN TIMES WEEKLY,

April 30, 1977

China Warns Tokyo, Seoul On Sea Pact

China lodged a formal protest with the Japanese Government last week over the Japan-South Korea continental shelf development agreement now before the Diet for ratification, it was learned Sunday.

The protest was filed orally by Sung Wen, first secretary at the Chinese Embassy, when he met Takashi Tajima, chief of the Foreign Ministry's China division, at the Foreign Ministry to be briefed on Japan's proposed 200-mile fishing zone, Tajima said Sunday.

Sung told Tajima the agreement violates the sovereignty of China and warned that if Japan and South Korea "arbitrarily" develop the area covered by the agreement, the two nations must bear the responsibility for any consequences arising out of the development.

The division of the continental shelf in the East China Sea must be decided in consultation with China, Sung said.

The protest is similar in content to an announcement by China immediately after Japan and South Korea signed the agreement in January 1974. A similar statement was conveyed to the Japanese Embassy in Peking by the Chinese Foreign Ministry last week.

Japanese Fishing Boat Leaves Sitka After Citation

A Japanese fishing vessel cited Thursday for violating America's 200-mile fishing limit was allowed to leave Sitka over the weekend, an official of the National Marine Fisheries Service in Juneau reported this morning.

The fishing vessel, the 165-foot "Tenyo Maru No. 25," had been cited Thursday by the Coast Guard when the boat arrived in Sitka after having failed to notify the Coast Guard that it had entered the U.S. fisheries zone. Federal law requires foreign fishing vessels to notify U.S. officials within 24 hours before they begin fishing in American waters.

Fred Maldonado, a Coast Guard spokesman in Juneau, Friday said the boat had failed to make such a notification and reportedly had been seen fishing for several days before arriving in port at Sitka.

Harry Rietze, regional director of the National Marine Fisheries Service in Juneau, this morning said his agency will process all the evidence obtained by the Coast Guard in its investigation which concluded over the weekend and then bring civil charges against the craft.

Rietze said the citing of the vessel marked the fifth administrative-civil issued citation by the government in Alaska since the 200-mile limit went into effect March 1.

He explained the failure of the craft to notify authorities of its commencement of fishing in American waters, even though the craft was fully licensed in every other way, is being treated as a serious violation of the act.

"It's very important that we take action since we don't want to allow foreign vessels to establish the practice of not checking in with us when they enter our territory. If foreign boats fail to check in, it could destroy our bookkeeping system and hurt the entire act."

"We'll be very insistent that all boats notify us when they enter our waters," Rietze said.

Maldonado this morning reported the Thursday incident marked the 53rd boarding of a foreign fishing vessel by the Coast Guard since March 1—31 Japanese, 21 Soviet and one South Korean boat being checked. Overall, seven of the boats have been found in violation of the new law, two of the boats escaping with written warnings.

Rietze this morning said that court charges formally would be filed against the first violator cited under the act later this week.

Maldonado said Friday each day of fishing is considered a separate violation under the 200-mile act and the vessel's owners could be fined up to \$25,000 for each violation.

Southeast Alaska Empire, Juneau, Alaska, Friday, June 24, 1977

Whaling Commission Slashes The Quotas

CANBERRA, Australia (AP)

The International Whaling Commission today slashed whale quotas an average of 35 per cent for next year and drastically reduced the number that can be taken in the North Pacific.

The ruling angered Japanese and Soviet delegates to the commission, who said the reduction in the North Pacific threatened to ruin their large whaling industries.

The commission reduced the total sperm whale catch in the North Pacific from this year's 7,200 to 763. The humpback whale

quota was dropped from 1,000 to 524 and minke whales from 541 to 400 in the North Pacific.

However, the commission promised to reconsider North Pacific quotas before next season. The commission said its scientific committee will hold a special meeting in November to review the North Pacific sperm whale stocks.

Depending on the findings, the commission could call a special full meeting to discuss quota changes, officials said.

Taiyo Fishery Goes Up In Corp. Earners' List

Taiyo Fishery Co. has moved up to the ninth place from the 10th in terms of income among the top 10 Japanese firms closing accounts in January.

According to figures reported to the National Tax Administration Agency, Taiyo Fisheries' sales totaled ¥481,400 million, up 5.6 per cent over the previous year. Its declared income rose 34.9 per cent to ¥2,694 million.

Taiyo officials ascribed this to the sales of nine ships, in-

cluding whalers, last year at some ¥3.9 billion.

Kirin Brewery Co. and Sekisui Prefab Homes, Ltd. retained the first and second places.

The agency also announced 59 companies, capitalized at more than ¥500 million, in nine industries reported total sales of ¥3,459.4 billion, up 12.1 per cent, and total income of ¥110.6 billion, up 22.9 per cent.

Taxes assessed on them totaled ¥38.7 billion, up 35 per cent.

Income increased for eight industries, including food, textile, paper-pulp and chemical, but decreased for the real estate industry.

Fish Industry Thrives

Thanks to higher fish prices, five major Japanese fish wholesalers listed on the Tokyo and Osaka stock exchanges have reported their best-ever sales in the last business year ended in March.

Leading the five was Chuo Gyorui Co., whose sales totaled ¥161,634 million, up 76.4 per cent, current profits ¥1,433 million, up 24.7 per cent, and after-tax profits ¥694 million, up 29 per cent.

Daito Gyorui K.K. reported an increased of 67.6 per cent in after-tax profits, Tsukiji Uoichiba Co. 48.7 per cent, Osaka Uoichiba Co. 32 per cent and Toto Suisan Co. 12 per cent.

Daito Gyorui and Osaka Uoichiba increased their dividend payments by 3 per cent (¥1.50) to 15 per cent (¥7.50), commemorating their 30th anniversaries.

Saturday, April 23, 1977

Press Comments Summarized

Fishery Talks Suspended

The Japanese-Soviet fishery negotiations in Moscow have been suspended. They were fishery negotiations in name, but in substance territorial negotiations. The Soviet insistence might prevail if the negotiations were continued, and the suspension was inevitable. Before the resumption of the negotiations, the Government must review past negotiations and make sound preparations for the forthcoming negotiations. It cannot be denied that there was an optimistic view on the part of the Japanese Government. The Russians have border questions with European countries and China. We wonder if the Japanese Government had tried to side-step the territorial issue by using ambiguous expression. The Russians did not yield on their stand that the four disputed northern islands are their territory. Lack of unity within the Japanese Government was conspicuous. A conflict of views between the foreign and the agriculture-forestry ministries was reported when the negotiations reached a climax. Needless to say, relief measures for the fishermen affected must be taken promptly. We earnestly hope the Soviet Government will understand the Japanese people's fervent wishes for reversion of the northern territory and take a broader perspective for the two nations' goodwill and friendship. — Yomiuri Shimben

May, 1977

U.S. MARITIME MONTHLY

Japan Paying High Prices For Alaska Red Salmon

Frozen red salmon imports from Alaska began to sell briskly in Japan, and the latest wholesale prices quoted at the Tokyo Central Market reportedly were rising to between \$2.01-\$2.10 per pound for size between six and nine pounds and up between \$2.24-\$2.40 per pound from earlier this year.

So far, about 500 tons of frozen red salmon have been imported from Alaska to Japan in 1977.

THE FISHERMAN — MAY 6, 1977

Pollock roe prices double

TOKYO — Prices of Alaska pollock roe in Japan have virtually doubled since last year. Latest wholesale prices at the Tokyo Central Market are given as 1,800 - 1,900 yen per kilogram (\$2.58 - \$2.69 per pound) for grade A, 1,300 - 1,400 yen per kilogram (\$2.10 - \$2.21 per pound) for grade B, and 1,000 - 1,100 yen per kilogram (\$1.61 per pound) for grade C, an increase of 80 to 100 percent over the same period last year.



Washington Bulletin

By Donald Whitaker

New Fees Proposed for Foreign Vessels

A schedule of fees to be paid by foreign vessels and foreign nations fishing within 200 nautical miles of the U.S. coasts has been proposed by the National Oceanic and Atmospheric Administration (NOAA).

The proposed schedule provides that each foreign vessel will be charged a fixed annual access fee of \$1.00 per gross registered ton, not to exceed \$5,000 per vessel. In addition, each foreign nation with fishing vessels in the zone will be charged a fee of 3.5 percent of the total dockside value of the pounds of fish allocated to the nation. The value will be determined by the price received by U.S. fishermen for the species in the U.S.; if there is no U.S. market, an average foreign dockside price will be used.

The Department of Commerce agency estimates that about 1,400 foreign fishing vessels with an average size of 1,400 gross tons are expected to apply for fishing privileges off the United States. They are expected to be permitted to catch about two million metric tons of fish, with a dockside value of about \$553 million, in 1977.

Revenue from the fees would thus amount to about \$2 million from the access fees and about \$19 million from the dockside value fees assessed against the foreign nations. In addition, up to \$750,000 may be collected from the foreign vessels for the cost of U.S. observers on 20 percent of the vessels.

In sum, the U.S. would thus recover about 40 percent of the cost incurred in permitting foreign vessels to fish within the 200-mile zone.

The total annual cost of research, administration, enforcement and other aspects of managing the 200-mile zone is estimated to be about \$92 million. The value of fish taken by foreign fishermen is about 60 percent—\$553 million—of the total value of the combined U.S. and foreign catch of \$920 million. Thus, according to the National Marine Fisheries Service (NMFS), about 60 percent of the total cost of the program, \$55 million, can be attributed to foreign fishing.

NMFS also estimates that about \$70 million of the total \$92 million required to manage the zone would be needed even if foreign fishing were totally excluded from the zone, owing to the need for stock assessment and enforcement activities.

United States commercial fishery landings for 1976 are forecast to be 5.2 billion pounds—the largest in 10 years—according to the National Marine Fisheries Service. This represents a seven percent increase over 1975.

The record dockside value, exceeding \$1 billion, is due to a steady increase in foodfish catches and to generally rising prices.

NMFS says that total quantities of domestic tuna processed by California canneries are running at least 10 percent ahead of 1975, as are those of domestic fish at canneries in Puerto Rico (Puerto Rico data are not included in the 5.2 billion-pound total catch).

Landings of fish used for processing into meal and oil also appear to be above the 1975 levels. Increased production of Atlantic and Gulf of Mexico menhaden will offset a decline in California anchovy. Heavier-than-expected production of menhaden and anchovies in December could make 1976 the best year for such industrial fish since the record year of 1962.

The chief declines will be in clams and blue crabs. Resource problems with the surf clam now restrict Atlantic Clam landings which are expected to be down by a third from last year. Total Atlantic and Gulf of Mexico blue crab production will be off by about 25 percent, but fairly large resource fluctuations are normal in this fishery.

As a consequence of the U.S. extended domestic jurisdiction, and in keeping with the intent of the Act, the President has decided that the United States would withdraw from the International Convention for the Northwest Atlantic Fisheries (ICNAF) on December 31, 1976.

The United States has been an active member of ICNAF since its inception 26 years ago. The Convention has made significant contributions to fisheries conservation in the Northwest Atlantic and the United States has benefited from decisions taken by its members.

The scientific research and management of fisheries in the area, which have been carried out under ICNAF, are outstanding examples of the benefits which can be achieved through international cooperation. The President has therefore concluded that as the United States implements its legislation, it should take into account the management proposals developed at the last meeting of ICNAF in developing its 1977 Management Plans.

Fish Processor To Expand Kodiak Operation

New England Fish Co., which long has been active in fish processing in the state, plans to expand its Kodiak Island processing facility to a \$3.2 million plant for the processing of bottomfish caught by U.S. fishermen in the Gulf of Alaska.

C. R. Rogers, president of the Seattle-headquartered corporation, also said a new office has been created within the company to develop additional Asian export markets for bottomfish which will not be utilized by consumers in the United States.

A. J. Petrie has been named to head the new office.

The new Kodiak facility will be one of several the company plans to install in the Pacific Northwest to process under-utilized species, Rogers said. The plant, which is expected to be open late in September, will be capable of processing 30 million pounds of landed fish.

Spurring construction of the plant is a \$150,000 guarantee provided by the State of Alaska against first-year market losses and a matching \$150,000 from the U.S. Economic Development Administration for fishermen and plant employee training programs.

Filleting equipment, considered the best in the world, has been ordered from Germany for the new facility which is expected to have a value of \$3.3 million, including associated equipment.

New England recently is seeking vessels capable of fishing in the North Pacific for the new plant, Rogers said. He invited inquiries from fishermen to the local and regional facilities of the company.

Company officials said its actions signal the beginning of a new U.S.

fisheries industry in the North Pacific. They said for the first time U.S. fishermen will catch and U.S. plants will process pollock and other bottomfish for use by the American seafood industry and for export abroad.

Prior to this time, virtually all such species from the Bering Sea and the Gulf of Alaska — nearly five billion pounds in 1974 — were caught and processed by foreign interests. A substantial portion, however, was exported back to the United States,

contributing thereby to the total annual U.S. balance of payments seafood deficit of \$1.8 million (1976 figure), the company officials noted.

Rogers said the company's decision to move into bottomfish is the direct result of the new 200-mile fishery zone.

"Prior to the law, when foreign interests were decimating the stocks of all fish species off the U.S. coasts, the investment of capital in processing plants for species under-utilized by the U.S. would have been attend-

ed by enormous risk," Rogers said. "Who was to guarantee that the species would be there even long enough to amortize the investment in a plant?"

C. O. Perkins, vice president, also noted that the long-term prospects are good for the new U.S. fisheries in the North Pacific.

"American fishermen and processors are a long way off today from utilizing the total ocean protein sources in the North Pacific and Bering Sea.

"By 1955 Americans should be able to harvest six billion pounds of seafood there, when stocks are fully replenished, with a wholesale value of a billion dollars. We could help turn the seafood foreign exchange situation completely around."

For the last several months, U.S. processors, led by New England Fish Co., have been embroiled in a controversy surrounding an application by Korean interests for a permit to buy pollock on the high seas from Alaska fishermen for Korean fac-

tory ships.

The Korean proposal, which delayed a decision by New England to move into bottomfish, received a setback April 27 when the North Pacific Fishery Management Council, meeting here, recommended by a vote of 12-0 to deny the application for a permit for the project.

"The support we have received from the council, the congressmen and from fishermen and other processors convinced us to go forward with our plans," Rogers said.

Sablefish prices peak on Japanese markets

Prices of Sablefish in Japan rose sharply since the turn of the new year, and in late January reached 430/kg yen (\$1,354/short ton) for medium size, and 390/kg yen (\$1,223/short ton) for small size. The recent sharp gain in price for Sablefish is attributed to the general lapse in shipment of northern-water bottom fish. Informed sources are predicting further rises in price of Sablefish and other northern-water bottom fish in February and March.

Trade agreement includes fisheries

A new Italian-Tunisian fishing agreement was ratified recently by the Tunisian National Assembly. The agreement will permit Italian trawlers to fish within Tunisia's Territorial Sea for a three year period in exchange for Italian loans and a promise to import 20,000 tons of Tunisian olive oil.

April, 1977 WESTERN FISHERIES

64 THE FISHERMAN — MAY 6, 1977

Dogfish operation for Poles approved

OTTAWA — Approval of a Polish proposal to catch and process dogfish off the British Columbia coast this year was announced last week by federal fisheries minister Romeo LeBlanc.

The operation will involve two Polish factory trawlers fishing on high concentrations of dogfish during the summer months on an experimental basis.

"We see several advantages to this proposal," LeBlanc said. "The most immediate advantage is that it will help reduce the large concentrations of dogfish which interfere with commercial and sport fishing and prey on such valuable commercial species as herring, salmon and crab."

In the longer term, he said he hoped to see establishment of a

domestic fishery for dogfish after Canadians have acquired the necessary techniques.

Fisheries Service staff and fishing industry observers will be placed on the Polish vessels not only to ensure compliance with Canadian regulations but also to learn the techniques of catching and processing dogfish from the Polish fishermen.

LeBlanc noted that dogfish had been heavily fished in the forties for the extraction of vitamin A from the livers, but with development of synthetic vitamins, commercial dogfish catches had become insignificant.

Various federal subsidy programs over the years had been unsuccessful in establishing a dogfish industry in the province, he added.

THE JAPAN TIMES,
Monday May 9, 1977 P.2

Argentina Wants Japan Immigrants

BUENOS AIRES (Kyodo) — Argentine President Jorge R. Videla has said his country will welcome Japanese fishermen as immigrants in Argentina.

This was disclosed Saturday by former Japanese Foreign Minister Zentaro Kosaka, who had met with Videla, Emilio Massera, commander of the Argentine Navy, and other Argentine leaders.

When Kosaka explained a Japanese Government idea to send idled Japanese fishermen to Argentina as fishery emigrants for possible fishing operations in waters off Patagonia, the Argentine leaders expressed positive support for the idea.

According to Kosaka, the plan is being considered by Japanese Government officials as a relief measure for Japanese fishermen who might lose their jobs or be forced to reduce their

operations as a result of the establishment of 200-mile fishery zones by foreign countries.

Argentina has been seeking Japanese cooperation in its efforts to develop a fishing industry, and it recently invited Japan to take part in an international bid for experimental fishing operations in waters off Patagonia.

A consortium of five leading Japanese fishing companies has submitted a tender, and Kosaka apparently gained the impression here that the Japanese bid will be accepted.

Kosaka also revealed to reporters that the Argentine Government has asked Japan to undertake feasibility studies for construction of three trans-Andes railroads between Argentina and Chile and a port on the Atlantic coast of Argentina.

THE JAPAN TIMES, WEDNESDAY,
MAY 18, 1977 P.5

Japanese Group Wins Argentine Fishing Deal

BUENOS AIRES (Kyodo) — The Argentine Government Monday night notified a consortium of five Japanese fishing companies of its tentative decision to grant it permission to conduct exploratory fishing operations for one year in waters off Patagonia.

The Japanese group — consisting of Taiyo Fishery Co., Nippon Suisan Kaisha, Nichiro Gyogyo Kaisha, Kyokuyo Hogel Co. and Hoko Suisan Co. — had taken part in an international bidding together with seven competitors from six other nations.

Only two foreign enterprises were to be granted the permission to catch up to 100,000 tons each of fish on an experimental basis in the waters in a bidding for the preferential right to establish fishing ventures in Argentina.

The Argentine Government will formally announce the results of the tender by July 15. The Japanese consortium thus passed the preliminary screening, but which of the six other countries — South Korea, Britain, West Germany, Portugal, Bulgaria and Poland — passed the screening besides Japan was not immediately known.

Conditions attached to the tender are: dispatching of two fishing vessels for experimental operations and one oceanographic survey ship, a feasibility study with regard to construction of related ground facilities to promote fishery industry such as ports and processing plants, low-interest, long-term loans for the Argentine Government's plan to build a fishing survey vessel.

THE JAPAN TIMES, SATURDAY, MAY 21, 1977 P.2

Central, Metropolitan Governments Take Action on Soaring Fish Prices

A series of actions to check soaring fish prices have been taken by both the central and Tokyo Metropolitan governments.

Construction Minister Shiro Hasegawa, who is serving as acting Agriculture-Forestry Minister during the absence of Zenko Suzuki, and Tadashi Kuranari, director general of the Economic Planning Agency, called on the leaders of 14 major fishery and trading companies to release their fish stocks and refrain from raising fish prices.

The Cabinet Ministers made the request in a meeting Thursday night with the companies' leaders.

Fishery Agency officials Friday solicited reports from 10 leading fishery and trading companies on their fish stocks and shipments.

Following the solicitation of the reports at the agency, 20 agency officials investigated the factories and cold-storage facilities of the companies in an effort to find if there was any hoarding of fish.

The Transport Ministry announced Friday night that it would investigate 318 cold storage facilities throughout the country in an attempt to find the cause of the recent sharp rise in fish prices.

It is the second time that the ministry has decided to take such an action in the postwar period. The ministry took the first such action in 1974, when the hoarding of daily necessities was rampant in the wake of the "oil crisis" late in 1973.

The storage places are located mostly in Tokyo, Osaka, Kobe, Fukuoka and Kushiro (Hokkaido), the ministry said.

The investigations would be carried out through the ministry's regional bureaus, it said.

The officials of the Tokyo Metropolitan Government, meanwhile, visited 16 major fishery and trading companies Thursday to urge them to report on their fish stocks.

They called on the firms to submit their reports by Wednesday. After examining the reports, the Tokyo Government will question the officials of the companies, according to an official.

Fishery Cities Are Hardest Hit By Soviet-Proposed Quota Cuts

The Soviet proposal for large reductions in Japan's fish catch quotas has raised a grave concern among fishery cities as it would deal a heavy blow to their fish processing industries.

The Soviet proposal, made in the current fish quota talks now under way in Moscow, calls for a 90 per cent reduction in Japan's Alaska pollack catch quota, for instance.

To be hit particularly hard would be Kushiro and Wakkanai in Hokkaido and Hachinohe, Aomori Prefecture,

all heavily dependent on the processing of Alaska pollack into kamaboko (fish cake).

The three cities are the bases for fishing and processing Alaska pollack and have 150 to 200 factories employing from 4,000 to 8,000 men and women.

Mayor Tatsuo Hamamori of Wakkanai said that the Soviet proposal had serious implication for his city especially because it came after the Soviet imposed a total ban on herring fishing in March this year.

If the quota reductions were

enforced as proposed by the Soviet Union, unemployment in his city would rise steeply because 40 per cent of its population are dependent on fishing and fish processing, he said.

The Hokkaido Prefectural Government and the Wakkanai municipal administration have decided to offer about 11 billion in financial aid to fishermen and fish processing businesses but this would be not much of help, the mayor said.

Mayor Tatsuo Yamaguchi of Kushiro said that his city would be driven into the worst conceivable situation because about 60 per cent of Kushiro's Alaska pollack hauls comes from areas within the Russian 200-mile zone.

Yamaguchi said that Kushiro's fishery industry would be dealt literally a fatal blow.

He said that his municipal government had extended to fishermen and fish processing business 11.5 billion in emergency loans.

Yamaguchi said that this was not sufficient to help the affected people to tide over difficulties since a large number of fishing boats would be idled as a result of the proposed quota reductions.

The mayor said that he would send a delegation of municipal officials and fishermen to Tokyo to demand full compensation for fishermen forcibly idled.

Mayor Sayiro Akiyama of Hachinohe also noted the need to increase emergency loans to fishermen and fish processing businesses in his city.

He said that most of the financial aids coming from the state to Aomori Prefectural Government had been provided to his city but he would further step up efforts in winning more state aid for the time being.

More Special Loans

The Fishery Agency Thursday set at ¥10.3 billion the amount of special loans for May to operators of some 500 fishing boats which were forced to idle at ports as a result of the Japan-Soviet Union fishery talks.

These loans follow the ¥15 billion of special loans extended at the end of April.

The interest rate for the special loans is 3 per cent, the same rate for special loans to residents in an area hit by a natural calamity of great intensity.

Since the rate is 6.5 per cent lower than the usual rate of 9.5 per cent for loans to fishermen, the government is going to pay the difference.

About 130 million yen will be lent to one pelagic trawler and about 115 million to one herring boat.

THE JAPAN TIMES,
FRIDAY, APRIL 22,
1977 P.4

Podgorny Receives Diet Mission

MOSCOW (Kyodo) — Nikolai Podgorny, president of the Presidium of the Supreme Soviet, Thursday afternoon received a 15-member suprapartisan Japanese Diet mission visiting here to help expedite the Japan-Soviet fishery talks.

The contents of the meeting were not known immediately. The meeting held at short notice was regarded as a gesture of Moscow to placate the rising anti-Soviet sentiment in Japan over the Soviet Union's stand on the fishery issue tangled with the territorial issue.

Russian authorities informed the Diet mission Thursday morning, when its members were packing up to return home, that Podgorny was ready to receive it.

The group arrived here Monday, hoping to see any of the top three Soviet leaders. Podgorny, General Secretary Leonid Brezhnev or Premier Alexei Kosygin — to explain Japan's position on the fishery issue.

Its members had talks with Soviet Fisheries Minister V.A. Ishkov and other officials on Monday and Wednesday. It planned to leave Moscow Thursday morning because it had been unable to meet any of the top three leaders. It had been reported earlier.



Dealers participate in a salmon auction after two small fishing boats unloaded 1,575 kilograms of salmon at a port in Kushiro, Hokkaido, Thursday for the first time since Japan and the Soviet Union initiated an interim fishery agreement earlier this week.

Companies Are Hotly Competing In Fish Habitat Development

YOKOHAMA — Construction and other companies are now hotly competing with each other in developing artificial fish habitats for increasing coastal fish resources.

The competition was touched off by the Government's decision to invest a total of 1200 billion over seven years to expand coastal fishery resources in the 200-mile fishery zone area.

Of the total spendings, about ¥5 billion was earmarked for subsidizing the costs to develop artificial fish habitats.

A number of companies engaged in manufacturing construction material and ocean development started development work immediately after the investment decision was made in March last year.

Fish habitats developed by these makers use both in place and materials from a factory to be erected in a coastal area. They are made of steel and concrete, and

house-like plastic model.

Since last year, about 30 artificial fish habitats developed by five makers have been sunk in the Sagami Bay near here for experiment with full support from local fishermen.

Officials of the Fishery Agency have recently inspected the fish habitats to check whether fish like living in them and whether they are strong enough not to be washed away by tides.

Artificial fish habitats weigh from 20 to 70 tons each and cost about 11 million each on the average.

Developers of large-scale fish habitats are eligible for state subsidies equivalent to 60 per cent of their development costs.

The agency expects that local governments, particularly in the Sagami Bay area, will increasingly turn to artificial fish habitats in the years ahead.

Japan Formally Accepts Quota Proposed by Russia on Salmon

MOSCOW (Kyodo) - Japan formally accepted Thursday a Soviet proposed salmon catch quota of 62,000 tons outside the Soviet Union's 200-mile exclusive fishing zone this year.

The two countries also agreed that the Soviet fishing boats this year will not catch salmon on open seas. Last year, Russia was entitled to a quota of 5,000 tons in open seas, although it hauled none.

The agreement, which virtually ended salmon fishing negotiations between the two countries, will be initiated Monday by Iwao Arakatsu, chief Japanese negotiator, and Ivan Nikonov, who heads the Soviet delegation. Formal signing is expected in Tokyo on April 28.

It was also agreed during Thursday's negotiations that Soviet inspectors will board Japanese patrol boats as before for joint inspection of Japanese fishing operations in Zone B (waters south of 43 degrees N. latitude).

The Soviet Union had been demanding that Russian patrol vessels do the inspection.

Nikonov told the Japanese negotiators he planned to arrive in Tokyo Wednesday for the signing.

Talks in Moscow will continue Friday to adjust details, including how long a period Japanese salmon fishing should be allowed this year.

The problems yet to be settled include a Soviet demand for a

reduction of Japanese fishing vessels to operate in the northwestern Pacific covered by the bilateral fishery treaty.

The agreement on Japan's salmon catch quota came after Agriculture Forestry Minister Zenko Suzuki instructed the Japanese negotiators in Moscow to accept the Soviet offer of 62,000 tons.

The Soviet Union proposed a 62,000-ton salmon catch quota, 5,000 tons more than the original proposal, during informal negotiations Wednesday in Moscow between Russian and Japanese officials.

Gov't Approves Bill For 200-Mile Zone

The Government formally approved a bill designed to set up a 200-mile fishing zone off Japan's coasts at a Cabinet meeting Thursday, and immediately submitted it to the Diet for approval.

The bill has been hurriedly prepared in a bid to give Japan a better bargaining position vis-a-vis the Soviet Union, which has already established its own 200-mile zone, in the currently stalled fishery talks.

The bill is expected to be cleared by the Diet in time for the resumption of the Japan-Soviet fishery talks in Moscow early next month.

It was, however, far short of Japan's demand for 87,000 tons.

The quota is to be applied to Zone B, which lies outside Soviet 200-mile waters and where smaller Japanese fishing vessels can operate without surveillance by Russian patrol boats.

At the news, more and more fishing boats were gathering Thursday at Kushiro Port to prepare for their operations to catch salmon. About 30 small vessels were ready at the port to go to the salmon fishing grounds, according to the association.

THE JAPAN TIMES,
FRIDAY, APRIL 22,
1977 P.1 & 4

The House of Representatives Agriculture, Forestry and Fishery Committee will begin debate on the bill today, along with the bill to expand Japan's territorial waters to 12 miles which is already before the Diet.

The heads of all the five opposition parties pledged their cooperation in passing the bills quickly through the Diet when they met Prime Minister Takeo Fukuda Monday.

The territorial waters bill is expected to clear the Lower House Tuesday, according to a Tory opposition agreement.

If the 200-mile zone bill becomes law, Japan will become the 46th country in the world to establish such an exclusive zone.

The 21 article bill specifies that if Japan's 200-mile zone overlaps with that of a foreign country, an intermediate line between that of the foreign country will be drawn up or a line agreed upon by both countries will be demarcated.

The bill sets a fine of up to ¥10 million for offenders.

In the case fishing boats of foreign countries operate in the Japanese zone, they must obtain the permission of the Japanese Government and pay fishing fees.

As an exception, however, the bill includes stipulations which excludes fishing boats of China, South Korea and North Korea from application of the 200-mile

zone since the three countries still have not established such zones of their own.

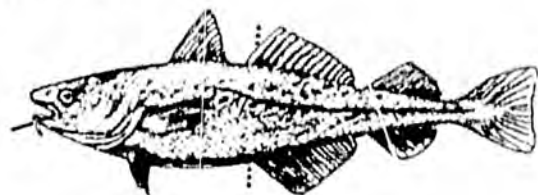
Foreign Minister Ichiro Hatoyama and Agriculture Forestry Minister Zenko Suzuki confirmed Japan's position regarding this exception again in their separate press conferences after the Cabinet meeting.

The demarcation of the 200-mile zone will be made through Government ordinances.

The Government plans to include waters off the four disputed northern islands of Kunashiri, Etorofu, Shikotan and Habomai off eastern Hokkaido in the Japanese zone.

The bill also bans operation by foreign fishing boats in international straits where territorial sea limits will be frozen at three miles even after the territorial waters are expanded to 12 miles.

PACIFIC COD



Quota Agreement Reached; Signing to Proceed Today

MOSCOW (Kyodo) — Japan and the Soviet Union reached a broad agreement Thursday afternoon on Japan's fish catch quotas within the Soviet 200-mile fishery zone for this year.

As a result, the formal signing of the bilateral interim fishery agreement will be held in Moscow Friday morning.

The agreement was reached between Japanese Agriculture-Forestry Minister Zenko Suzuki and Soviet Fisheries Minister A. A. Ishkov in a meeting from 5 p.m. Thursday.

Emerging from the 30-minute meeting with Ishkov, Suzuki told newsmen that more work by experts would be done Thursday night to make final adjustments on quotas by species of fish on the basis of the broad agreement reached between him and Ishkov.

The agreement was made possible when the Soviet Union agreed to slightly increase the initially proposed quota of 455,000 tons for Japan, June-December this year under the interim fishery pact.

Japan had been demanding that the quotas be increased substantially and more areas be opened up to Japanese fishermen within the Soviet 200-mile zone.

The Suzuki-Ishkov meeting followed two rounds of unsuccessful working-level negotiations between Makoto Okayasu, director general of

Japan's Fishery Agency, and Georgy Zhygalov, Soviet deputy fisheries minister, earlier in the day.

Makoto Okayasu, director general of Japan's Fishery Agency, attended the Suzuki-Ishkov talks.

Soviets Seize Japanese Boat

SAPPORO (Kyodo) — A Japanese fishing boat with five men aboard was captured by Soviet authorities in waters off Kunashiri Island east of Hokkaido Thursday morning, according to a report reaching the Nemuro Maritime Safety Office.

The 9.9-ton Wotoku Maru which left Nemuro Port early Thursday morning was captured while fishing at a point about four miles off the island at about 7 a.m., according to the report.

It is the second time this year that a Japanese fishing vessel has been captured by a Soviet patrol boat in the particular sea area.

During the preceding two meetings Thursday, Okayasu negotiated with Georgy Zhygalov, Soviet deputy fisheries minister, on Japan's demand that fish catch quotas be expanded nearly to the level of Japan's past fishing records and that more areas in the Soviet fishery zone be opened to Japanese fishing operations.

The Japan-Soviet talks on the quotas were however deadlocked because of the uncompromising attitude of the Soviets.

According to Fisheries Ministry sources, the formal signing of the bilateral interim fishery agreement, originally scheduled for Thursday night, was postponed until Friday due to the delay in the quota talks.

Japan and the Soviet Union initiated the interim pact under which Japanese fishing boats will be allowed to operate within the Soviet 200-mile zone Tuesday after three months of talks.

Moscow imposed a total ban on Japanese fishing for salmon and herring inside the Soviet fishery zone this year.

Eager Fishermen Head for Grounds Off Aleutians

KUSHIRO, Hokkaido (Kyodo) — About 30 pelagic trawlers which have been idling due to the delay in the Soviet-Japan fishery talks left mist shrouded Kushiro Port Thursday morning fishing grounds around the Aleutian Islands within the U.S. 200-mile economic zone.

Fishing crews from Hokkaido, Tohoku and Hokuriku looked fairly happy although strict U.S. Coast Guard vigilance against violations of the U.S.-Japan Fishery Agreement obviously foremost in their minds.

Because of the Soviet Union's establishment of a 200-mile zone, the fishing boats have been idling for about one and a half months since April.

The quota allowed for Japanese pelagic trawlers under the U.S.-Japan agreement is 85,000 tons — half of last year's catch. One pelagic trawler can catch up to 549 tons of fish.

Many fishermen complained that the quota may make fishing unprofitable. They fear that they may be fired after the current fishing operation ends.

Masayuki Salto, 41, chief fisherman of the 350-ton Yamasan Maru No. 81 from Wakkanai, who has been working aboard a pelagic trawler for more than 10 years, said, "This year, we have to care more about preventing violations than fishing itself."

SABLEFISH



International Fishing in New Era

The Japan-Soviet Interim Fishery Agreement signed by the two chief negotiators in Moscow Friday brought to an end three months of arduous bargaining for both sides over Japanese fishing in Soviet waters. With only internal procedures left to be completed in each of the signatories, the agreement is expected to go into effect shortly.

What the new accord means, in effect, is a drastic reduction in the amounts of fish Japanese fishermen can catch in the Soviet-claimed 200-mile zone, which had formerly been a key source of fish supply for Japan.

Despite this, we must note that the negotiations did chalk up a major achievement — the separation of the territorial question from fishery issues. In the very last phase of the negotiations, as a matter of fact, a Soviet proposal to alter the wording of articles caused a flurry of excitement in Japan. The final Soviet proposal in this regard was to delete one word, "other," from an article in the draft agreement. Because this revision appeared to have a significant impact on the fishery-territory question, the Japanese negotiators and Government leaders scrupulously studied all the possible implications and ramifications of that semantic proposal before acceding to the Soviet request.

According to this fishery accord, the total annual catch for Japanese fishermen has been seriously reduced from the previous figures. Whereas in 1974, for instance, Japanese fishermen hauled about 713,000 tons during the June-December period, the quota for the same period of this year is only 455,000 tons.

There are many other forms of restriction. The kinds of fish and the number of fishing boats to enter the Soviet zone will be specified by the Moscow Government. Formerly, such restrictions applied only to salmon, crab and sea snail. Now, all the fishes are subject to such restrictions.

The same is true with regard to fishing areas. Previously, this type of restriction applied only to salmon, herring, crab and sea snail. Under the terms of the recently signed agreement, however, Japanese fishing boats can enter only seven areas designated by the Soviet Government within the 200-mile zone.

And likewise with catch quotas. Formerly, quotas were established only for salmon, herring, crab and sea snail. But now precise tonnage maximums are set for 14 kinds of fish and another category to cover all other forms of marine life by area. All these figures add up to 455,000 tons.

For Alaska pollock, for instance, the quota is 100,000 tons, which is allocated for such areas as the Pribilof side of the Kurils (51,310 tons), the Okhotsk side of the Kurils (7,300 tons), east of Sakhalin (35,000 tons) and the Sea of Japan (1,400 tons). What these meticulously prescribed restrictions mean is a far cry from the days when 10,000 Japanese fishing boats hauled in 1.7 billion tons of fish from the northern waters.

In reviewing the process and conclusion of the fishery talks with the Soviet Union, we cannot but note that we are indeed in a new era — that of the 200-mile fishery zone. And this requires our adjustment to new conditions — and to new concepts.

Until early this year, Japanese concern with ocean fishing had the vague feeling that even though most nations are claiming 200-mile fishing zones, we should be able to manage because these other nations have not been fishing as much as we have.

Our experience with Russia, however, has compelled these people to drastically revise their attitudes. One thing that has become clear is that the concept of "past record" — how much we did catch each year — is not a viable criterion for determining how much we can catch in the future.

One of the new concepts in this new age is a kind of "parity bias," by which all the nations, regardless of the disparity in their fish catch in the past, should fish the same amounts in one another's waters. The formula is seen at work in the European Communities' demand on the Soviet Union to sharply cut its fish hauls in the European waters. And the Soviet Union seems to have applied the same philosophy to negotiations with Japan.

The very idea of 200-mile zone, claimed by non-fishing nations over the high seas adjacent to their territorial waters, represents the same concept. Plainly put, it may be something like "I can't deliver efficiently myself. But that doesn't mean that someone else who can should be allowed to fish near our territory."

Thus, the old Japanese argument that "maritime resources are a common asset of mankind" is hardly tenable in this age of "resource nationalism."

The problem is not what we must do to readjust ourselves to the requirement of this new age. One possibility is joint venture, which has proved effective in other areas of foreign activities — industry, manufacturing and commerce. Wasn't it found by which Japan can offer her superior fishing technology to a country which, though without the technology, has natural resources developed to the maximum?

Another might be their entering into a contract in the waters of two different countries — which was reportedly proposed during the Moscow negotiations by Japanese Agriculture-Forestry Minister Zenko Maeda.

There, of course, cannot be the role answer to the enormous problem we now face. No effort must be spared in developing fishing resources in our own waters where no international complication is likely to occur.

Fishermen Told To Adjust Boats

The Fishery Agency has ordered local fishermen to cut this year the total number of crab-fishing boats by 37 and sea-snail-catching boats by seven below their levels of last year, it was learned Sunday.

The reduction in fishing operations in the northwestern Pacific was ordered in accordance with the regulations set under the Japan-Soviet Interim fishery accord concluded last week.

These fishing boats usually depart for fishing grounds off the eastern coast of Sakhalin in mid-June. Last year, 121 crab-fishing and 34 sea-snail fishing vessels operated there.

As a result of the recent Russo-Japanese fishery talks, however, Japan's catch quota of crabs was set at 5,300 tons for this year, a sharp 61.7 per cent decrease from 1976.

In addition, Japanese hauling of tanner crabs in the western part of the Bering Sea and king crabs in the Pacific waters off the Kurils are totally banned this year.

Under the bilateral fishery accord, Japan's quota of sea snails in waters east of Sakhalin was increased by 35 per cent, to 3,500 tons, above the 1976 haul.

But Japanese fishermen are allowed to catch sea snails only in the waters south of 36 degrees N. L., where the resources of the species are not as abundant.

The fishery agency has already ordered local fishermen to sharply reduce the number of their salmon-fishing boats to meet the requirements of the Russo-Japanese accord.

Silver Salmon Flourish In Warm Inland Sea

OSAKA — Necessity is the mother of invention, say Seto Inland Sea fishermen who have helped compensate themselves for salmon lost to the Soviet Union's 200-mile fishing zone by successfully propagating silver salmon in the warm waters off Shikoku.

Experiments conducted by the Kagawa Prefecture Fishing Co-operatives during the winter months, when water temperatures are lower, have proven that the silver salmon can adjust to its new habitat.

Seto Inland Sea salmon recently made their first appearance on the market, and fish breeders in the area, whose primary work is in raising yellowtail, are now looking to salmon as a valuable secondary source of income.

Kagawa fishermen imported fertilized salmon eggs from Alaska last December, and after hatching them in Hokkaido, stocked 100,000 baby salmon off Shodo Island and in other offshore preserves.

They found that in half a year the fish had grown in weight from 120 grams to one kilogram and had doubled in length from 20 to 40 centimeters.

The loss rate was even smaller than with yellowtail and by feeding them with plankton crustacea in the last month before beginning the harvest the fish developed a natural pink coloring.

The catches are now being sent primarily to the Kanto and Tohoku districts, but the fishing

cooperatives are also now holding tasting sessions among local housewives and cooks in the hope of expanding the regional market in the future.

In the bred salmon's first appearance at the Tsukiji Central Fish Market in Tokyo, it sold for a relatively low ¥1,600 to ¥1,200 a kilogram, but fishery officials expressed confidence that, in the future, they will be raising one million fish a year to help offset losses from foreign 200-mile restrictions.

Press Comments

Fishery Talks Over

The long and hard Japanese-Soviet negotiations on the interim fishery agreement have ended at last. The finally agreed upon Japanese catch quotas are 500,000 tons for the March-December period. The figure means a 45 per cent reduction compared with the actual hauls in the corresponding period of 1976. The agreement dealt a shock to the quarters engaged in fishing in the northern Pacific. Not only a reduction in the number of boats and the scale of operations but also the discontinuation and change of jobs have now become a pressing problem for the Japanese fishermen affected. The

Japanese people in general will also be affected in varying degrees. A decrease in the absolute volume of fish hauls will certainly push up fish prices. Japan seems to have made two errors in conducting the bargaining with the Russians. First, Japan had failed to acquire an adequate understanding of the Soviet Union. In other words, Japan had a too optimistic view about the Russians' position on the northern territorial problem. Second is that Japan's understanding of the significance of the "200-mile era" is superficial. It is true that the worldwide trends toward such an era had been touched off by the Third World countries'

strong consciousness of independence and "resource nationalism." But it is not the Third World that has made the 200-mile era an established fact and is now trying to create a new order on the basis of that establishment. It is the big power countries that have been capitalizing on the new trend generated by the Third World. Leading off the trend now is the U.S. Under the present circumstances, where the big power nations are trying to establish a new order for the oceans of the world, fish has the possibility of becoming a "strategic material," as are cereals, oil and nuclear energy. Japan's inadequate realization of this fact seems to have led to the bitter result in the recent fishery negotiations. — Asahi Shimbun

Japan Demands Larger Hauls From Soviet 200-Mile Zone

MOSCOW (Kyodo) — Japanese negotiators made a strong demand Wednesday that the Soviet-proposed fish catch quotas for Japanese fishermen within the Soviet 200-mile zone be largely increased.

The Soviet Union offered Tuesday night to set Japan's quotas in the Soviet zone at 455,000 tons for the second half of this year — a 36 per cent cut from Japan's hauls taken during the same period in 1975.

At Wednesday's negotiations, the Japanese side heard detailed explanation of the Soviet proposal concerning the catch quotas, species of fish to be caught and areas where Japanese fishermen will be allowed to fish.

The proposed quota, described by Japanese sources as too small, is for the period from the time of concluding a bilateral interim fishery pact initiated earlier in the day to the end of this year.

The offer was made following the initialing of the agreement between Susumu Matsubara, minister at the Japanese Embassy here, and P.A. Moiseyev, deputy director of the Soviet Ocean Fishery and Oceanography Research Institute.

The quota, if applied retroactively to the period beginning April 1, when Japanese fishing in the newly created Soviet fishery zone was suspended, would amount to 700,000 tons, however.

The Japanese negotiators are studying the Soviet proposal. Observers predicted that Japan will propose an increase in the quota.

The Soviet-proposed catch quota covers 17 species of fish, including Alaska pollack, cuttlefish, flatfish and sea snails, according to informed sources.

Salmon and herring fishing will be banned, however.

The Soviet Union has proposed expanded restricted zones for Alaska pollack and sea snails and crab fishing.

Japanese Agriculture-Forestry Minister Zenko Suzuki said that the drastic cut in the catch quota would develop into a serious social problem in Japan because it means that considerable number of fishermen would lose their jobs.

He indicated he would urge the Soviet side to increase the quota at the next round of talks Wednesday.

The 455,000-ton quota represents a decrease of 36.2 per cent from the actual catch volume in the waters concerned for the corresponding period of

1975.

Under the proposal, the Soviet 200-mile zone in the northwestern Pacific is divided into seven sections, and the catch volume according to species was indicated for each of the sections.

Agriculture-Forestry Minister Suzuki was planning to meet his Soviet counterpart, Fisheries Minister A.A. Ishkov, Wednesday and seek Soviet concession on the volume and the restricted waters.

Suzuki was pressed for time as Ishkov told him Tuesday night that he wanted all negotiations to be concluded so that the interim pact could be signed by 10 p.m. Thursday (4 a.m. Friday JST) because he will be leaving Moscow on a trip Friday.

Meanwhile, the two countries Tuesday signed a protocol of another agreement on Japanese salmon fishing operations in waters outside the Soviet 200-mile zone.

Under the protocol, Japan's salmon catch quota in northwestern Pacific waters was set at 62,000 tons for this year.

The protocol was signed by Iwao Arakatsu and Ivan Nikonov, chief Japanese and Soviet negotiators at the salmon fishing talks.

Besides setting Japan's catch quota at 62,000 tons, the protocol limits the fishing areas outside the Soviet 200-mile zone.

The quota for waters in the classified "A" zone, or in the waters north of 45 degrees North Latitude, was set at 29,500 tons and that for the waters in the "B" zone, or the waters south of 45 degrees North Latitude, at 32,500 tons.

The season for the "A" zone, where boats led by factory ships and medium-sized boats are allowed to operate, will end Aug. 10 and that for the "B" zone, excluding the Sea of Japan, on June 30, according to the protocol.

The initialing of the interim pact and the signing of the protocol Tuesday night brought an end to the protracted negotiations that had been conducted in Moscow and Tokyo for three months.

Diet to Get Fishery Pact Legislation This Week

Chief Cabinet Secretary Sunao Sonoda said Wednesday a Government bill seeking Diet approval of ratification of the Japan-Soviet interim agreement on Japanese fishing in the Soviet 200-mile fishery zone would be presented to the Diet Friday or Saturday.

In his statement on the pact initialed in Moscow Tuesday, Sonoda said the Government had followed its basic policy to maintain Japan's traditional fishing interests in the northern Pacific waters and not to prejudice its position on the Japan-Soviet peace treaty talks.

He later told reporters Japan's draft proposal for another interim fishery accord with the Soviet Union, designed to control Soviet fishing in Japan's 200-mile fishery zone, would be presented to Moscow in mid-June.

The two countries would then start negotiations for the proposed pact, he explained. Agreement to this effect was reached between Japanese Agriculture-Forestry Minister Zenko Suzuki and Soviet Fisheries Minister A.A. Ishkov in Moscow Tuesday night, he said.

The Chief Cabinet Secretary Wednesday sought the cooperation of the heads of both Houses of the Diet for prompt action on the bill when the legislature receives it.

Opposition Rises Doubts
Opposition parties Wednesday raised doubts that the Japan-Soviet interim fishery agreement might jeopardize Japan's claim to the four islands off Hokkaido in dispute between the two countries.

While welcoming the provisions of the pact that permit Japanese fishing in the 200-mile Soviet zone, the Japan Socialist Party regretted that it fails to mention the territorial issue. This in effect would result in recognizing Soviet rule over the disputed islands, the JSP said.



U.S.S.R.

Basic Territorial Issue Policy Reflected in Interim Pact: Suzuki

Agriculture-Forestry Minister Zenko Suzuki said Saturday the Government's basic policy of separating the fishery issue from the territorial issue with the Soviet Union was clearly reflected in the Japan-Soviet interim fishery agreement negotiated by him.

Meeting reporters upon his return to Tokyo from Moscow, Suzuki admitted the outcome of the Tokyo-Moscow fishery talks was "unsatisfactory" in terms of catch quotas.

The fishery negotiations over 80-odd days had rough going because they became tangled with the territorial issue over the four Soviet-held islands off Hokkaido, he explained.

Suzuki and other members of the Japanese delegation to the fishery talks in Moscow returned to Tokyo International Airport at about 11:30 a.m.

He told reporters he had made it clear to Soviet Fisheries Minister A. A. Ishkov Japan would not allow Soviet fishing vessels to operate within Japan's territorial waters which are to be extended from three to 12 miles in July.

Japan's position on this point is reflected in Article 2 of the interim fishery pact signed in

Moscow Friday, Suzuki said.

Asked about the impact of the agreement on the territorial issue, Suzuki said the provisions of Article 8 of the pact will not adversely affect future talks over the territorial issue in the view of the Japanese Government.

The article reads that "No provision of this agreement shall be construed in such a way as to prejudice the positions or views of the government of either country on various problems of the law of the sea under consideration at the third U.N. Conference on the Law of the Sea and also on various problems concerning mutual relations."

The last clause implies Tokyo's claim to the disputed islands, according to explanations offered by Government officials.

Moscow banned Japanese salmon fishing in the 200-mile Soviet zone on the basis of the principle that salmon bred in rivers of a country belong to that country even while in the sea, Suzuki said.

The Japanese catch quota of 455,000 tons in the Soviet zone for the latter half of this year and the seven fishing areas open to Japan under the pact

are for only this year, and separate agreements would be needed for the future, Suzuki said.

Suzuki said new negotiations would be started between Tokyo and Moscow in mid-June to conclude another agreement to control Soviet fishing in Japan's 200-mile offshore fishing zone.

The forthcoming talks would not progress unless the Soviet Union recognized the waters to be covered by Japan's 200-mile zone and, therefore, Japan's position on the disputed islands would be clearly mentioned in the new pact, he explained.

'No Alternative'

Tomoyoshi Kamenaga, chairman of the Japan Fisheries Association, told a general meeting of the association Saturday that the outcome of the latest Japan-Soviet fishery negotiation is unsatisfactory but his group has no alternative but to accept it.

He said the fishing industry should make concerted efforts to overcome difficulties expected in the upcoming fishery negotiations with South Korea and safeguard fishermen's interests.

Future of Fishery Pacts

Japan's catch quota for this year allowing for Japanese fishermen to operate within the Soviet Union's 200-mile zone has been reduced by nearly 40 per cent from last year's. This is a heavy blow to Japan's fishing operations in the northern waters. The Government, in view of its bitter experience in the fishery negotiations with the Soviet Union, will have to make preparations for the forthcoming negotiations with the United States and the Soviet Union for long-term fishery pacts as well as those with other

nations. This nation has been able to secure quotas for salmon for this year, but both the United States and the Soviet Union are likely to stiffen their stand on next year's quotas. At present, the Soviet Union is negotiating with the European Community on fishery operations. Depending upon the outcome of these negotiations, the Russians may shut out Japanese fishermen from their coastal waters from next year. At any rate, this nation is now compelled to rely on its coastal fishing operations. As pointed out in the recently published white paper on fishery, Japan's coastal fishing grounds have been damaged by industrial waste and other pollutants. Here we also see the Government's delay in coping with the situation. — Mainichi Shimbun

At long last the Japanese-Soviet fishery negotiations are over. Japan's catch quota fixed for this year within the Soviet Union's 200-mile zone is far from satisfactory. This is a brutal blow to Japan's fishing operations in the northern waters, which used to yield about ¥300 billion worth of fish a year and employed 110,000 fishermen. But we cannot blame the Soviet Union for all this. The United States also fixes catch quotas for its fishermen first and then allocates the rest to foreigners, who are required to pay fishing fees. The Soviet Union, which gives great importance to fish as an animal protein source, has been shut out from the coastal waters of the United States and the European Community, and the Russians

are trying to increase their catches in their own coastal zone to make up for their losses in the American and European zones. The cold reality of the era of 200-mile zones is that past fishing records do not apply. On this occasion of the completion of the Japanese-Soviet fishery negotiations, we should fully realize that this nation needs to formulate a food policy to cope with the situation and to restructure its fishery policy — Tokyo Shimbun

MEMORANDUM

OFFICE OF THE GOVERNOR

TO: [The Honorable Sterling Gallagher
Commissioner
Department of Revenue

DATE : July 25, 1977

FROM: Ron Lind
Division of Budget and Management
Office of the Governor

SUBJECT:

Jay S. Hammond
Governor

As we have discussed, a high priority issue of this Administration is the need to switch the financing of State operations from a non-recurring (particularly, oil dependent) basis to recurring revenue sources. There are several possible strategies for accomplishing this objective. I would appreciate your participation proposing and evaluating the pros, cons, and probabilities for success of various methods.

As an early step in this analytical process, my Division of Policy Development and Planning, after discussions with your agencies, commissioned a short report by the Institute of Social and Economic Research. This report outlines possible approaches to "fiscal planning" for the state.

I am forwarding copies of this paper for your information. Please comment. I would also like to receive recommendations you wish to offer regarding possible solutions to the long-term fiscal problem, as well as a delineation of specific steps which will be necessary to begin the shift in financing base.

JSH/dp

Q: Are not all revenues non-recurring?

Q: what are recurring revenues -
even the personal income tax takes a
percentage from oil production, transportation
etc activities roughly equivalent to that
oil provides for the whole state budget

PRACTICAL ISSUES IN LONG TERM
FISCAL PLANNING FOR ALASKA

by

Michael J. Scott
Assistant Professor of Economics

Institute of Social and Economic Research
Anchorage Fairbanks Juneau

April, 1977

Prepared under contract to the State of Alaska
Division of Policy Development and Planning

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PRACTICAL ISSUES IN LONG TERM FISCAL PLANNING FOR ALASKA

1. Introduction

There are several practical issues which can be raised with respect to long term fiscal planning for the state of Alaska. These problems are related to the level of analysis, the time frame over which one is doing the planning, and certain constraints which data availability may impose upon the process. Of course, these problems are not unique to Alaska, but the pace of economic and population growth, lack of social and economic data and infrastructure, and the amount of funds the state expects to receive from oil and gas activities will mean that the traditional problems in planning will be exacerbated.

The level of analysis will determine the choice of planning tools to a greater extent than might be imagined. For economic impact issues of the most general kind, it may be sufficient to forecast independently the total level of State expenditures planned for each year, introduce this planned series into a few simple equations describing population, income, and employment growth, and have a fairly accurate overview of the impact. For questions of much greater complexity, such as the different impacts of specific

percentages of the Permanent Fund to be spent for specific types of projects, a detailed econometric model might be needed. The complexity of the question will have definite implications for the level of complexity of the analysis, and the effort which might be needed to produce the answer.

The time frame of the analysis will also affect the type and detail of analysis done on a specific question. Suppose, for example, that one wished to know the effect on the rate of growth of education expenditures of an increase in the rate at which migration to Alaska included children of school age. If the time frame of analysis were one to five years, the major effects could probably be modeled by adding students into the base of the current school finance laws. However, since in a longer run period of ten to twenty years, a more general relationship between numbers of students and the expenditures per student could tend to dominate and even cause changes in specific funding formulas, general funding assumptions might be more accurate than the current formulas.

Finally, the rate of growth of the Alaskan economy and the scarcity of certain social and economic elements, such as multiple transport modes between points and local availability of some goods and services normal for the

United States, makes it extremely difficult to project past economic and government relationships into the future. This is compounded by lack of reliable data and indicators of business and government activity in many areas; and by the fact that Alaska is facing a situation in which its economy is maturing at the same time that the traditional spending constraints imposed on the state government for most of the historical period by lack of an adequate tax base will soon be removed. The lack of a traditional industrial and transportation base, along with weather and cost problems in Alaskan business, makes data from other states of limited use. Yet, data compromises may have to be made, especially to answer the more complex and difficult modeling questions regarding future Alaskan growth in response to government fiscal policy. Ultimately, the choice of the form of analysis will depend both on the objectives of the analysis and the quality of the supporting data.

There are a series of long term fiscal policy questions or options which will affect Alaskan state government fiscal planning over the foreseeable future. Among these are: whether the State wishes to increase or decrease its dependence on oil revenues, or its dependence on revenues

resulting from taxes on recurrent economic activity; whether to provide the equivalent of the most modern health, communication, transportation, and education services to all Alaskans; whether to increase the size, stability, and complexity of the State's economy; and whether to minimize the tax burden on the average Alaskan. To reach any of these fiscal goals or any other fiscal goal, however, it will be desirable for the planners to restate the goal in increasingly precise terms, as is done with one goal in the following section. Following this, it will be desirable to deal with a large range of specific issues related to both revenues and expenditures of state government in Alaska. The purpose of this paper will be to identify several of these specific issues as they relate to the budget process and to the specific goal of releasing the State from dependence on oil revenues as the largest source of funding for the operating budget.

I have chosen to organize the issues in Alaskan fiscal planning around a number of specific subject areas, for analytical convenience. In actually attempting to complete any long term fiscal plan, the planner will have to deal with several of these specific issues simultaneously. However, by classifying them according to subject areas, I hope to encourage a more organized approach to the bewildering

number of factors which have to be taken into account. In each case, I will attempt to identify the issues, suggest some methodologies for dealing with them, tell where I feel the data gaps lie, and discuss some strategies for dealing with these gaps. Where necessary, further studies are outlined. In each case, I will try to use examples which deal with the specific objective of long term State fiscal independence from oil and gas.

2. Objectives and Goals of the Fiscal Plan

In any fiscal planning process, the State administration should define its general fiscal objectives as operational goals so that the planning staff can tell whether the objective is being met. While this may seem an obvious point, it is not necessarily easy to come up with a specific set of goals, both of which will fulfill the long term objective, and which will permit the fiscal planning staff to empirically determine whether or not the goal is being met. For example, if the objective of "fiscal independence from oil" is not stated as a more precise goal, such as "no funds from oil property taxes, bonuses, severance taxes, or royalties are to be used to finance current general fund expenditures," the staff is left to conclude that maybe these funds could be used for ten percent of current expenditures and that

this would constitute "independence." Obviously, the path to such a goal could be much different than the goal actually intended, if literally no dependence is desired. In any case, it is desirable to define the goal operationally, as is demonstrated in the following example.

a. Example of Defining a Fiscal Objective

The State of Alaska currently depends on oil and gas taxes, bonuses, and royalties to fund 60 to 70 percent of the general fund budget of FY 1978.¹ Since oil and gas deposits are finite, this source of money is limited, and the State is faced with the problem of how to move from a dependence on this single unreplenishable source of funding to sources based exclusively on continuing State economic activity, without substantially reducing services, disrupting the growth of the Alaskan economy, or saddling the populace with a large tax burden in the short run. Besides the term "exclusively," this statement of the fiscal goal has four basic elements which raise specific questions of definition:

1. How soon is the State to be independent of oil revenue?
2. What exactly are the prohibitions on reduction of government services? What constitutes "substantial" reduction?

¹Alaska Office of the Governor, Division of Budget and Management, Executive Budget Fiscal Year 1977-1978, p. 9.

3. What sort of disruption of the Alaskan economy is not tolerable?
4. What defines an onerous tax burden?

The answer to the first question is critical to the overall strategy, since if the State were to save all its oil revenues next year rather than spend any on its operating budget, either large increases would be required in effective tax rates on personal and business income, or there would have to be large cuts in government services, or both. At the other extreme, since it can be reasonably supposed that not all the oil and gas in place on State lands has been found, it is not necessarily true that the State will have no more oil revenues after current sources run out. While other choices are available, I recommend that experiments be done with at least two arbitrary dates of "independence"--for example, one 10 years hence and one 25 years hence. Substantial oil revenue seems assured for at least 10 years, so Alaska would probably not have to worry about draconian measures over a much shorter period. Conversely, 25 years is probably past the outer plausibility limit on projections of such crucial factors as population growth, so a 25-year projection is useful if we want to discuss independence from oil revenues only in the "long run."

The second operational term whose meaning the State must examine is "substantial reduction in services." While it is possible that the citizens of Alaska would never accept a reduction in the overall level of government service each receives, it is not clear that this translates into a prohibition against reductions in real expenditures per capita for at least some programs. Neither does it translate into any particular rule on the rate of increase in total real expenditures in either total or per capita terms. However, three useful and plausible assumptions concerning expenditures are: constant per capita real expenditures on each expenditure category, a low fixed growth rate in total real expenditures, and the historic experience in growth of expenditures per capita by category. The first case essentially "freezes" spending at current levels, the second case would show the effect of a relatively conservative government expenditure guidelines policy like that being currently attempted, and the third suggests a "no controls" situation.

The third aspect of the policy of becoming independent of oil and gas as a source of current revenues is that of impacts of the policy on Alaska's economy. A state administration would probably not wish to pursue policies leading

to actual massive and persistent reductions in total employment, for example, because of the high political and human costs of doing so. However, the policies which the State may pursue to get to the goal of independence from oil revenue in the long run might, theoretically, reduce the rate of growth of the economy to such an extent as to frustrate the achievement of the goal of independence. This could occur either because of an attempt to reach the goal too fast by confiscatory tax rates on the current tax base and by holding down State spending in Alaska to too great an extent; or failure could occur because the government spent too much and taxed too little. Without trying to prejudge the issue, I can recommend that the State adopt some basic guidelines for "intolerable" results, such as: no decreases in total employment lasting more than one year, no decreases in per capita real disposable income persisting beyond one year, or some critical growth rate which is considered too low to support the long term increase in population.

Finally, it is necessary to define an "onerous tax burden." This could be done by reason of its economic effects, or by some (necessarily arbitrary) standard of fairness, such as the average or highest effective tax rates for certain taxes in other states. Since any policies

undertaken to reach the goal of independence from oil revenues have implications for the feasible tax rates on non-petroleum sources, some standards must appear against which tax effects are to be measured. As an example, one can specify that the average effective tax rates for any tax on personal income and on the activities of the nonpetroleum sectors of the economy not exceed the highest average effective tax rate for a similar tax in any other state.

As can be seen from the example, even if no other sources of variation existed, definition of the goal itself could lead to many equally interesting cases which would have to be evaluated. There are, however, many other issues to examine in the context of a fiscal plan. Discussion of these follows.

3. Issues Related to the Size of Budget and Growth in Expenditures

It is useful to think of the state government as taking one of two approaches to fiscal management. It can either take what I shall call an "expenditure-oriented" approach--that is, try to determine what expenditures will be demanded by the people of the State over the forecast period and devote most of its effort to looking for sources of funds for those expenditures--or, it can take a "revenue-oriented

approach," in which forecasts are made of state revenues and the State's budgeted expenditures are made to fit to the revenues available. In neither case can the State pick its path of future expenditures with impunity, since level of available revenues will always potentially constrain the choice of the level of expenditures. Secondly, some expenditures are not within the discretion of the budget staff. This is important, since the economic effects of the budget (and, therefore, some future revenues) depend not only on discretionary expenditures but on other expenditures which are not part of those sections of the budget over which any single administration and legislature have control. Alaska has relatively few state expenditures which do not go through the appropriations process, but overall flexibility in spending is somewhat limited in many cases. A strictly "expenditure-oriented" approach may get into trouble because of unanticipated economic effects of those expenditures which affect revenues, and a "revenue-oriented" approach may get into trouble because some expenditures cannot be tailored to the available revenues. Therefore, fiscal planning needs to include elements of both strategies.

a. Size of the Budget Generally

For Alaska to carry out either strategy or a mixture of them, a series of distinctions have to be made with respect to the size of budgets and the growth in expenditures. In the first place, the capital budget in any year contains within it implicit obligations for future operating budgets. Highways, for example, must be maintained once built, if they are to continue to provide service (and debt service will continue in any case). This relationship between capital and operating budgets is likely to increase in importance in the future as the capital stock ages, especially if the State embarks on a large capital construction program, using oil and gas revenues to supply either part or all of the necessary funds.

However, I am aware of no studies in existence or planned which investigate the relationship between capital and operating expenditures. If the State elects to pay cash on a large capital construction program, it may be left without a source of earned interest income. In such a case, the construction program may itself have to generate enough long run funds to pay for maintenance. If the State elects to guarantee construction bonds with its oil money, then the public projects built and interest on the invested oil money backing the bonds may have to supply enough funds

to pay for maintenance and coverage of debt, plus repayment of principal. Either way, the future demand for operating budget expenditures will increase as a result of current State capital budget expenditures, and this relationship needs to be examined.

One possible strategy to determine the relationship would be to use State Public Works and Highways financial records to determine 1) capital cost and 2) subsequent levels of maintenance expenditures of a large group of capital projects. If a standard time profile of operating expenditures can be established by comparison of projects (with maintenance expenditures as a proportion of capital expenditures explained by one or two parameters), then the overall capital budget can be related to subsequent operating expenditures.

Whether or not the relationship between the capital and operating budget can be established, it is still important to make a distinction between the two, since they influence the Alaskan economy (hence, future revenues and expenditures) somewhat differently. For one thing, the operating budget is quite labor intensive. The many services ordinarily supplied in the budget are usually personal services of some sort. Furthermore, a fairly high

percentage of the government operating expenses represents salaries paid to Alaska residents. The capital budget on the other hand sometimes represents construction expenditures which end up either as purchases from materials suppliers outside of Alaska or as wages and salaries of construction workers who are not state residents. As such, they represent a leakage of spending power from the Alaskan economy. Since the resultant effects of a dollar of these two kinds of expenditures are much different, it is important to distinguish between them in planning total expenditures and examining effects.

b. Expenditures Not Under Staff Control

Some expenditures are obligated by formulas written into the statutes (such as the Teachers' Retirement System or the Public School Foundation Program), or by the acceptance of Federal programs requiring state matching funds. These expenditures usually grow right along with the size of the client population, or with the increases and decreases in Federal funding. In long run fiscal planning, it appears worthwhile to compile a time series on each formula expenditure, and to attempt to forecast the demand these functions will place on state revenues over the forecast period. These obligated expenditures represent a minimum amount of revenues which must be available in each year, and

many state employees were also non-state residents immediately prior to their employment with the state

4. The Budget Through 1985
 - a. Overview by category
 - b. Overview by object
 - c. Detail by groups of programs
5. Policy Experiments with the Budget
6. Appendices
 - a. Definitions of variables and constants
 - b. Estimated equations and results
 - c. Annotated data listing
7. References

V. Budget

Total estimated cost of the project is approximately \$35,000.

It is anticipated that Man-in-the-Arctic Program work on fiscal modeling in closely related areas will have significant impact on reducing the total cost of the project to the figure cited here.

restrict the ability of the State to influence the Alaskan economy by switching expenditures from one expenditure category to another. Similar projections ought to be made for State expenditures which lie entirely outside the State budget, such as the Trust and Agency Funds, the Enterprise Funds, and the State corporate entities like the Alaska State Housing Authority. As was stated at the outset, however, the exact form of this projection would depend on whether it is relatively short range, where present formula factors might be important, or whether the projection is long range, and depends upon more general relationships.

It is unclear at this time what the relevant explanatory variables would be in all cases. However, Foundation program expenditures are well explained by the size of school age population, and similar variables might be found for other formula programs. In projecting budget expenditures, it will be useful to forecast formula State expenditures separately.

c. Strategies for an Expenditures Approach to the Budget

More generally, if the State primarily takes an "expenditures approach" to budget projection, it may be necessary to forecast either explicitly or implicitly the

demand for government services. In general, it will not be sufficient to extrapolate past trends in total expenditures, since, for example, the mix of total expenditures has been changing rapidly from transportation toward expenditures on health, social services, and education. While expenditures for both transportation and social services have been increasing, the two categories are controlled by different demand relationships, so the change in mix alters the rate of growth of the total. At the very least, it will be necessary to extrapolate each major expenditure category separately. However, it will probably be more useful in the long run to search for explanatory variables for each major expenditure category. Both Department of Revenue and ISER have initiated work in this area (see the attached working paper by Scott on education), but much more remains to be done.

There appear to be three obvious alternatives for using the expenditure projection information. One method is to project the series some distance into the future based on extrapolation of each category or on exogenous assumptions concerning the underlying demand relationships, and to compare the expenditures for each year with revenue projections made independently. This method would be the easiest to do,

but would ignore the expenditures' effects on the rate of growth, and on revenues. It could only be used for rough comparisons. A second method would be to project a series of expenditures based on extrapolation of each category or on assumptions concerning the underlying demand relationships, and enter these exogenously into an econometric model such as the ISER statewide model, or Department of Revenue's adaptation of the model. This method would imply that the State has some plan of expenditures which is invariant with the effects of the expenditures. However, it would show the effect of such expenditures on total revenue. A third method would be to make expenditures truly endogenous in an econometric model, "determined" by specified relationships inside the model as is currently done in the Department of Revenue adaptation of the ISER econometric model, and feeding back into the model (through wages and salaries, for example), as in the ISER version. It is not necessary that State government expenditures be completely endogenous, by the way. ISER is currently experimenting with including both an endogenous and an exogenous component to expenditures, and there is no mechanical reason why it could not be done.

The principal practical difficulty, as I see it, is the scarcity of instrument or explanatory variables available

to project "demand" for government expenditures. While one would ideally like to take into account changes in program offerings, shadow prices for services, and changes in the tastes and structure of the community client populations, only population by age and sex, employment, payrolls, gross product, and personal income are available as general instrument variables and proxies. As a result, it is usually only possible to estimate reduced form "expenditure" equations rather than true "demand" relationships.

For some expenditures such as those of the State Ferry System, it may be necessary to estimate future expenditures using both State and national data--the relationship between State population and system data on ridership, and the (exogenous to the model) relationship of the U.S. economy to ridership, for example. Whether studies of this detail are attempted will obviously depend on the presumed importance of the endogenous part of the expenditure projection.

d. Appropriations as a Proxy for Expenditures

Another issue which is related to the general size of the budget and the rate of expenditure growth is a data problem. The fact is that budget expenditures from a given year's appropriations in a given fiscal year do not correspond to actual expenditures during that fiscal year, spending

which may be funds from the previous, current, or coming fiscal year budget, or any of several successive capital budgets. It is not surprising, therefore, that total operations budget expenditures for any given fiscal year are usually smaller than the corresponding total operating expenditures in that year (as defined by The Annual Financial Report from the Department of Administration, Division of Finance), or that operating budget plus capital budget appropriations generally exceed total cash expenditures. Ideally, one would like to have actual expenditures functionally related to planned appropriations, and economic impacts related to actual expenditures. With a few exceptions, the eventual operating expenditures in any one year in the past have been within ten percent of original budget total appropriations. It seems reasonable, therefore, since there appear to be no particular instrument variables which explain the difference between actual expenditures and prior appropriations, to use operating budget appropriations directly to explain economic impacts of this portion of State spending.

Capital expenditures are more difficult. The basic components of capital expenditures are General Fund highway construction expenditures, non-highway "general fund"²

²As this term is used by the Division of Finance, not as the Division of Budget and Management uses the term.

capital expenditures, and Capital Project Funds (general obligation bond) capital expenditures. Highways expenditures are not obviously predictable from appropriations, since highways expenditures are dependent on highways expenditures timing as well as the total size and timing of appropriations. Since Capital Project Fund capital expenditures depend upon biennial general election approval of general obligation bonds, rate of bond sales, and expenditures out of the bond sales (which depend in turn on the desired finish date of each project and the required construction time), capital projects expenditures funded by general obligation bonds are not predictable from appropriations, either. In general, causation seems to run the other way: expenditures are directly related to the demand for capital goods services, and appropriations are fitted to the requirements for the expenditures program and the economics of the bond markets. A way to econometrically model State capital expenditures is to develop demand indicators for services, capital depreciation, and carrying capacity of the capital stock, and try a few capital replacement rules from outside the model. For example, in hospital construction there are acceptable hospital use to hospital bed ratios. A possible rule is that hospital capacity be provided at such a rate that the acceptable

bed use ratios not be violated at any time over a specified time period, and that if they are, that hospital capacity be augmented by some specified number at prevailing construction costs. In addition, any hospital would be replaced at specified intervals, and real facilities upgrading expenditures per capita could follow historical trends, so that total hospital construction expenditure in any year would be (exogenous) new construction costs, plus (endogenous) capital replacement costs, plus (endogenous) facilities upgrading costs. School construction, university construction, airports, and highways all lend themselves to similar treatment, although demand and capacity measures are different in each case. Ferry construction is done out of state, so it should not be a part of capital expenditures for economic impact purposes, although it is part of total expenditures for budget purposes.

To summarize, it is necessary to project as closely as possible actual expenditures in any one fiscal year to find the impact on the State economy. It is probably a satisfactory substitute to use appropriations as a proxy for expenditures in demand relationships for operating expenditures. However, it is unsatisfactory to use appropriations or appropriations plus bond sales to do this for capital expenditures, and another method is suggested.

If, however, this is considered too complex a methodology, the obvious alternative is to simply prepare a limited number of capital budgets outside the econometric model, and introduce the bond sales, expenditures, and general fund capital appropriations into the model as exogenous series.

4. Issues Related to Revenue Estimation

The State could take a primarily revenue-oriented approach to fiscal modeling. One way to do this would be to make a "first pass" estimate of revenues from recurrent (non-petroleum) sources for a series of future years; establish a schedule of recurrent expenditures (initially larger than non-petroleum revenues) which would permit, for example, some target annual growth rate for the unexpended balance of oil and gas revenues, including both the Permanent Fund and General Fund; and then introduce the exogenous expenditures series into an econometric model to see the projected revenue results of the policy, given the expenditures. By successive adjustments of the expenditures, a target growth rate of unexpended petroleum revenues could be achieved without ever making expenditures a function of revenue, under a wide variety of assumptions concerning the rate of development in the petroleum sector.

While the technique does not inherently provide "guidelines" for expenditures, in the same sense that modeling the demand for government expenditures does, the "supply" of government expenditures exogenously introduced into the model in each year can be compared to a model-generated "demand" values in the same year, and adjustments made to successive exogenous expenditures series to reduce the disparity between "supply" and "demand" values. As alternative strategies, the gaps between desired and demanded expenditures could simply be left as they come out of the experiment and analyzed for differences in government services delivered, or changes introduced on the revenue side to reduce differences between "demand" and "supply."

It is not recommended that an extensive search be conducted with models for "the best" solution, given the constraints on use of oil revenues imposed from outside the model. Probably a wide variety of explicit policies will result in approximately the same long run average growth rate in the unexpended balance of oil and gas revenues, while yielding much different results as to timing of expenditures and their distribution among the major functions of government. Instead, the best use of the econometric model would be to help define some rough

limits of expenditure policy, beyond which a proposed expenditure pattern would result in the violation of one or more target revenue rules.

If the State wishes to take a revenues approach without explicitly accounting for the feedback effect of State expenditures upon the growth rate of the economy as a whole and upon recurrent revenues, it risks facing in the future a circumstance where induced growth brought about by State expenditures policies has so increased the size and altered structure of the Alaskan economy that both revenue and expenditures estimates are gross underestimates. In such a circumstance, hindsight probably would reveal that the State could have achieved independence from non-recurring oil and gas revenues as a source of funds for current expenditures at an earlier date with lower population and economic growth rates. Failing to account for the feedback loop is equivalent to saying either that total government expenditures are totally unrelated to government expenditures on wages and salaries in Alaska (which must then be forecast exogenously), since total government expenditures do not affect the determination of how much is spent for wages and salaries; or it says that government spending has an impact multiplier of zero, since neither larger nor smaller government expenditures alters the rate of growth.

There are three separate issues which relate to the State fiscal planners' ability to project recurrent revenues using econometric models. These are the problem of aggregate data, the problem of sensitivity of revenues to changes in the type of revenue base, and the problem of changes in the structure of the Alaskan economy.

a. Use of Aggregate Data

The issue of aggregate data is essentially the same one as came up earlier in the paper with respect to the scarcity of explanatory variables which determine demand for government services. We know that total tax collections are a function of both the taxable base, be it income or property or gross sales, and the effective rate structure. In order to predict increases in total personal income tax collections, for example, it is not sufficient to know how much aggregate income in the State increased; it is also necessary, given the progressive rate structure, to predict total incomes of persons in each rate class, or equivalently, the average effective rate on total income.³ The detailed information is not

³ISER is currently working on a model which projects the "distribution of income" on the basis of an average wage rate in each of 11 major occupational categories, with changes in the distribution being caused by changes in the occupational mix. However, even this model will prove of only limited use for estimating income tax collections when the distribution of income for each occupation shifts along with average income for that occupation. We still would have to use aggregate estimated effective rates for each occupation.

currently available to model this kind of change in the tax structure, however, so this tax must be modeled on an aggregate basis, using alternative assumptions concerning the average effective rate, if necessary. Similar problems apply to all taxes with anything but a proportional rate structure with respect to its tax base. This is a problem that can only be solved by improved data, and can only be partially avoided by clever use of modeling techniques.

b. Sensitivity to the Revenue Base

The second issue is that the calculation of total State revenues will probably be sensitive to different variables during different parts of the forecast period. Recurrent revenue estimates are currently very sensitive to the average effective tax rates on personal and corporate income, since these constitute the bulk of non-petroleum revenues. However, estimates for future years are likely to be increasingly sensitive to the rate of return on unexpended oil revenues in the General Fund and the Permanent Fund. The higher the target rate of growth of these funds, and the higher the early rate of return, the more important it will be to account for the expenditures and revenues sides of fiscal policy simultaneously, because the greater will be the interaction of expenditures and revenues policy. Also, because in this case fewer

petroleum dollars are available to fund current expenditures in the early years, fiscal planners may have to worry about ways to change the effective personal and corporate tax rates to generate enough revenue, which may throw all the projections off the true value. Perhaps the only creative way to deal with this issue is to run sensitivity tests on the model or other method of projection, to see if it has any important effects on policy.

c. Effect of Structural Changes

The third issue is that changes in the structure of the Alaskan economy, particularly changes which result in unanticipated changes in the tax base, will reduce the usefulness of any formal modeling technique which depends upon past history of economic growth to forecast future economic growth and State revenues. For example, large expansion of Alaskan manufacturing of finished goods for export has not been a past feature of growth. However, if such growth were to occur as a result of radically changed economics of energy in industry, or if the State's fiscal policy were successful in inducing large growth of manufacturing in the future, there might well be increases in gross receipts, property, and corporate income taxes that no model or simple projection could anticipate.

(Econometric models do satisfactorily handle "evolutionary" changes in the level of secondary business activity related to local increases in population and major industrial demand.)

Any change of this type in the entire structure of the economy can be handled best by introducing outside the model a side analysis, where effects of State policy on the attracting of industry are analyzed. If, based on this analysis, it appears the structure of Alaska's economy will change drastically, the fiscal planner will probably want to take explicit account of the change in his revenue projections, either by adding blocks of corporate, property, and sales taxes explicitly; or by exogenously introducing primary manufacturing production and employment series into his econometric model in the way petroleum mining and transportation is currently done in ISER's MAP models.

It may have occurred to the reader that at sufficiently high level of complex intermediate economic activity in manufacturing, the technique of input-output analysis may prove useful for analysis of the ultimate revenue impacts. This is probably true, except that I-O is not well adapted to even evolutionary changes in the structural coefficients of the I-O matrix, and it is not well adapted to time series policy analysis, a separate run being required for each year over which the fiscal planner wants to simulate

policy. Finally, the same type of assumptions are necessary to introduce non-existent industries into I-O matrices as into econometric models, even though the specific data requirements are somewhat different. Little seems to be gained by using I-O at this time.

5. Issues Related to the Permanent Fund and Its Use

There are four general issues related to the management of the Permanent Fund, as it affects long range fiscal planning for the State. These four management issues must either actually be resolved or assumptions made with respect to them in order to do anything about expenditure policy. Since management of this fund is not part of the regular revenue and budgeting process of the State, fiscal planners may have to accept some aspects of its management as exogenous to their planning process. Stated as questions, the issues are as follows: What rate or rates of return will be earned on the Permanent Fund balance? At what rate and by what criteria will payments into the Fund take place? What will be the actual permitted uses of Permanent Fund principal? What will be the actual permitted uses of Permanent Fund interest?

a. Rate of Return

The rate or rates of return which the Permanent Fund earns are obviously crucial to any planning process, whether the Permanent Fund interest is transferred to the General Fund and used to pay for goods and services purchased by the State, or whether it is permitted to accumulate, increasing the size of either the General Fund balance or Permanent Fund balance. Yet, the rate is not easily predicted since rates of return vary across classes of securities according to their riskiness, taxability, and maturity date, since the rates of return on each type of security vary over time, and since there is some pressure to invest in Alaskan lending institutions and investment projects quite apart from liquidity and rate of return considerations. Some effort must be made to project a plausible rate of return, but the greater the extent to which criteria other than liquidity and risk come into plan, the more difficult this task will be. In view of the many uncertainties involved, a variety of rates should probably be assumed, to test the sensitivity of revenues to the rate of return.

b. Rate of Fund Accumulation

Quite apart from rate of return issues, there is the question of how fast money will be paid into the Permanent

Fund, with its resultant effects on the rate at which the Fund grows. This would be particularly important if the State chooses a target rate of growth for the Fund. Whether or not fiscal planners have some say in the rate of mineral leasing, amounts received for lease bonuses, royalties, property taxes, and production taxes will depend at least partly on markets for mineral products outside of Alaska. Since it is not possible for the State to force the workings of these markets to accommodate State fiscal plans, the plans will have to accommodate currently unforeseen events in these markets.

Fortunately, there are some tools available to aid in these projections. The State Division of Minerals and Energy Management has conducted studies of oil leasing policy using computer programs which demonstrate expected impact of future fields on State revenues. ISER has a program called SCENARIO which will aggregate year by year oil and gas income from several fields in different stages of development, given a specific leasing policy, prices of oil and gas, and assumed successes in exploration. The State Legislative Affairs Agency can project the effect on State revenues of any change in taxation policy on total tax collections from existing State fields. Alternatively, fiscal planners could simply assume some

illustrative time paths of the various oil and gas revenues to see how the fiscal plan is affected.

c. Uses of Fund Principal .

The third issue with respect to the Permanent Fund is the permitted uses of Fund principal. It was shown above that this may affect the earned rate of return on the Fund. However, if the principal of the Fund is invested inside the State of Alaska or on projects to encourage Alaskan exports (such as a pipeline or LNG tanker fleet) by accepting rates of return on these projects that, while profitable for the State, are below private market rates, then unpredictable economic growth would occur in Alaska which may not be conveniently analyzed by any existing impact or forecasting model. To the extent that the State does not invest Permanent Fund principal in Alaskan projects, or to the extent that it accepts only market rates of return and merely substitutes for private capital, the rate of Alaskan economic growth will not be substantially affected, although the rate of return on the Fund might be.

The temptation to assume that Permanent Fund principal is not invested in Alaska at subsidized rates is overwhelming, considering all the modeling complexities raised

by the alternative. However, in the event that subsidized Alaskan investment must be taken into account, assumptions will have to be made or analysis done concerning the amount, timing, type of business growth that will occur as a result of subsidized lending rates, since future tax revenues and endogenous state expenditures may be affected. Default and repayment rates on the type of loans involved will also have to be considered, since this will affect the rate of return on the Fund.

d. Uses of Fund Interest

The final issue to be considered here is the uses which are assumed to be made of the interest on the Permanent Fund. Several possibilities emerge, including: transferring all of the interest to the General Fund, with no further restrictions on its use; transferring only part of interest to the General Fund for a specified period of years, in order to save the rest in the Permanent Fund to augment the rate of increase and move up the day of fiscal independence; paying part or all of the interest earned as "dividends" to Alaskans, perhaps on the model of stock dividends, or on the model of a negative income tax; or some combination of the above. Currently, there are so many proposals for use of Permanent Fund interest that no single assumption regarding its use seems justifiable.

Two approaches to the problem appear useful. One would be to proceed, as has been recommended in several other cases, with several alternative assumptions which span the range of possible uses of the Fund interest, to check the sensitivity of resulting revenues and expenditure paths.

The other approach is to statistically "search" for a "best" policy. For example, set up some hypothetical fiscal series, such as an expenditure-determined rate of withdrawals from the General Fund, and an endogenous rate of non-petroleum revenues additions to the General Fund, the remainder of revenues to be provided by Permanent Fund interest. Then, employing a social welfare criterion such as "maximize present value of per capita payments from the Permanent Fund to Alaska, Inc., over time," an optimal control model could be used to yield the time path of permitted withdrawals for direct payments to individuals which maximized this social welfare measure, subject to the cited fiscal constraints. The series of Alaska, Inc., payments thus introduced into the economy as incomes of persons could be added to the economic model as a series of exogenous payments to personal income, and the parent econometric model resimulated to note the effects. Several runs of the optimal control model subject

to the same social welfare criteria, but with different preferred paths of expenditures, would yield a family of "best" Alaska, Inc., expenditures, subject to the given constraints. By changing the constraints and the criteria, one could check the economic effects of different "optimal" paths, and different "optimality" criteria.

The preferred strategies for use of Permanent Fund interest could be found by comparing simulated economic effects of the path of expenditures which maximized each criterion, or by combining these strategies in various ways. The essential difference from the simpler expedient of using intuition to generate the assumed levels and uses of interest payments is that each program of payments in the case where the optimal control model is used maximizes some social welfare criterion and, therefore, has some claim of "optimality."

In summary of this section, whether fiscal planning involves choosing a series of expenditure paths, and adapting Permanent Fund policies to those expenditures, or whether fiscal planning involves picking certain Permanent Fund criteria and adapting expenditure policies to these criteria, it will still be necessary to make certain assumptions about the policy parameters applying to the Permanent Fund, and there are a few tools available to

make consistent use of these assumptions, and which will aid the fiscal planning process.

6. Issues Related to Economic Impact

Throughout this paper to this point, I have discussed fiscal planning policy in terms of its economic impacts. Although some of what is said here has been anticipated in what has been written in previous sections, it is worthwhile to briefly discuss two important issues that will have to be faced in any fiscal planning done for the State of Alaska. One of these is that the aims of a given fiscal policy can probably not be restricted to a single criterion of success, such as the level of disposable personal income per capita, or the number of jobs created, or the rate of spending of oil revenues. The State's goals are inherently multidimensional. The other is that it is not sufficient to look at only the aggregate measures, such as total spending or employment or personal incomes earned. Fiscal planners must be concerned with the distribution of benefits and costs of policy between groups and over time.

a. Multiple Dimensions of Impact

The existence of the first issue, that fiscal planners must examine at once several dimensions of policy, implies that there ought to be consistent treatment of the

assumptions the planner wishes to make with respect to the State economy and fiscal structure in a single, unified, general equilibrium framework. While it is theoretically possible to do fiscal analysis in a partial equilibrium framework, holding a proposed path of expenditures and the structure of the economy constant and successively computing its effect on revenues, employment, output, etc., in each year, it is much more convenient and sensible to link an expenditure model with specified structural impacts to a model whose structure evolves naturally and which structure accounts for hard-to-trace general equilibrium effects of one variable on another through time. A dynamic expenditures model linked to an econometric model seems the best way to accomplish both the goals of simultaneous accounting for multiple effects of policy and of allowing for a natural growth path in the Alaskan economy.

b. Aspects of Impact Not Handled by Models

The second issue is not conveniently handled by even a relatively sophisticated econometric model such as the ISER MAP models. The problem is that while these models can, given appropriate assumptions, trace out in some detail the aggregate effects of a given fiscal policy over time, the most important effects may occur at an individual

and small group level beyond the analytical ability of the model. For example, suppose that a run of an augmented MAP model showed that by spending only half of Permanent Fund interest and allowing it to accumulate, state income and other recurring taxes and interest on the Permanent Fund could take over all recurring expenditures reasonably anticipated by 1995, and that this policy would result in a 50 percent increase in employment. The criteria should be expanded to include the distribution of benefits and costs. If, for example, this achievement of fiscal independence from oil by 1995 can only be had by reducing real expenditures per capita by 50 percent between 1978 and 1985, the desirability of the goal might be called into question. Beyond that, even if total expenditures for government functions were not reduced, reductions for some functions and offsetting expansions of others might have distributional consequences about which the models are silent, but which would lead to rejection of the policy if they were known.

Aware of this problem, and similar general problems with distributional issues, ISER staff have begun the modeling of demand and supply of occupation classes, and of distribution of income based on average compensation of occupational classes in Alaska. However, completion

of this effort is about one year away, and does not include distribution of government expenditures in any case. Precise knowledge of benefits and costs will depend on individual program analysis. At the more general decision level, the fiscal planner will have to depend on a combination aggregate measure of economic and fiscal impact, and on informed judgment guided by model outputs.

7. Summary

This paper has organized a series of issues with respect to long term fiscal planning in Alaska into four areas: issues related to forecasting the size of state budgets and effect of state spending policy on the economy and on revenues; issues relating to the forecasting growth of revenues, whether used to meet a given series of state expenditures or adopted as criteria to regulate expenditures policy; issues related to the role the Permanent Fund plays in the future financing of Alaskan government services; and finally, a short section on two issues relating to generating and interpretation of forecast results. Where I have been aware of convenient methods of handling these issues in some useful and creative way, I have briefly described how the method might be applied to resolve the issue. Where I have felt that several alternatives

existed, I tried to suggest what these are. Obviously, however, the solutions or methodologies selected will depend upon what the State administration determines its goals are with respect to fiscal planning, where goals are really more precise and defined ways of stating more general objectives.

While I have applied the methodologies in a general way to one possible goal of fiscal policy, stated in rather limited terms, I do not mean to suggest that this is anything more than an example of "how it might be done." Definition of the goals leading to the general fiscal objectives will undoubtedly be a shared executive-planner responsibility where the author has no special expertise. I hope, however, that I have demonstrated that one of the benefits of the planning exercise outlined in this paper is that the questions to be answered by the plan become much clearer, no matter by what process they are finally resolved.

APPENDIX A

Model of Education Expenditures

The MAP State Education
Expenditures Model

Progress Report

Institute of Social and Economic Research
Anchorage Fairbanks Juneau

October 4, 1976

Introduction

This model is the first in a series designed to improve MAP program capabilities to project the consequences of state government expenditures policies in Alaska. This model (EDMOD) is not an attempt to forecast the future, both because it requires the input of several exogenous data series which themselves cannot be forecast precisely, and because the structure of the model depends upon historic relationships which may not hold true in the future. Moreover, the model projects education expenditures for a period in which state revenues are expected to be abundant, while the historical data come from a period when the state's funds were relatively scarce.

Because of these problems, the model was built with two primary considerations in mind concerning the level of state education expenditures in the future. First, the model should provide some distinction between expenditures which are primarily discretionary in nature, and those which may be mandated by increases in population and past trends in expenditures per pupil. (Ideally, one would like to explain the trend in expenditures per pupil, but it has not proved possible with the data available to separate past movements in expenditures per pupil into demand and supply components.) This projection of past relationships into the future has value in the budget planning process, and can be used to demonstrate the importance of differences in assumptions concerning the exogenous variables and

parameters of the model in the forecasting of future expenditures. Second, since the state may be the future recipient of large amounts of discretionary income, it is also important for the model to allow departures from past trends in expenditures at the discretion of the researcher, and to offer some basic measures of the effectiveness of the discretionary spending decision in altering the level of government services in education.

A decision was made early in the development of this model to temporarily set aside the problem of capital spending for education, both because the relevant determinants of demand for capital spending would be less easy to isolate than those for operations spending, and because the measures of capital services are a profound conceptual and data problem. (In contrast, the ratio of professionals or teachers per student is a recognized, though admittedly crude measure of educational "services".) Also, because of the importance of state operations expenditures for wages and salaries in inducing state economic growth, it was felt that the initial payoff would be highest in modelling operations expenditures.

To generate business-as-usual expenditures, the model estimates the levels of enrollment in the various state school systems and in the Native BIA schools based on predicted population from the MAP population model. (A model listing is shown in Appendix A.) These enrollments are combined with the historical spending-to-enrollment relationships to estimate state operations spending on primary and

secondary education, excluding debt service and capital outlays. A provision has been made in the model to accommodate consolidation of the BIA attendees into the state schools by the use of a variable constant. Primary and secondary education expenditures are combined with state expenditures for the University of Alaska and for a "miscellaneous" category (the state library system and public television are major components) to estimate total state government operating expenditures for education.

Local school district operating expenditures are estimated in much the same fashion as total state operating expenditures, with state funds transferred to district schools being estimated based on enrollment, local funds being estimated from personal income, and federal funds being supplied exogenously. These three components are added together as an estimate of local potential operations spending, actually being an estimate of revenues available for operations spending on education, and the sum is used to estimate actual spending, to which it bears a strong historical relationship. (Local districts have historically been limited in their spending capacity by the level of transfers from the state and federal governments, and by the tax effort which has been made locally.) The moving proportion of available revenues spent by school districts on wages and salaries of professionals is computed, and this district schools proportion is multiplied times total operations expenditures in the state for all primary and secondary education to estimate the number of

education professionals and professional/student ratios for the forecast period.

The basic model has been modified for this report to permit the state to make additional discretionary transfers to local school districts, signified by the variable EXEDS. Theoretically, it is possible to alter the model in several ways with exogenous variables--e.g., to permit a higher local tax effort, an exogenous component could be added to EDFINL, the local funds variable. In addition, it is possible to test the sensitivity of state expenditures and services delivered to changes in the basic assumptions underlying the model, such as enrollment/population ratios. Finally, the model is designed to either operate as an independent model using exogenous data supplied by the MAP model, or to be integrated into the structure of the MAP econometric and population models, and to interact with them.

The Data

The data used to develop EDMOD came from four major sources in Alaska state government, and from one federal source. As a result, there are data incompatibility problems which have to some extent determined the possible structures the model could take. The enrollment data (actually, Average Daily Membership, which is the average enrollment figure used to determine state aid) are reported by the

schools to the State Department of Education, and appear in their Annual Report. A consistent series is available from FY 1963 through FY 1975. Also appearing in the Annual Report are the sources of funds used by local district schools, a broken series which is not reported in FY 1971 or before FY 1966. Actual expenditures of local districts come from this source, also, as does the proxy variable for reported expenditures by local districts on professionals (instruction plus administration expense), and the number of full-time equivalent professionals working for the districts. More detail is available in some years on how this number of professionals breaks down into teachers, administrators, and others, but the series is so severely broken that, for example, there is only one year in which both instructional services expenditures and the number of teachers are both reported. Therefore, all professional employment was used as a measure of service. The reporting system has now been changed, so no consistent series on expenditures is available after FY 1974.

The historical series in the state Budget Document (Supplement, in later years) are the main source for state government expenditures for the University of Alaska, state expenditures for district and state-operated rural and military base schools, and state expenditures for miscellaneous educational purposes. The numbers reported in this source form an unbroken series from FY 1963 to FY 1975 (with the exception of miscellaneous, which is unbroken only since FY 1964), but corresponding figures reported by the Department of Education

(e.g., the amount transferred from the state to its district schools under the Foundation Program, which dominates such transfers) do not equal each other. Nor does the total expenditure figure for education reported in the Budget Document equal that reported in the state's official Annual Financial Report from the Department of Administration Division of Finance. Part of the discrepancy comes from differences in reporting dates and accounting conventions, especially concerning the treatment of encumbrances at the end of the fiscal year, but may not account for all the difference.

The source of personal income (PI) was a combination of the wages and salaries data reported by the State Department of Labor, and of other sources of personal income as reported by the U. S. Department of Commerce, Bureau of Economic Analysis. The wages and salaries data reported for corresponding categories by the state and federal sources do not match, and since state employment figures were used, the federal payroll figures were adjusted to the state totals.

There is no good count of population by ethnic group prior to the 1970 Census of Population which can be used as a guideline to build a detailed population model. Consequently, the detailed breakdown of population by ethnic group and age group generated by the MAP population model and used by this model is only available for a five-year period, 1970 to 1975. This causes some problems. The ratios on school enrollments to population 1970-75 indicate that

variance in the equation is high, but it was left to stand for this report. Total expenditures by the University (EUA) was forecast exogenously.

Estimation of the Equations

The complete results of the estimation of the stochastic structural equations of EDMOD appear in Appendix B. This section will briefly describe the results of the regression analysis to date.

Initially, the decision was made to run the equations with ordinary least squares (OLS), treating each equation independently. As in other MAP research, the researcher is faced with the problem of extremely short data series, combined with a relatively large number of explanatory variables and a scarcity of variables which permit identification of individual equations. These considerations combine to exclude as impractical the use of two-stage least squares (2SLS) or indirect least squares techniques. In any case, the test of the model is not the structural elegance of the single equations comprising it, but the model's ability to give intuitively satisfactory projections which meet consistency tests. The OLS results were of high quality, though not consistently so. A major internal test was passed in every case--the explanatory variable was highly significant in every case, and the explanatory power of the equations was generally high. In the two cases where corrected multiple correlation coefficient

(CRSQ) was less than 0.80, additional effort will be made to improve the fit of the equation to the historical data. However, it should be pointed out that reestimation of the local expenditures equation 16 has thus far produced worse results.

An additional comment seems worthwhile on two other issues--the apparent arbitrary choice of the range of the regression equations, and the low values of the Durbin-Watson statistic in three of the equations. The overall MAP approach has been consistently to use as much data as is available and possible to use in estimating structural equations. In this case, the choice of range was not affected by data outliers; rather, it was dictated by missing data. The Durbin-Watson statistic seems to indicate first-order serial correlation in three of the equations, which could affect the efficiency of the equation estimated. However, this is probably not a problem in these cases even if serial correlation exists, since the null hypothesis (coefficient $C_iB=0$) is so overwhelmingly rejected. In any case, the coefficient is not biased by the serial correlation problem if it exists, so the estimates in the forecast period will not be changed, even though the degree of confidence which can safely be placed in them may be reduced. However, since the simulation model of which these equations are a part will likely be affected even more by other larger sources of bias and loss of efficiency, worry over this source seems an inefficient use of research time.

Simulations and Results

The model described above was used for two simulation experiments over the period 1976 to 1990. In the first experiment, the past relationships between variables were projected into the future in a "growth as usual" case based on non-Native civilian population data from an earlier run of the MAP econometric model A7 (accelerated growth at a wellhead oil price of \$7 per barrel), with Native population growth proceeding at the rate which prevailed between 1970 and 1975, and with military population constant at the 1975 level. In the second experiment, the variables remained the same, except that the state was assumed to spend an extra \$100 million per year in the form of operating subsidies to the district schools. The results are summarized in Tables 1, 2, 3, and 4 and are described briefly below.

Table 1 shows the base case simulation enrollments. Since enrollment figures for district schools and state-operated rural schools are fixed proportions of civilian non-Native population growth, the increase in ADND (district school membership) and ADMS (state rural school membership) reflects the population growth associated with petroleum development in the A7 case. Military population is assumed constant, so membership in base schools (ADMB) also remains constant. Enrollment in district schools doubles between 1976 and 1990, while rural school districts slightly more than double their enrollment.

Table 1

GROWTH-AS-USUAL CASE, A7 SCENARIO
SCHOOL ENROLLMENT VARIABLES

(Thousands of Students)

	ADMD	ADMB	ADMS	ENRN	ENRU
1976	75.817	6.91	7.8976	4.68867	22.1688
1977	78.8054	6.91	8.2089	4.71651	23.8313
1978	78.7363	6.91	8.2017	4.74516	25.6187
1979	80.879	6.91	8.4249	4.77351	27.5402
1980	86.759	6.91	9.0374	4.80228	29.6055
1981	92.9568	6.91	9.683	4.83105	31.826
1982	98.8531	6.91	10.2972	4.86003	34.213
1983	105.846	6.91	11.0256	4.88922	36.779
1984	112.537	6.91	11.7226	4.91862	39.5374
1985	119.132	6.91	12.4096	4.94802	42.5077
1986	126.164	6.91	13.1421	4.97763	45.6905
1987	133.488	6.91	13.905	5.00766	49.1171
1988	141.352	6.90994	14.7242	5.03749	52.801
1989	149.727	6.91	15.5966	5.06793	56.761
1990	158.346	6.91	16.4944	5.09838	61.0182

Key: ADMD = District Schools, Average Daily Membership
 ADMB = Base Schools, Average Daily Membership
 ADMS = State Rural Schools, Average Daily Membership
 ENRN = Native BIA Schools, Potential Enrollment
 ENRU = University of Alaska, Potential Enrollment

Native potential enrollment increases, but a combination of low net population growth and the fact that many Natives attend district or state-operated rural schools keep enrollment increases to only about 10 percent of the 1976 base. This may even actually overstate the case, since with recent increases in local statutory control in the state-operated rural schools, and probable increased levels of funding to all state schools, the BIA alternative will likely appear less attractive than in the past. The attendance at the University of Alaska (all campuses: ENRU) more than triples, from a 1975 base of about 18,500 to a 1990 enrollment of just over 61,000. The decision to attend school is probably much more an economic one for the potential college student than for the potential primary or secondary student, since the college student directly bears part of the cost as tuition and fees, and this latter enrollment could be markedly affected by changes in the cost and value of education to the student. However, if past trends prevail, the potential for enrollment growth is very large. Even so, the expenditures "required" by trends in past relationships may be less than would be predicted by extrapolating the past proportion of the state budget to the new era.

Table 2 reports the expenditure data for the base case. As can be seen from the table, all categories of state spending for education grow substantially between 1976 and 1990. While spending on primary and secondary education grows some twelve times over the 1976 level between 1976 and 1990, and miscellaneous spending grows 3.4 times

Table 2
EXPENDITURES BY CATEGORY, GROWTH-AS-USUAL
(Millions of Dollars)

	EEDS96A	EEDS98A	EEDMSCS	EEDUAS
1976	105.205	143.348	53.3155	36.8301
1977	117.665	162.545	60.0638	39.2354
1978	117.366	162.082	62.3724	41.7982
1979	126.854	176.9	66.6725	44.5284
1980	155.432	222.53	75.4293	47.4365
1981	189.802	279.149	84.7299	50.535
1982	226.791	341.937	93.8396	53.8357
1983	276.416	428.787	104.481	57.3522
1984	330.093	525.681	114.725	61.0981
1985	389.264	635.604	124.708	65.0888
1986	459.571	769.943	135.005	69.3403
1987	541.13	930.289	145.404	73.8691
1988	638.672	1127.65	156.274	78.6941
1989	754.484	1369.	167.638	83.834
1990	887.2	1653.8	179.203	89.3097

	EEDGFS	EEDL99	Key:
1976	233.493	131.41	EEDS96A = Total State Transfers to
1977	261.844	144.763	Local School Districts
1978	266.252	145.739	EEDS98A = Total State Operating
1979	288.101	156.981	Expenditures for Primary
1980	345.395	187.412	and Secondary Education
1981	414.414	222.629	EEDMSCS = Total State Miscellaneous
1982	489.612	260.131	Education Operating
1983	590.619	310.745	Expenditures
1984	701.504	365.325	EEDUAS = Total State Transfers to
1985	825.401	425.093	the University of Alaska
1986	974.288	495.607	EEDGFS = Total State General Fund
1987	1149.56	576.904	Operating Expenditures
1988	1362.62	673.602	for Education
1989	1620.47	787.833	EEDL99 = Total Local School District
1990	1922.31	919.215	Operating Expenditures

over the period, transfers to the University of Alaska grow only about 2.4 times, less than the projected rate of increase in student population. This suggests that higher education may be a future area within education where the state may wish to increase funding, relative to past trends. For example, if state transfers to the University of Alaska bore the same proportion of total education operations spending in 1990 as in 1976, the University would receive \$303.2 million in 1990, not \$89.3 million. If real spending per University student were constant (allowing for an average annual inflation rate of 5 percent), then 1990 transfers to the University in this case would be \$200.7 million.

Table 3 shows the difference between estimated total spending on education projected by using past proportions of total state spending by function and spending on education projected with the same exogenous data, using past enrollment trends. As the table shows, the difference is quite large in most years. Initially, the difference is a little over \$200 million, peaks at nearly \$600 million, and then declines rapidly.

Table 4 reports the result of the second experiment, which took the same exogenous data as in the growth-as-usual case, but added \$100 million per year to the operating revenues which the state provides to the local school districts, and which, it is assumed, are spent in the same manner as other operating subsidies.

Table 3

TOTAL EDUCATION EXPENDITURES
PROJECTED PAST BUDGET PROPORTION VS.
"REQUIRED" BY ENROLLMENT TRENDS
(Millions of Dollars)

	<u>Past Budget Proportions</u>	<u>"Required" Total Expenditures*</u>	<u>"Required" Operating Expenditures</u>	<u>Projected, Less "Required"</u>
1976	485.8	276.6	233.5	209.2
77	521.7	310.1	261.8	211.6
78	472.2	315.5	266.3	156.7
79	555.2	341.3	288.1	253.9
80	757.2	409.2	345.4	348.0
81	841.1	490.9	414.4	350.2
82	1051.5	580.0	489.6	471.5
83	1242.6	699.6	590.6	543.0
84	1413.6	831.0	701.5	582.6
85	1574.5	977.8	825.4	596.7
86	1738.5	1154.2	974.3	584.3
87	1882.7	1361.8	1149.6	520.9
88	2026.1	1614.1	1362.6	412.0
89	2181.0	1919.6	1620.5	261.4
90	2332.3	2277.2	1922.3	55.1

*Based on the ratio of state general fund operations expenditures for education to all state expenditures for education, as reported in the State of Alaska Annual Financial Report. Ratio = 1.1846.

Table 4

PROFESSIONAL EMPLOYMENT IN EDUCATION, NUMBER OF PROFESSIONAL
EMPLOYEES PER STUDENT, AND DEPARTMENT OF EDUCATION
DIRECT PLUS INDIRECT EXPENDITURES PER STUDENT

Case 1: Growth as Usual

	PROF	PROFPS	EEDPSS
1976	5.36903	0.059245	2.17009
1977	5.71125	0.060807	2.37009
1978	5.71704	0.060918	2.39167
1979	5.99123	0.062166	2.53157
1980	6.71111	0.065343	2.90107
1981	7.5297	0.068733	3.32158
1982	8.36341	0.072061	3.75474
1983	9.42601	0.07615	4.30814
1984	10.5142	0.080158	4.88228
1985	11.6539	0.084173	5.49153
1986	12.942	0.088512	6.18911
1987	14.3643	0.093092	6.9713
1988	15.9836	0.098067	7.87751
1989	17.8132	0.103425	8.92178
1990	19.8097	0.108994	10.0852

Case 2: State to Local Exogenous Transfer = \$100 million per year

	PROF	PROFPS	EEDPSS
1976	6.39216	0.070534	3.27354
1977	6.67535	0.071072	3.43477
1978	6.68116	0.071191	3.45723
1979	6.90402	0.071757	3.57092
1980	7.53046	0.07332	3.87472
1981	8.25086	0.075316	4.23441
1982	9.00032	0.077549	4.61636
1983	9.97393	0.080577	5.11601
1984	10.9871	0.083763	5.64465
1985	12.0613	0.087116	6.2138
1986	13.2879	0.090878	6.87303
1987	14.654	0.094969	7.61938
1988	16.2205	0.099521	8.49106
1989	18.0015	0.104518	9.50239
1990	19.9547	0.109792	10.6355

Key: PROF = Professionals Employed in Primary and Secondary Education,
in Thousands

PROFPS = Professionals Per Student

EEDPSS = State Expenditures for Primary, Secondary, and General
Education, Per Student, in Thousands of Dollars Per Student.

How much of a difference would this additional discretionary spending make? Table 4 shows that since the number of pupils is assumed to be independent of the level of the subsidy (i.e., good schools do not in themselves attract large numbers of additional primary and secondary students to Alaska), the difference in spending per student declines from over \$1,100 per student in 1976 to \$550 per student in 1990. The additional \$100 million initially translates into about 1,000 additional professionals if schools spend these funds in the normal manner, i.e. not concentrating it only on teacher salaries. It also reduces the student-to-professional ratio from 16.9 to 14.2, a difference of not quite 16 percent. However, by the end of the period, \$100 million per year makes virtually no difference in this ratio. Enrollment growth, increasing labor costs, and inflation combine to reduce the effect of the \$100 million to almost no difference in "service".

Conclusion

The education expenditures model in this report is for demonstration and is not the final version. Additional work may remain to be done on several of the equations which, while they give intuitively satisfactory results for the projection period, have not been subjected to the full range of tests, and could be improved. The problems of integrating this model with the MAP econometric and population models

remain, as does that of satisfactorily projecting capital spending in education. Some district education data is reported on a regional basis, and this awaits coordination with regional population models, if regional local expenditures for education are to be projected. The model should be taken for what it is: an initial attempt, not a completed effort.

EDMOD

Appendix A

Symbol Declarations and Equations

The model whose results are given in this progress report is reported below. The definitions of variables and parameters appear at the end of this Appendix, in alphabetical order. The values of the parameters and coefficients appear in Appendix B.

SYMBOL DECLARATIONS:

ENDOGENOUS:

ADMB ADMD ADMS EDFINL EEDL99 EEDMSCS EEDS96 EEDS98
EEDUAS ENRN ENRU ESCHPROF FOUNPROF

DEFINITION:

ADMN ADM97 ADM98 EEDGFS EEDL EEDL98 EEDPSS EEDS96A
EEDS98A EED99S PROF PROFEX PROFPS

EXOGENOUS:

EDFINF EUA EXEDS NPOP519 PI POPC519 POPM519 TPOP
TPOP1524 TPOP519 DUM1 DUM2

COEFFICIENT:

C10A C10B C12A C12B C13A C13B C14A C14B C6A
C6B C7A C7B C8A C8B C8C C8D C9A C9B

PARAMETER:

CADM1 CADM2 CADM3 CADM4 CADM5 K

EQUATIONS:

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1:      ADMD == CADM1*POPC519
2:      ADMS == CADM2*POPC519
3:      ADMB == CADM3*(TPOP519-NPOP519-POPC519-POPM519)
4:      ADM97 == ADMD+ADMS
-----
5:      ENRN == CADM4*NPOP519
6:      ADMN == K*ENRN
7:      ADM98 == ADM97+ADMB+(1-K)*ENRN
8:      ENRU == CADM5*TPOP1524
9:      LOG(EEDS96) = C6A+C6B*LOG(ADMD)
10:     EEDS96A == EEDS96+EXEDS
11:     LOG(EEDS98) = C7A+C7B*LOG(ADM98)
12:     EEDS98A == EEDS98+EXEDS
13:     EEDMSCS = C8A+C8B*TPOP+C8C*DUM1+C8D*DUM2
14:     LOG(EEDUAS) = C9A+C9B*LOG(ENRU)
15:     EEDGFS == EEDS98A+EEDMSCS+EEDUAS
16:     LOG(EDFINL) = C10A+C10B*LOG(PI)
17:     EEDPSS == (EEDS98A+EEDMSCS)/ADM98
18:     EED99S == EEDS98A+EEDMSCS+EUA
19:     EEDL == EEDS98A+EDFINL+EDFINF
20:     EEDL98 == EEDS96A+EDFINL+EDFINF
21:     EEDL99 = C12A+C12B*EEDL98
22:     ESCHPROF = C13A+C13B*EEDL99
23:     LOG(FOUNPROF) = C14A+C14B*LOG(ESCHPROF)
24:     PROFEX == FOUNPROF/EEDL98
25:     PROF == PROFEX*EEDL
26:     PROFFS == PROF/ADM98

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Definitions of Variables:

ADMB = Average Daily Membership in Base Schools (Thousands)

ADMD = Average Daily Membership in District Schools (Thousands)

ADMN = Average Daily Membership in Native (BIA) Schools (Thousands)

ADMS = Average Daily Membership in State-Operated Rural Schools
(Thousands)

CADM1 = Ratio of ADMD to POPC519, for School Year 1974-75

CADM2 = Ratio of ADMS to POPC519, for School Year 1974-75

CADM3 = Ratio of ADMB to Military Dependent Population, for
School Year 1974-75

CADM4 = Ratio of ENRN to NPOP519, for School Year 1974-75

CADM5 = Ratio of ENRU to TPOP1524, for School Year 1974-75

EDFINF = Federally Supplied Operating Funds of Local School
Districts (Millions)

EDFINL = Locally Supplied Operating Funds of Local School
Districts (Millions)

EEDL = Estimated Total Operating Expenditures for Primary and
Secondary Education (Millions)

EEDL98 = Estimated Total Operating Expenditures for Primary and
Secondary Education by Local Districts (Millions)

EEDL99 = Actual Total Operating Expenditures for Primary and
Secondary Education by Local Districts (Millions)

EEDGFS = Total State General Fund Operating Expenditures for
Education (Millions)

EEDMSCS = Total State Miscellaneous Operating Expenditures for
Education (Millions)

EEDPSS = Total State Operating Expenditures for Primary and
Secondary Education, Per Student (Thousands)

EEDS96 = Total Demand-Induced Operating Expenditures for Primary
and Secondary Education by Local Districts (Millions)

Definitions of Variables (Continued):

EEDS98 = Total State Demand-Induced Operating Expenditures for
Primary and Secondary Education (Millions)

EEDUAS = Total State Operating Funds Transferred to the University
of Alaska (Millions)

EED99S = Total Operating Expenditures for Education by the State
and University (Millions)

ENRN = Potential Enrollment in Native (BIA) Schools (Thousands)

ENRU = Potential University of Alaska Enrollment, All Campuses
(Thousands)

ESCHPROF = Expenditures for Instruction and Administration,
by District Schools (Millions)

EUA = Total Operating Expenditures of the University of Alaska
(Millions)

EXEDS = Exogenous State Transfer of Funds to Local Districts
(Millions)

FOUNPROF = Total Professional Personnel Hired by Local Districts
(Thousands)

K = Proportion of Potential Native School Enrollment Attending
BIA Schools

PI = Personal Income (Millions)

NPOP519 = Native Population 5-19 Years of Age (Thousands)

POPC519 = Civilian Population 5-19 Years of Age (Thousands)

POPM519 = Military Population 5-19 Years of Age (All 15-19)
(Thousands)

PROF = Total Primary and Secondary Education Professionals
(Thousands)

PROFEX = Ratio of Professionals Hired per \$1000 of Operating
Expense, District Schools

PROFPS = Ratio of Professional Personnel per Student, All Schools

TPOP = Total State Population

TPOP1524 = Total State Population, 15-24 Years of Age

EDMOD

Appendix B

Estimated Values and Regression Statistics
for Stochastic Equations

Key:

NOB = Number of Observations

NOVAR = Number of Explanatory Variables (Including the Constant)

RANGE = Time Series of Observations (Includes End Dates)

RSQ = Multiple Correlation Coefficient

CRSQ = RSQ, Corrected for Degrees of Freedom

SER = Standard Error of the Residuals

SSR = Sum of Squared Residuals

F = Fiedecor "F" Statistic of Significance

DW = Durbin-Watson Statistic of First-Order Serial Correlation
of Errors

COEF = Regression Coefficient (The A-coefficient is always
the constant)

STER = Standard Error of the Coefficient

T-STAT = Student "t" Statistic of Significance

$$9: \text{LOG}(\text{EEDS96}) = \text{C6A} + \text{C6B} * \text{LOG}(\text{ADM96})$$

NOB = 13 NOVAR = 2

RANGE = 1963 TO 1975

RSQ = 0.91428 CRSQ = 0.90649

F(1/11) = 117.332

SER = 0.2224 SSR = 0.544

DW(0) = 0.64

COEF	VALUE	ST ER	T-STAT
C6A	-7.87517	1.06519	-7.39323
C6B	2.89514	0.26728	10.83200

$$11: \text{LOG}(\text{EEDS98}) = \text{C7A} + \text{C7B} * \text{LOG}(\text{ADM98})$$

NOB = 13 NOVAR = 2

RANGE = 1963 TO 1975

RSQ = 0.9259 CRSQ = 0.91916

F(1/11) = 137.438

SER = 0.1948 SSR = 0.417

DW(0) = 0.58

COEF	VALUE	ST ER	T-STAT
C7A	-10.87220	1.27174	-8.54907
C7B	3.51419	0.29976	11.72330

$$13: \text{EEDMSCS} = \text{C8A} + \text{C8B} * \text{TPOP} + \text{C8C} * \text{DUM1} + \text{C8D} * \text{DUM2}$$

NOB = 12 NOVAR = 4

RANGE = 1964 TO 1975

RSQ = 0.92175 CRSQ = 0.8924

F(3/8) = 31.410

SER = 5.3373 SSR = 227.898

DW(0) = 1.00

COEF	VALUE	ST ER	T-STAT
C8A	-85.07470	24.60170	-3.45809
C8B	0.32589	0.09048	3.60164
C8C	8.55669	6.27211	1.36424
C8D	-22.24140	6.19347	-3.59111

14: LOG(EEBUAS) = C9A+C9B*LOG(ENRU)

NOB = 13 NOVAR = 2
 RANGE = 1963 TO 1975
 RSQ = 0.92607 CRSQ = 0.91935 F(1/11) = 137.787
 SER = 0.1812 SSR = 0.361 DW(0) = 1.59

COEF	VALUE	ST ER	T-STAT
C9A	0.89536	0.14213	6.29977
C9B	0.87487	0.07453	11.73820

16: LOG(EDFINL) = C10A+C10B*LOG(PI)

NOB = 9 NOVAR = 2
 RANGE = 1966 TO 1970, 1972 TO 1975
 RSQ = 0.67839 CRSQ = 0.63245 F(1/7) = 14.766
 SER = 0.1927 SSR = 0.260 DW(1) = 1.86

COEF	VALUE	ST ER	T-STAT
C10A	-1.93336	1.27576	-1.51545
C10B	0.67178	0.17483	3.84254

21: EEDL99 = C12A+C12B*EEDL98

NOB = 8 NOVAR = 2
 RANGE = 1966 TO 1969, 1972 TO 1975
 RSQ = 0.99055 CRSQ = 0.98897 F(1/6) = 628.858
 SER = 4.1371 SSR = 102.692 DW(1) = 2.65

COEF	VALUE	ST ER	T-STAT
C12A	-4.11577	3.50147	-1.17544
C12B	0.94426	0.03765	25.07700

22: ESCHPROF = C13A+C13B*EEDL99

NOB = 7 NOVAR = 2
 RANGE = 1966 TO 1969, 1972 TO 1974
 RSQ = 0.9557 CRSQ = 0.98233 F(1/5) = 344.547
 SER = 2.9571 SSR = 43.723 DW(1) = 1.51

COEF	VALUE	ST ER	T-STAT
C13A	3.23779	2.59664	1.24692
C13B	0.64289	0.03463	18.56190

23: LOG(FOULPROF) = C14A+C14B*LOG(ESCHPROF)

NOB = 10 NOVAR = 2
 RANGE = 1963 TO 1969, 1972 TO 1974
 RSQ = 0.97604 CRSQ = 0.97305 F(1/8) = 325.957
 SER = 0.0490 SSR = 1.920E-02 DW(1) = 0.52

COEF	VALUE	ST ER	T-STAT
C14A	-0.80588	0.09820	-8.20667
C14B	0.50308	0.02786	18.05430

Constant Values:

K = 1.0 CADM1 = 0.96 CADM2 = 0.10 CADM3 = 0.50 CADM4 = 0.21
 CADM5 = 0.18

Exogenous Data Supplied on Endogenous Series:

ESCHPROF: 1975 = 100.0

APPENDIX B

Proposal for Expenditures Modeling

PROPOSAL FOR EXPENDITURES
MODELING PROGRAM

I. Introduction

The accompanying paper on practical issues in long term fiscal planning for Alaska provides a general rationale for an expenditure modeling effort linked to an econometric model of Alaska's economy, in that there is currently no sophisticated budget planning model in Alaska's state government which projects future demand for current government expenditure programs, and which has an expenditures "feedback" loop that takes into account the effect of altered expenditures paths on subsequent revenues and demand for expenditures.

The feature of demand for expenditures modeling is valuable, since it may point out discrepancies between planned or projected expenditures and those expenditures which would have resulted from extending current levels and trends in government services. Second, the feedback loop may be particularly important for certain expenditures policies which could result in high levels of immigration. Preliminary MAP studies with a cruder model indicate, for example, that use of oil revenues to roll back the state personal income tax is counterproductive, in that half of the initial gains in disposable real personal income are eroded by population increases.

Similar effects could exist in many other fiscal areas, and it is important that these be examined in planning fiscal policy. Third, detailed expenditures modeling lends itself to estimation of measurable effects of those expenditures in terms of services delivered. This would enhance the value of the effort, since regardless of eventual expenditures policies decided, at least some of the resulting effects on services can be projected.

II. Proposed Project

I.S.E.R. proposes to do a comprehensive, detailed five-year state expenditures planning study for the use of the Division of Policy Development and Planning, Division of Budget and Management, and other state agencies which the governor or his representative may direct. The study in its finished form will be compatible with (and will draw from) I.S.E.R.'s statewide long run econometric model, and with long run modeling efforts currently proposed by I.S.E.R. for contract with the state's Legislative Affairs Agency. At a minimum, the detailed expenditures study will provide the following:

- a. Detailed projection of demand for budget expenditures by subcategories of the nine major functional categories of expenditure in the state operating budget through 1985. This will be a more detailed modeling effort than that contemplated in the Legislative Affairs proposal, and is aimed at systematically projecting the current programs into the future to test their implications for state budgets.

b. Study of a number of alternatives for budget expenditures through 1985 to demonstrate the sensitivity of the budget to various assumptions concerning individual programs.

c. Projections of state expenditures by object by year by budget category.

d. The impact of transferring variable proportions of interest to the General Fund and to other projects, including direct distribution to persons.

e. Projections of some limited measures of government service availability.

f. Relationships between budget expenditures and total economic impacts.

g. Separate treatment of special funds, state enterprises, and formula spending programs.

In addition, I.S.E.R. will attempt to model two other capabilities which are valuable, though far less tractible to produce:

h. The projected demand for capital expenditures.

i. The relationship between capital expenditures and subsequent continuing expenditures.

The proposed project will involve model development and a series of applications to study the future of the state budget in detail. The State will have an additional option either to purchase the use of Institute resources for additional use of the model, or to pay for the subsequent conversion of the model from TROLL software environment in which the model will be developed, to a form compatible with the State's computer in Juneau. The final product will consist of a copy of the model listing, regression results,

annotated data listing, and the applied budget study, to be delivered to the Division of Policy Development and Planning 120 days after the contract is signed.

III. Data

Though additional clarification of data definitions and additional limited aid in data compilation may be requested from Division of Budget and Management, Department of Revenue, and Division of Employment Security, I.S.E.R. staff currently has in hand nearly all the data anticipated as usable for the modeling effort. Little extra collection effort is anticipated. The primary sources will be the state's Executive Budgets (title varies), Revenue Sources, Annual Financial Reports, and miscellaneous sources such as the U.S. Department of Commerce, State Division of Employment Security, and State Departments of Labor and Public Works. The data is of uneven quality, particularly before 1965, but is usable for the present project.

IV. Outline of the Study

1. Introduction and Executive Overview of the Budget Through 1985
2. Data Problems and Solutions
3. Estimation of the Equations, to Include:
 - a. Choice of variables
 - b. Choice of functional form
 - c. Results of estimation and adjustments