**Defining "General Fund"**

The General Fund is the general operating fund of the state. All public money coming into the state treasury that is not authorized or required by law to be placed in a special fund constitutes the General Fund. As noted above, the accounting "General Fund" and the budgeting "general fund" are not the same thing. For example, the FY 2002 budget passed in the spring of 2001 was predicated on $2.4 billion in general fund revenue. The draft CAFR for FY 2002 shows General Fund revenue for the period of $3.7 billion. Did a billion dollars go missing? No. What accounts for this difference is just that the accountants and budget writers use the term "general fund" differently.

The accountants' General Fund starts with everything in the budget writers' general fund, which represents the core government dollars that are designated as "unrestricted" in this Revenue Sources Book. The accountant's General Fund, however, also includes the following:

- Sub-accounts or subfunds of the General Fund. A budget writer will consider a General Fund subfund as a separate fund, and will discuss moving money from the general fund to a subfund. But such a transfer would not show up in the accountant's final report, because, to the accountants, it had no effect on the General Fund. For example, in conformance with GASB 34 standards, in FY 2002, the Constitutional Budget Reserve is considered a subfund of the General Fund.

- Federal dollars that are spent in general fund programs. No accounting funds are defined by the fact that they have only federal dollars. On the other hand, six specific budget codes refer to different kinds of federal funds.

To distinguish between these two concepts, in this document we will capitalize the accountants' General Fund, and keep the budget writers' general fund in lowercase.

# Reconciling this Revenue Sources Book With the State's Annual Budget

## Total Revenue

Budgeting is a dynamic process and there are many different budget documents available. This appendix compares the Revenue Sources Book with one of the most accessible of these many budget documents: the Summary of Appropriations [4] published by the Legislative Finance Agency every year. We have chosen the hard-print version of the Summary of Appropriations for FY 2003, issued in the summer of 2002, just after the fiscal year 2003 budget had been passed. For FY 2003, there will be many minor differences between the Revenue Sources Book and the Summary of Appropriations that simply reflect the difference between the budget document which was looking forward in July 2002 and the forecast which is looking backwards from the vantage of November 2002 after the passage of five of FY 2003's 12 months.

The first two pages of the Summary of Appropriations, the "fiscal summary", reproduced below present the following budget picture for FY 2003, with each item circled on the reproduction on the adjacent page:

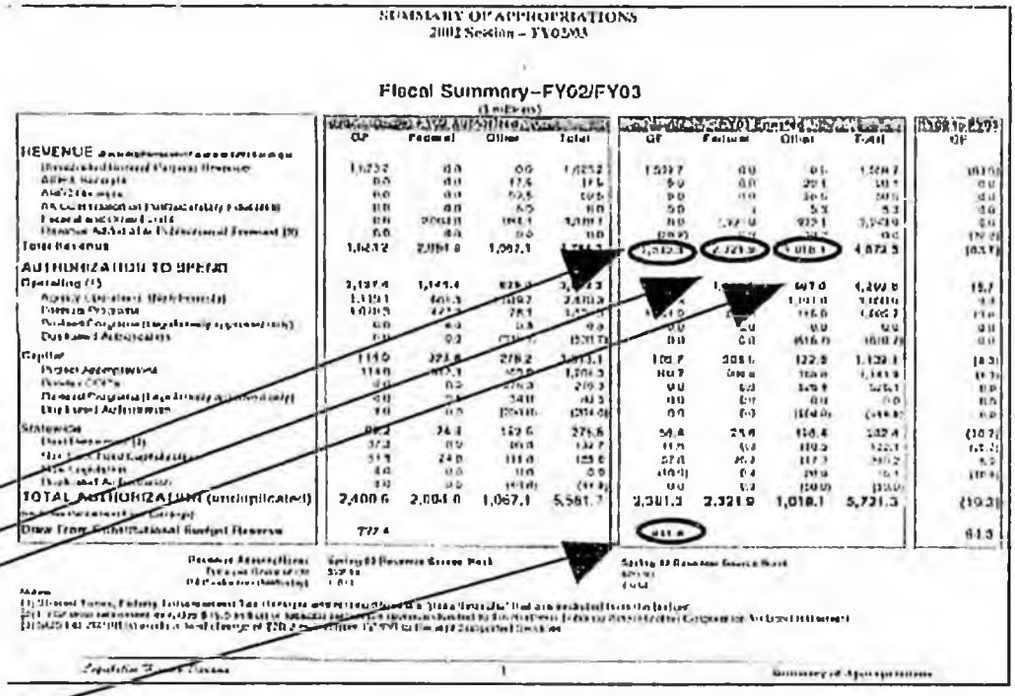
Table 63. Total Authorized Revenues in Summary of Appropriations
$ Million

| | |
|---|---|
| **Summary of Appropriations (Page 1)** | |
| General Fund Revenues | 1,539.5 |
| Federal Revenues | 2,321.9 |
| Other Revenues | 1,018.1 |
| "Total Revenues" | 4,879.5 |
| Draw from CBRF | 841.8 |
| | |
| **Fiscal Summary (Page 2)** | |
| Permanent Fund Inflation Proofing | 655.0 |
| Permanent Fund Dividends | 721.1 |
| Supplementals | 161.8 |
| | |
| Total | 7,259.3 |

(4) This document can be found by clicking "fiscal summary" at http://www.legfin.state.ak.us/

## Table 63. Total Authorized Revenues in Summary of Appropriations, cont.

**Page 1.**



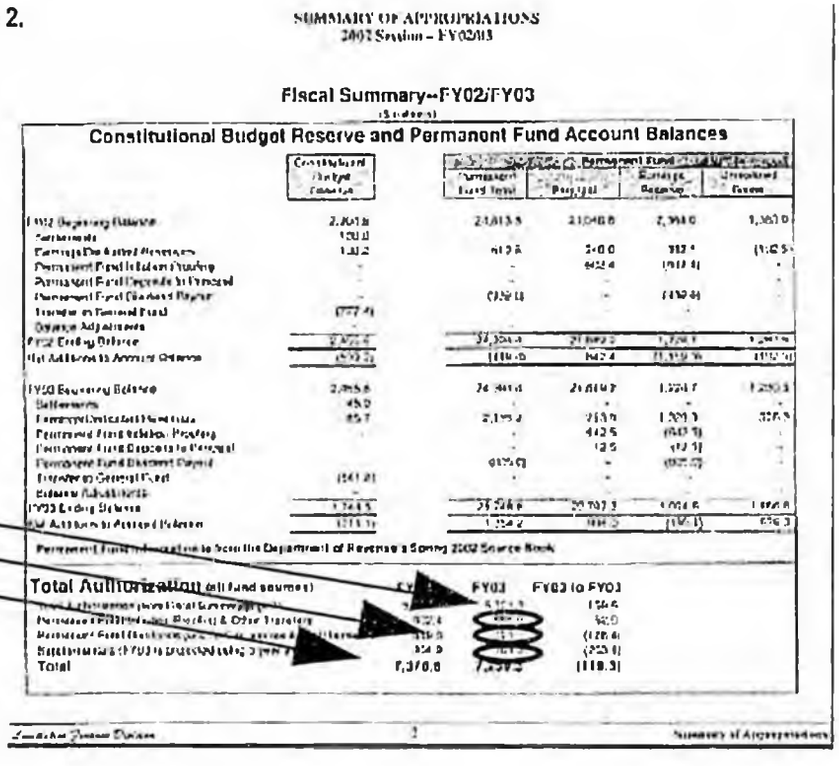
SUMMARY OF APPROPRIATIONS
2002 Session – FY02/03

Fiscal Summary–FY02/FY03

| | GF | Federal | Other | Total | GF | Federal | Other | Total | FY02 to FY03 GF |
|---|---|---|---|---|---|---|---|---|---|
| REVENUE | | | | | | | | | |
| Unrestricted General Purpose Revenue | 1,023.2 | 0.0 | 0.0 | 1,023.2 | 1,039.7 | 0.0 | 0.0 | 1,039.7 | 16.5 |
| AHFC Receipts | 0.0 | 0.0 | 17.5 | 17.5 | 0.0 | 0.0 | 20.1 | 20.1 | 0.0 |
| Alaska Energy | 0.0 | 0.0 | 52.5 | 52.5 | 0.0 | 0.0 | 50.0 | 50.0 | 0.0 |
| Permanent Fund Dividends (PFD) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.3 | 5.3 | 0.0 |
| Federal and Other Funds | 0.0 | 2,004.0 | 994.1 | 2,998.1 | 0.0 | 2,321.9 | 933.1 | 3,255.0 | 0.0 |
| Revenue Adjustments for Unrestricted Revenue (2) | 0.0 | 0.0 | 0.0 | 0.0 | (29.9) | 0.0 | 29.9 | 0.0 | (29.9) |
| Total Revenue | 1,023.2 | 2,004.0 | 1,063.1 | 4,090.3 | 1,009.8 | 2,321.9 | 1,018.1 | 4,369.8 | (13.4) |
| AUTHORIZATION TO SPEND | | | | | | | | | |
| Operating (1) | 2,137.4 | 1,149.4 | 928.0 | 4,214.8 | 1,[illegible] | [illegible] | 947.0 | 4,490.8 | 15.7 |
| Agency Operations/ Misc Expenditures | 1,119.1 | 668.3 | 189.2 | 1,976.6 | [illegible] | [illegible] | 1,191.0 | [illegible] | 0.0 |
| Formula Programs | 1,018.3 | 477.1 | 738.8 | 2,234.2 | [illegible] | [illegible] | 116.0 | 1,666.7 | 17.6 |
| Revised Programs (Legislatively Approved only) | 0.0 | 4.0 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Duplicated Authorization | 0.0 | 0.0 | (73.0) | (73.0) | 0.0 | 0.0 | (68.0) | (68.0) | 0.0 |
| Capital | 114.0 | 323.6 | 278.2 | 715.8 | 108.7 | 308.1 | 122.8 | 539.6 | (5.3) |
| Project Appropriations | 114.0 | 323.6 | 278.2 | 715.8 | 108.7 | 308.1 | 122.8 | 539.6 | (5.3) |
| Pouch Orders | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Revised Programs (Legislatively Approved only) | 0.0 | 0.0 | 276.3 | 276.3 | 0.0 | 0.0 | 345.9 | 345.9 | 0.0 |
| Duplicated Authorization | 0.0 | 0.0 | (341.8) | (341.8) | 0.0 | 0.0 | (464.0) | (464.0) | 0.0 |
| Statewide | 98.2 | 34.8 | 152.6 | 285.6 | 56.8 | 25.8 | 116.4 | 199.4 | (41.4) |
| Debt Service (1) | 37.3 | 0.0 | 90.0 | 127.3 | 11.9 | 0.0 | 110.0 | 121.9 | (25.4) |
| Unrestricted Contributions | 51.9 | 24.8 | 111.0 | 187.6 | 37.0 | 25.8 | 117.3 | 180.2 | (14.9) |
| PFD Legislation | 0.0 | 0.0 | 0.0 | 0.0 | (49.0) | 0.0 | 29.0 | (20.0) | (49.0) |
| Duplicated Authorization | 9.0 | 0.0 | (48.4) | (39.4) | 0.0 | 0.0 | (39.9) | (39.9) | (9.0) |
| TOTAL AUTHORIZATION (unduplicated) | 2,400.6 | 2,004.0 | 1,067.1 | 5,561.7 | 2,301.3 | 2,321.9 | 1,018.1 | 5,721.3 | (19.3) |
| Use of Investment Earnings | | | | | | | | | |
| Draw From Constitutional Budget Reserve | 777.4 | | | | 611.8 | | | | 611.8 |

Legislative Finance Division | 1 | Summary of Appropriations

**Page 2.**



SUMMARY OF APPROPRIATIONS
2002 Session – FY02/03

Fiscal Summary–FY02/FY03

Constitutional Budget Reserve and Permanent Fund Account Balances

| | Constitutional Budget Reserve | Permanent Fund Total | Permanent Fund Principal | Permanent Fund Earnings Reserve | Permanent Fund Unrealized Losses |
|---|---|---|---|---|---|
| FY02 Beginning Balance | 2,801.8 | 23,813.5 | 23,048.8 | 2,964.6 | 1,351.0 |
| Settlements | 120.0 | - | - | - | - |
| Earnings/Dis-Asset Revenues | 1,812.2 | 913.5 | 540.0 | 932.1 | (1,018.5) |
| Permanent Fund Inflation Proofing | - | - | 652.4 | (652.4) | - |
| Permanent Fund Deposits to Principal | - | - | - | - | - |
| Permanent Fund Dividend Payout | - | (739.0) | - | (739.0) | - |
| Transfer to General Fund | (777.4) | - | - | - | - |
| Revenue Adjustments | - | - | - | - | - |
| FY02 Ending Balance | 3,956.6 | 23,988.0 | 24,241.2 | 2,504.3 | 332.5 |
| Net Additions to Account Balance | 1,154.8 | 174.5 | 1,192.4 | (460.3) | (1,018.5) |
| FY03 Beginning Balance | 3,956.6 | 24,162.5 | 24,241.2 | 2,504.3 | 332.5 |
| Settlements | 45.0 | - | - | - | - |
| Earnings/Dis-Asset Revenues | 85.7 | 2,135.2 | 713.0 | 1,301.3 | 320.9 |
| Permanent Fund Inflation Proofing | - | - | 442.5 | (442.5) | - |
| Permanent Fund Deposits to Principal | - | - | 12.5 | (12.5) | - |
| Permanent Fund Dividend Payout | | (915.0) | - | (915.0) | - |
| Transfer to General Fund | (541.2) | - | - | - | - |
| Balance Adjustments | - | - | - | - | - |
| FY03 Ending Balance | 3,546.1 | 25,382.8 | 25,707.3 | 1,004.6 | 1,653.4 |
| Net Additions to Account Balance | (410.5) | 1,220.2 | 1,466.1 | (1,499.7) | 1,320.9 |

Permanent Fund balances are from the Department of Revenue's Spring 2002 Source Book

| Total Authorization (all fund sources) | FY02 | FY03 | FY03 to FY03 |
|---|---|---|---|
| Unrestricted General Purpose Revenue | 5,561.7 | 5,721.3 | 159.6 |
| Permanent Fund Inflation Proofing & Other Transfers | 652.4 | 654.4 | 54.0 |
| Permanent Fund Dividend Payout | 739.0 | 915.0 | (178.6) |
| Supplementals (FY02 to Discussion Only) | 354.9 | 61.8 | (293.0) |
| Total | 7,310.0 | 7,352.5 | (118.3) |

Footer: Legislative Finance Division | 2 | Summary of Appropriations

The "Page 2 items" and the "Draw from the CBRF" are non-revenue items. The draws from the Constitutional Budget Reserve Fund (CBRF) and the appropriations from the Permanent Fund (PF) shown in the Summary of Appropriations are draws on pools of dollars already in place. The Revenue Sources Book describes the revenues that go into these funds, essentially opposite from the Summary of Appropriations. The Revenue Sources Book includes an extensive discussion of both the PF and the CBRF (Section VIII). Of course, when we project future balances for those funds we include both the revenue coming into and the dollars taken out of each.

The "supplementals" is spending projected to be authorized later in the fiscal year. No current source is given for these dollars. If and when supplemental spending is authorized, a source will be identified. In prior years' versions of the Summary of Appropriations, supplemental spending would be presented on "Page 1" of the Summary, and thus would be included in the calculation of the draw required from the CBRF required to balance the budget. In the current format there is no indication of the revenue or other dollar source to support supplemental spending.

## Comparison of Revenue

As can be seen in the next table, there are four areas in these two reports that have close enough ties to be compared.

- What the Revenue Sources Book labels as "Unrestricted Revenues" can be compared to what the Summary of Appropriations labels "General Fund Revenue."
- What the Revenue Sources Book characterizes as "Restricted Federal Revenues" ties to federal revenue in the Summary of Appropriations.
- What the Summary of Appropriations characterizes as "Other Revenue" can be divided into three parts. One part, roughly half, covers items that do line up with what the Revenue Sources Book characterizes as "Non-Oil Revenues (Except Federal & Investments)." Another part, again roughly half, does not, and frequently represents draws from existing sources of money, and not actual new revenues.
- The third piece, which represents a couple of percent of the Summary of Appropriation's "Other Revenue" contains three items, which line up with items that the Revenue Sources Book shows as restricted investment revenues.

The "Restricted Oil Revenues" and the remaining "Restricted Investment Revenues" found in the Revenue Sources Book — that flow primarily into the CBRF and PF — have no counterpart in the Summary of Appropriations. Shared taxes are those dollars apportioned out to municipalities according to formulas found in statute. They also appear in the Revenue Sources Book but not the Summary of Appropriations.

## Table 64. Comparison of FY 2002 Revenue Shown in Revenue Sources Book and Summary of Appropriations
$ Million

| Presentation in Revenue Sources Book - Table 4 | | Presentation on Page 1 of the Fiscal Summary | |
|---|---|---|---|
| Description | Dollars | Dollars | Description |
| **Unrestricted Revenue** | | | |
| Oil | 1,468.1 | | |
| Non-Oil (ex Fed & Invst.) | 253.4 | | |
| Investment | 30.7 | | |
| **Subtotal Unrestricted Revenue** | 1,752.2 | 1,539.5 | General Fund Revenue |
| **Restricted Revenue** | | | |
| Federal Revenue | 2,321.9 | 2,321.9 | Federal Revenue |
| | | | Other Revenue |
| Nothing comparable in Revenue Forecast | | 535.3 | Items not in Revenue Sources Book (see Table 65) |
| Non-Oil (ex Fed & Invst.) | 548.4 | 456.8 | Non-Oil Items in Revenue Sources Book (see Table 66) |
| Investment | | | |
| Investment items in Summary of Appropriations | (2.5) | 26.0 | Investment Items in Revenue Sources Book (see Table 67) |
| | | 1,018.1 | Subtotal Other Revenue |
| Other Investment not in Summary of Appropriations | 231.5 | Nothing Comparable in Budget | |
| Subtotal Investment | 229.0 | | |
| Oil | 392.1 | Nothing Comparable in Budget | |
| Subtotal Restricted Revenue | 3,491.4 | | |
| **Total Revenue in Revenue Sources Book** | 5,243.6 | 4,879.5 | **Total Revenue in Summary of Appropriations** |

## General Fund Revenue

Conceptually, the $1,539.5 million in revenue listed in the Summary of Appropriations corresponds to the $1,752.2 million in unrestricted revenues shown in the Revenue Sources Book.[5] Practically, in the Summary of Appropriations, "general fund revenues" are based on last year's Spring 2002 forecast, made in April 2002. This year's fall 2002 forecast is written in November, now that one third of fiscal year 2003 is behind us, and it looks like our unrestricted revenues will be $193 million or 12% higher than originally forecast. Why? Several reasons, but the two usual suspects we see every year show up here once again – the price and volume of Alaska North Slope crude. In April 2002 we estimated an average price for a barrel of North Slope crude for FY 2003 of $20.50. Now, about one third of the way through the fiscal year, we have revised this estimate up to $25.90, or about $5.40 higher, which will result in both higher oil royalty and production tax collections. On the other hand, we projected production of 1.053 million barrels a day of oil. Now, due to among other events, an unexpected shutdown of TAPS, we are projecting about 60,000 barrels less a day or .994 million barrels. This results in lower projected oil royalty and production tax collections. In addition to several other minor adjustments in the non-oil and investment areas of the forecast, income tax collections from the oil and gas industry appear to be about $30 million less than anticipated, for a net increase of $193 million. As a consequence of this increase, we forecast the annual draw from the CBRF will go down by roughly the same $193 million.[6]

Another interesting adjustment is a switch of dollars from unrestricted to restricted. On Page 1 of the Summary of Appropriations it can be seen that our actual estimate in April of 2002 was for $1,559.7 million in unrestricted revenue. In the 2002 legislative session, $20.2 million in revenues from programs that used to go into the unrestricted general-purpose pot, were earmarked for a specific purpose. Typically, a program, such as building or restaurant inspection, that charges fees for its services now becomes self-supporting. The revenue the program generates moves from unrestricted to restricted. This has no effect on the budget gap or the CBRF draw as both the programs' costs as well as the programs' revenues are moved from "general fund" to "other" in the budget. Probably some dollars that we are calling unrestricted in our forecast for FY 2004 will eventually be redesignated as restricted in the next legislative session.

## Federal Revenue

This $2.3 billion amount lines up both conceptually and practically with the number found in this Revenue Sources Book. A more thorough discussion of federal dollars can be found in Section VII of this forecast. The reason this matches is that both documents draw on the same source: This number is developed by the Office of Management and the Budget (OMB) which asks each agency how much federal money it expects to get and spend over the fiscal year, and sums these estimates.

(5) We call this category "unrestricted revenue" rather than "general fund revenue" because, while all the dollars here are general fund revenues, at least according to the accounting definition of General Fund; there are lots of General Fund revenues that are not included here.

(6) Our actual CBRF draw figures differ from the estimated CBRF draw in the Summary of Appropriations because we use a rounded spending figure (after supplementals) of $2.5 billion, where the Summary of Appropriations uses a spending figure of $2.381 billion, prior to adding in supplemental spending estimated on Page 2 at $161.8 million, for a total spend of $2.542 billion.

## Other Revenue

Although characterized as revenue in the Summary of Appropriations, a significant portion of the $1,018.1 million [7] in this category appear to not be revenues as the Revenue Sources Book uses the term. Rather, as was explained earlier for the Permanent Fund and CBRF, the figure in the summary of appropriations is the amount that will be used by state government for various purposes. It might represent a draw down from an existing pool of money, current revenues, or more typically a combination of the two. There does not appear to be any budget document that sets forth how much money is available in the various budget funds – nor a reconciliation of how well those figures will line up with actual cash on hand. [8]

Where those sources exist as investable dollars there is frequently actual revenue, which we will include in our investment numbers — but the draw rarely matches the forecast return. The budget draw is either larger than the investment return, implying that the source is being used up, or the budget draw is smaller than the investment return, implying that the source is being built up. In general, the budget draws are larger. Most of these investment revenues will be discussed in Section VIII.

The table on the next two pages set forth the items that are shown as sources of money for the budget in the Summary of Appropriations, but are not revenues, nor are they listed in the Revenue Sources book. They are subcategorized into several types of sources discussed below.

The first three are trust funds that hold money not for general governmental purposes but for specific other beneficiaries. The actual returns earned by these funds are not included in either the Revenue Sources Book or the Summary of Appropriations, though they are shown in the CAFR.

### Summary of Appropriation Items Not in Revenue Sources Book.

Retirement and Benefit Related Trust Funds. The Alaska State Pension Investment Board manages the retirement funds. The Department of Revenue Treasury Division serves as staff to the Pension Board. The Revenue Sources Book does not show the dollars transferred between the retirement funds and the department to pay for the staff, while the Summary of Appropriations does. Other trust funds hold money for current state employee benefits.

Exxon Valdez Spill Money. The sums here represent transfers authorized by the Exxon Valdez Oil Spill Trustee Council from the trust to the state agencies doing remediation and other spill-related work.

Mental Health Trust Fund. This fund was established in 1994 to settle a dispute concerning land that was set aside in a trust to support mental health services in Alaska. When the Trust makes grants to state agencies to carry out the mission of the Trust, these grants pass through the Mental Health Trust Authority Authorized Receipts Fund that is shown as their source for the budget. The cost of administering the trust is subject to the Executive Budget Act and the funding for this expenditure is received in the Mental Health Administration Fund. The Trust is discussed further in Section VIII.

(7) The specific figures are derived from the Summary of Appropriation documents by first taking the detail summary of appropriations found at Pages 17 to 21 for the operating budget and netting out duplicated fund sources found on Pages 7, 11 and 13-14, adding in the capital non-duplicated fund sources found on Page 9. The result ($5,721.3 million) precisely matches total revenues plus anticipated CBRF draw as found in the fiscal summary. OMB budget codes designate each item as federal, general fund or other, so the sources can be divided between these three categories.
(8) The CAFR does track the "cash on hand" and investments in the General Fund.

## Table 65. Items in FY 2003 Summary of Appropriations Not in Revenue Sources Book
$ Million

| OMB Fund Number | OMB Fund Name | Summary of Appropriations "Other Revenues" From Table 64 Not In Revenue Sources Book |
|---|---|---|
| Permanent Fund | | |
| 1041 | Permanent Fund Earnings Reserve Account | 83.85 |
| 1179 | Permanent Fund Corporation | 4.00 |
| | | 87.95 |
| Revolving Loan Funds | | |
| 1021 | Agricultural Loan Fund | 2.21 |
| 1035 | Veterans Revolving Loan Fund | 0.06 |
| 1036 | Commercial Fishing Loan Fund | 5.82 |
| 1046 | Student Revolving Loan Fund | 12.26 |
| 1057 | Small Business Loan | 0.00 |
| 1062 | Power Project Loan Fund | 1.33 |
| 1067 | Mining Loan Fund | 0.01 |
| 1069 | Historical District Revolving Loan Funds | 0.00 |
| 1071 | Alt Energy Rev Ln Funds | 0.15 |
| 1073 | Bulk Fuel Rev Ln | 0.05 |
| | | 21.89 |
| Retirement Related Trust Fund Sources | | |
| 1017 | Benefit Systems Receipts | 17.53 |
| 1023 | Fica Administration Fund | 0.14 |
| 1029 | Public Employees Retirement Fund | 26.25 |
| 1034 | Teachers' Retirement System Fund | 12.92 |
| 1042 | Judicial Retirement System | 0.31 |
| 1053 | Investment Loss Trust | 4.30 |
| 1045 | National Guard Retirement System | 0.20 |
| | | 61.66 |
| Spill Related Trust Fund Sources | | |
| 1018 | Exxon Valdez Oil Spill Settlement | 6.16 |
| 1114 | Exxon Valdez Oil Spill Restoration Fund | 0.20 |
| | Subtotal | 6.36 |
| Mental Health Trust Fund Sources | | |
| 1092 | Mental Health Trust Administration | 9.06 |
| 1094 | Mental Health Trust Authority Authorized Receipts | 1.17 |
| | Subtotal | 10.22 |
| Component Revenue Sources | | |
| 1010 | University Of Alaska Interest Income | 4.95 |
| 1015 | University Of Alaska/Dormitory/Food/Auxiliary | 38.89 |
| 1025 | Science & Tech Endow | 10.52 |
| 1038 | Ua Stf Svc | 59.41 |
| 1039 | University Of Alaska Indirect Cost Recovery | 25.19 |
| 1048 | University Of Alaska Interest Restricted Receipts | 98.46 |
| 1101 | Alaska Aerospace Development Corporation Receipts | 13.85 |
| 1102 | Aidea Receipts | 4.15 |
| 1106 | Alaska Post-Secondary Education Commission Receipts | 8.37 |
| 1103 | Ak Housing Finance Corp. Receipts | 16.86 |
| 1107 | Alaska Energy Authority Corp. Receipts | 1.07 |
| | Subtotal | 281.72 |

**Table 65. Items in FY 2003 Summary of Appropriations Not in Revenue Sources Book, cont.**
**$ Million**

| OMB Fund Number | OMB Fund Name | Summary of Appropriations "Other Revenues" From Table 64 Not in Revenue Sources Book |
|---|---|---|
| In Unrestricted Revenue in Sources Book | | |
| 1153 | Land Disposal Inc Fund | 3.12 |
| 1049 | Training & Building | 0.69 |
| | Subtotal | 3.81 |
| Other Fund Sources not in Revenue Sources Book | | |
| 1054 | State Employment & Training Program | 5.26 |
| 1059 | Correctional Industry | 4.15 |
| 1031 | Second Injury Fund | 3.18 |
| 1032 | Fisherman's Fund | 1.31 |
| 1111 | Fisherman's Fund Income | 0.12 |
| 1001 | Constitutional Budget Reserve Fund | 0.13 |
| 1012 | Railbelt Energy Fund | 42.97 |
| 1040 | Real Estate Surety | 0.25 |
| 1068 | Child Care Facility | 0.01 |
| 1091 | General Funds-Designated | 3.31 |
| 1117 | Vocational Rehabilitation Small Business Enterprise Fund | 0.37 |
| 1134 | Fish And Game Criminal Fines And Penalties (Net Of Table 2 Duplication) | (2.24) |
| 1142 | Retiree Health Ins/Mm | 0.02 |
| 1143 | Retiree Health Ins | 0.04 |
| 1152 | Ak Fire Standards Council Receipts | 0.22 |
| 1154 | Shore Fisheries Development Lease | 0.32 |
| 1164 | Rural Econ Dev Init | 0.04 |
| 1166 | Vessel Environmental Compliance Fund | 0.70 |
| 1170 | Small Business Economic Development Relief Fund | 0.04 |
| 1172 | Building Safety | 1.28 |
| 1173 | Misc Earnings | 0.29 |
| 1181 | Veteran's Endowment | 0.01 |
| | Subtotal | 61.78 |
| | **Total** | **535.29** |

Permanent Fund. These are additional draws from the Earnings Reserve of the Permanent Fund used to cover expenses related to the Permanent Fund or issuing the dividend. Actual revenues earned by the fund are included in both the Revenue Sources Book and the CAFR.

Revolving Loan Funds. These revenues represent the annual payments of interest and principle on the outstanding loans in each fund's portfolio. Even though the interest portion of those repayments represents revenue to the state, they are not included in our Revenue Sources Book.

Component Revenue Sources. We have separated out those revenues of the component organizations such as the University of Alaska, AHFC, etc., which the legislature appropriates back to the organizations to run their affairs and carry out their missions. Their day-to-day expenditures are subject to the Executive Budget Act. The dollars being so appropriated show up in the budget documents. The gross revenues of these organization can be found in Section IX of this book.

Other Fund Sources in Unrestricted Revenue in Sources Book. These dollars all appear to be included in accounts which we are designating as unrestricted. As a concerted effort is made to assign particular revenues to particular programs we may not always be in sync. These items will be fixed in the next Spring Forecast, by which time no doubt other differences may have arisen.

Other Fund Sources Not in Revenue Sources Book. [10] These remaining sources , many of which are quite small, represent many different things. For example, the Correctional Industries $4.2 million is derived from selling prison-crafted furniture to state agencies. On the other hand, the $43 million from the Railbelt Energy Fund is for the most part the draw down of money set aside at an earlier time.

(10) When the process of reversing duplicated expenditures described in Footnote 7 was carried out, the only duplicated fund that was not netted out precisely was Fund 1134, Fish and Game Criminal Fines. The balance, a credit of $2.24 million is in this category.

Table 66. Items in FY 2003 Summary of Appropriations Shown in Non-Oil Revenue in Sources Book
$ Million

| OMB Fund Number | OMB Fund Name | Summary of Appropriations Comparable "Other Revenue" From Table 64 In Revenue Sources Book | Revenue Sources Book "Non-Oil" Revenue |
|---|---|---|---|
| Other (Public Corporations Dividends) | | | |
| 1139 | AHFC Dividend | 50.5 | 103.0 |
| 1140 | AIDEA Dividend | 20.1 | 19.0 |
| 1150 | Alaska Student Loan Corporation | 5.3 | 5.0 |
| 1104 | AK. Muni Bond Bank receipts | 0.5 | 2.0 |
| Total Other | | 76.4 | 129.0 |
| Fines & Forfeitures | | | |
| 1168 | Tobacco Use Education | 6.1 | 4.9 |
| | Northern Tobacco Securuitization Corp Payments | 0.0 | 19.8 |
| Total Fines & Forfeitures | | 6.1 | 24.7 |
| Licenses & Permits | | | |
| 1093 | Clean Air Protection | 2.9 | 2.3 |
| 1024 | Fish And Game Fund | 25.4 | 23.6 |
| Total Licenses & Permits | | 28.3 | 25.9 |
| Tax | | | |
| 1030 | School Fund (Cigarette Tax) | 29.0 | 29.3 |
| 1157 | Workers Safety & Comp | 3.7 | 3.0 |
| 1180 | Alcohol & Drug Prevention & Treatment Fund | 3.6 | 9.6 |
| Subtotal earmarked taxes | | 36.3 | 41.9 |
| NB: Taxes shared with local municipalities | | | 20.9 |
| Total Taxes | | | 62.8 |
| Charges for Services | | | |
| 1027 | International Airports Revenue Fund | 63.3 | - |
| 1112 | International Airports Construction Fund | 0.4 | - |
| Subtotal International Airport Funds | | 63.6 | 74.0 |
| 1076 | Ak Marine Hwy System Fund | 49.1 | 41.0 |
| 1108 | Statutory Designated Program Receipts | 98.4 | 98.7 |
| 1175 | Business License Receipts | 1.9 | 0.5 |
| 1109 | Test Fisheries Receipts | 4.0 | 2.4 |
| 1070 | Fisheries Enhancement | 0.4 | 0.3 |
| 1155 | Timber Sale Receipts | 0.7 | 0.3 |
| 1151 | Technical & Vocate Ed. Fund | 4.6 | 2.3 |
| 1156 | Other Receipt Supported Services | 75.9 | 76.7 |
| 1162 | Alaska Oil & Gas Conservation Commission Rcpts | 5.0 | 4.3 |
| 1141 | Regulatory Commission Of Alaska Receipts | 6.0 | 5.5 |
| Subtotal Receipt Supported Services | | 98.6 | 92.3 |
| Total Charges for Services | | 309.8 | 306.0 |
| **Total Comparable "Other Revenues" from Table 64** | | 456.8 | |
| **Total "Non-Oil Restricted Revenues" from Table 4 of Revenue Sources Book** | | | 548.4 |

Summary of Appropriations Items in Revenue Sources Book as Non-Oil Revenue.

Table 66 are those items which line up fairy closely, and are categorized as Non-Oil Revenue (Except Federal and Investment) in the restricted section of the Revenue Sources Book and as "other" the Summary of Appropriations. They are divided into the same categories as Section IV, where a more complete discussion of each topic can be found.

(Other) Dividends from Public Corporations. Both sources delineate dividends from the Alaska Housing Finance Corporation (AHFC), the Alaska Student Loan Corporation (ASLC), Alaska Industrial Development and Export Authority (AIDEA), and the Alaska Municipal Bond Bank Authority (AMBBA). The $52 million difference between the two figures shown for the AHFC dividend represents a difference in how the dividend is reported. In the Revenue Sources Book we show a $103 million dividend. The dividend can be broken into several pieces: Capital project dollars spent directly by AHFC; dollars appropriated for debt retirement; and dollars used to pay off AHFC bonds. However, only the first two uses are specifically identified in the Summary of Appropriations because the payment of bonds is part of the general ("language") appropriation and thus is not part of AHFC's appropriation. See Section X of the Revenue Sources Book for the actual revenues earned by each of these corporations. The other dividends match more closely.

Fines and Forfeitures. The State of Alaska was a participant in the so-called nationwide Master Settlement Agreement (MSA) in which the major tobacco companies agreed to reimburse the state for the costs it will incur to treat its population made sick from smoking cigarettes. Through the AHFC subsidiary, the Northern Tobacco Securitization Corporation (NTSC), the state sold much the stream of settlement payments up front for cash by issuing bonds backed by future settlement payments. Part of the money from the MSA is set aside for tobacco-related education, and that is found in both the Summary of Appropriations and the Revenue Sources Book. In the Revenue Sources Book we include estimated future settlement payments to the state that the NTSC will use to pay off the bonds. This latter stream of money is not shown in the Summary of Appropriations.

Licenses and Permits. This includes money for clean air and various Fish and Game programs.

Taxes. A portion of the tax on cigarettes is dedicated to the School Fund. A portion of the insurance premium tax is earmarked for the Workers Safety and Comp Fund. A portion of the alcohol tax is earmarked for the Alcohol and Drug Prevention and Treatment program. All of these are shown in both the Summary of Appropriations and the Revenue Sources Book. To help the reader tie this to the rest of the Revenue Sources book, the tax dollars shared with the municipalities and various fishery industry promotion groups is shown here to tie to restricted total taxes in the Revenue Sources Book of $62.8 million.

(10) When the process of reversing duplicated expenditures described in Footnote 7 was carried out, the only duplicated fund that was not netted out precisely was Fund 1134, Fish and Game Criminal Fines. The balance, a credit of $2.24 million, is in this category.

Charges for Services. Money in this category has been earmarked for a particular purpose. The money may be new revenue, a draw on an existing amount of money previously set aside, or setting aside current revenues for future use, or some combination of these approaches. These can be subtotaled into several categories.

The first are the International Airport Funds. The Summary of Appropriations shows money to be used from prior activities, bond sales, current fees and current investment income, while the Revenue Sources Book only shows the latter two items.

The second is the Marine Highway Fund, where again the Summary of Appropriations draws on accumulated cash from prior years.

The third is Statutorily Designated Program Receipts.

Finally, Receipt Supported Services, for which several individual services are broken out.

**Summary of Appropriation Items in Revenue Sources Book as Investment Revenue.**

Table 67 . FY 2003 Summary of Appropriations
Items Shown in Investment Revenue in Revenue Sources Book
$ Million

| | | Summary of Appropriations | Revenue Sources Book | |
|---|---|---|---|---|
| OMB Fund Number | OMB Fund Name | Comparable "Other Revenues" from Table 64 | "Other Revenues" from Table 64 | Distributable Income from Investment Section |
| 1169 | Power Cost Equalization Endowment | 12.9 | (5.1) | 12.8 |
| 1098 | Children's Trust Fund Earnings | 0.5 | 0.0 | 0.2 |
| 1066 | Public School Fund | 12.6 | 2.6 | 10.3 |
| Total | | 26.0 | (2.5) | 23.3 |

The table above breaks out three of the four items in "Other Treasury Managed Funds" in the investment revenues section of the Revenue Sources book that are directly comparable with the Summary of Appropriations. As shown in Section IX of this book, these, and many other state funds calculate their earnings available for distribution differently than how GASB calculates earnings. For these three funds, the distributable income is a fixed percentage of the market value of the fund, whether that value is shrinking or growing. Thus for example the PCE Endowment had $12.8 million in distributable income, which represents 7% or the fund market value over the previous 36 months. But the fund actually lost $5.1 million in value. This table sets forth both the revenues and the dollars available for distribution. As might be expected, the distributable funds line up more closely with the Summary of Appropriations numbers than the actual revenues do.

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# XII. APPENDICES

## A. General Fund Unrestricted Revenue Sensitivity Matrices

$ Million

### FY 2003

| $/barrel | Million barrels/day 0.90 | 1.00 | 1.10 |
|---|---|---|---|
| 15.00 | 1,100 | 1,140 | 1,170 |
| 16.00 | 1,150 | 1,190 | 1,240 |
| 17.00 | 1,200 | 1,250 | 1,300 |
| 18.00 | 1,250 | 1,310 | 1,360 |
| 19.00 | 1,300 | 1,360 | 1,430 |
| 20.00 | 1,350 | 1,420 | 1,490 |
| 21.00 | 1,400 | 1,480 | 1,560 |
| 22.00 | 1,450 | 1,540 | 1,620 |
| 23.00 | 1,500 | 1,590 | 1,690 |
| 24.00 | 1,550 | 1,650 | 1,750 |
| 25.00 | 1,600 | 1,710 | 1,810 |
| 26.00 | 1,650 | 1,760 | 1,880 |
| 27.00 | 1,690 | 1,820 | 1,940 |
| 28.00 | 1,740 | 1,880 | 2,010 |
| 29.00 | 1,790 | 1,930 | 2,070 |

### FY 2004

| $/barrel | Million barrels/day 0.90 | 1.00 | 1.10 |
|---|---|---|---|
| 15.00 | 1,090 | 1,150 | 1,200 |
| 16.00 | 1,140 | 1,200 | 1,260 |
| 17.00 | 1,190 | 1,260 | 1,320 |
| 18.00 | 1,240 | 1,310 | 1,380 |
| 19.00 | 1,290 | 1,370 | 1,450 |
| 20.00 | 1,340 | 1,430 | 1,510 |
| 21.00 | 1,390 | 1,480 | 1,570 |
| 22.00 | 1,440 | 1,540 | 1,630 |
| 23.00 | 1,490 | 1,590 | 1,690 |
| 24.00 | 1,540 | 1,650 | 1,750 |
| 25.00 | 1,590 | 1,700 | 1,810 |
| 26.00 | 1,640 | 1,760 | 1,870 |
| 27.00 | 1,690 | 1,810 | 1,930 |
| 28.00 | 1,740 | 1,870 | 2,000 |
| 29.00 | 1,790 | 1,930 | 2,060 |

### FY 2005

| $/barrel | Million barrels/day 0.90 | 1.00 | 1.10 |
|---|---|---|---|
| 15.00 | 1,050 | 1,100 | 1,150 |
| 16.00 | 1,100 | 1,160 | 1,210 |
| 17.00 | 1,150 | 1,210 | 1,270 |
| 18.00 | 1,200 | 1,260 | 1,330 |
| 19.00 | 1,250 | 1,320 | 1,390 |
| 20.00 | 1,290 | 1,370 | 1,450 |
| 21.00 | 1,340 | 1,420 | 1,510 |
| 22.00 | 1,390 | 1,480 | 1,570 |
| 23.00 | 1,440 | 1,530 | 1,630 |
| 24.00 | 1,490 | 1,590 | 1,680 |
| 25.00 | 1,530 | 1,640 | 1,740 |
| 26.00 | 1,580 | 1,690 | 1,800 |
| 27.00 | 1,630 | 1,750 | 1,860 |
| 28.00 | 1,680 | 1,800 | 1,920 |
| 29.00 | 1,730 | 1,850 | 1,980 |

## B. Unrestricted Petroleum Production Tax and Royalty Revenue Forecast
$ Million

| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|---|---|---|---|---|
| **Alaska North Slope** | | | | | | | | |
| Oil Royalty - NET (1) | 690.2 | 593.4 | 539.5 | 522.4 | 508.8 | 518.4 | 529.0 | 499.0 |
| Oil Severance Tax | 495.2 | 411.9 | 350.3 | 332.7 | 303.2 | 290.5 | 302.5 | 267.2 |
| Conservation Tax | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Hazardous Release Fund | 9.1 | 9.2 | 9.1 | 9.0 | 8.8 | 9.4 | 10.2 | 10.1 |
| Gas Royalty | 1.1 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Gas Severance Tax | 1.3 | 1.5 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| **Subtotal** | 1,196.9 | 1,017.0 | 901.2 | 866.2 | 822.8 | 820.3 | 843.8 | 778.3 |
| **Cook Inlet** | | | | | | | | |
| Oil Royalty - NET (1) | 23.8 | 22.4 | 21.1 | 20.0 | 19.0 | 26.5 | 25.7 | 25.2 |
| Oil Severance Tax | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Conservation Tax | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Hazardous Release Fund | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Gas Royalty | 20.6 | 20.4 | 21.1 | 21.7 | 22.4 | 23.2 | 23.9 | 24.7 |
| Gas Severance Tax | 16.6 | 15.3 | 15.7 | 16.2 | 16.7 | 17.3 | 17.8 | 18.3 |
| **Subtotal** | 61.3 | 58.5 | 58.4 | 58.3 | 58.6 | 67.3 | 67.8 | 68.6 |
| **TOTAL PRODUCTION TAX and ROYALTY REVENUE** | 1,258.2 | 1,075.5 | 959.5 | 924.6 | 881.4 | 887.6 | 911.6 | 846.9 |
| **Bonuses** | 5.5 | 7.2 | 6.2 | 11.8 | 18.8 | 9.6 | 7.0 | 7.3 |
| **TOTAL PRODUCTION TAX + ROYALTIES + BONUSES** | 1,263.7 | 1,082.7 | 965.8 | 936.3 | 900.2 | 897.2 | 918.7 | 854.2 |

(1) Unrestricted oil royalty revenue is net of Permanent Fund and Public School Fund contributions.

## C. Historical and Projected Crude Oil Prices
$ per Barrel

| FY | WTI | | ANS Wellhead | | ANS West Coast | |
|---|---|---|---|---|---|---|
| | nominal | real2002 | nominal | real2002 | nominal | real2002 |
| 1990 | 20.06 | 28.77 | 11.90 | 17.06 | 17.22 | 24.70 |
| 1991 | 24.95 | 34.19 | 15.38 | 21.08 | 21.57 | 29.56 |
| 1992 | 20.69 | 27.08 | 11.21 | 14.67 | 16.64 | 21.78 |
| 1993 | 20.69 | 26.27 | 12.81 | 16.26 | 17.83 | 22.64 |
| 1994 | 16.69 | 20.57 | 9.57 | 11.80 | 14.05 | 17.32 |
| 1995 | 18.54 | 22.30 | 11.51 | 13.84 | 16.77 | 20.17 |
| 1996 | 19.20 | 22.41 | 12.60 | 14.71 | 17.74 | 20.71 |
| 1997 | 22.54 | 25.60 | 16.40 | 18.63 | 20.90 | 23.74 |
| 1998 | 18.03 | 20.03 | 11.91 | 13.22 | 15.86 | 17.61 |
| 1999 | 14.09 | 15.39 | 8.47 | 9.25 | 12.73 | 13.90 |
| 2000 | 24.82 | 26.58 | 18.82 | 20.16 | 23.27 | 24.92 |
| 2001 | 30.41 | 31.40 | 22.24 | 22.96 | 27.85 | 28.75 |
| **2002** | **23.80** | **23.80** | **16.80** | **16.80** | **21.78** | **21.78** |
| 2003 | 27.34 | 26.57 | 20.53 | 19.95 | 25.94 | 25.25 |
| 2004 | 24.90 | 23.52 | 17.88 | 16.89 | 23.25 | 21.96 |
| 2005 | 23.65 | 21.71 | 16.56 | 15.20 | 22.00 | 20.19 |
| 2006 | 23.65 | 21.09 | 16.41 | 14.63 | 22.00 | 19.62 |
| 2007 | 23.65 | 20.50 | 16.30 | 14.13 | 22.00 | 19.07 |
| 2008 | 23.65 | 19.92 | 16.26 | 13.70 | 22.00 | 18.53 |
| 2009 | 23.65 | 19.36 | 16.28 | 13.33 | 22.00 | 18.01 |
| 2010 | 23.65 | 18.82 | 16.17 | 12.86 | 22.00 | 17.50 |

## D. Historical and Projected ANS Production

Million Barrels/ Day

| FY | (1) Prudhoe Bay | (2) PBU-Satellite | Kuparuk | (3) Kup Satellite | (4) Milne Point | (5) Endicott | Lisburne | Point McIntyre | Niakuk | (6) West Beach | Alpine | Nanuk | Northstar | Liberty | (7) Known Onshore | Flord | NPRA | Point Thomson | TOTAL ANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1978 | 0.702 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 0.702 |
| 1979 | 1.197 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.197 |
| 1980 | 1.422 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.422 |
| 1981 | 1.511 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.511 |
| 1982 | 1.531 | . | 0.039 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.570 |
| 1983 | 1.532 | . | 0.095 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.627 |
| 1984 | 1.539 | . | 0.118 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.657 |
| 1985 | 1.534 | . | 0.161 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.694 |
| 1986 | 1.555 | . | 0.238 | . | 0.009 | . | . | . | . | . | . | . | . | . | . | . | . | . | 1.802 |
| 1987 | 1.564 | . | 0.272 | . | 0.006 | . | 0.018 | . | . | . | . | . | . | . | . | . | . | . | 1.859 |
| 1988 | 1.605 | . | 0.287 | . | 0.000 | 0.069 | 0.044 | . | . | . | . | . | . | . | . | . | . | . | 2.006 |
| 1989 | 1.524 | . | 0.300 | . | 0.002 | 0.098 | 0.038 | . | . | . | . | . | . | . | . | . | . | . | 1.962 |
| 1990 | 1.396 | . | 0.300 | . | 0.011 | 0.103 | 0.037 | . | . | . | . | . | . | . | . | . | . | . | 1.846 |
| 1991 | 1.330 | . | 0.299 | . | 0.018 | 0.108 | 0.039 | . | . | . | . | . | . | . | . | . | . | . | 1.794 |
| 1992 | 1.300 | . | 0.316 | . | 0.020 | 0.111 | 0.037 | . | . | . | . | . | . | . | . | . | . | . | 1.783 |
| 1993 | 1.193 | . | 0.322 | . | 0.018 | 0.115 | 0.030 | . | . | 0.001 | . | . | . | . | . | . | . | . | 1.679 |
| 1994 | 1.082 | . | 0.308 | . | 0.018 | 0.099 | 0.020 | 0.059 | 0.002 | 0.004 | . | . | . | . | . | . | . | . | 1.593 |
| 1995 | 0.991 | . | 0.303 | . | 0.021 | 0.099 | 0.020 | 0.121 | 0.014 | 0.003 | . | . | . | . | . | . | . | . | 1.572 |
| 1996 | 0.891 | . | 0.283 | . | 0.022 | 0.089 | 0.015 | 0.147 | 0.024 | 0.002 | . | . | . | . | . | . | . | . | 1.474 |
| 1997 | 0.809 | . | 0.267 | . | 0.052 | 0.068 | 0.013 | 0.166 | 0.028 | 0.002 | . | . | . | . | . | . | . | . | 1.404 |
| 1998 | 0.713 | . | 0.260 | 0.001 | 0.053 | 0.058 | 0.008 | 0.152 | 0.029 | 0.000 | . | . | . | . | . | . | . | . | 1.275 |
| 1999 | 0.636 | 0.003 | 0.241 | 0.025 | 0.055 | 0.048 | 0.007 | 0.119 | 0.029 | 0.000 | . | . | . | . | . | . | . | . | 1.164 |
| 2000 | 0.570 | 0.004 | 0.212 | 0.037 | 0.053 | 0.044 | 0.009 | 0.079 | 0.025 | 0.002 | . | . | . | . | . | . | . | . | 1.035 |
| 2001 | 0.540 | 0.007 | 0.196 | 0.031 | 0.052 | 0.037 | 0.010 | 0.060 | 0.019 | 0.001 | 0.040 | . | . | . | . | . | . | . | 0.991 |
| 2002 | 0.487 | 0.026 | 0.175 | 0.039 | 0.052 | 0.033 | 0.010 | 0.045 | 0.019 | . | 0.096 | 0.000 | 0.020 | . | . | . | . | . | 1.003 |
| 2003 | 0.435 | 0.046 | 0.158 | 0.051 | 0.053 | 0.030 | 0.009 | 0.041 | 0.014 | . | 0.097 | 0.000 | 0.059 | . | . | . | . | . | 0.994 |
| 2004 | 0.425 | 0.053 | 0.159 | 0.052 | 0.060 | 0.031 | 0.010 | 0.036 | 0.012 | . | 0.098 | 0.000 | 0.062 | . | . | . | . | . | 0.997 |
| 2005 | 0.399 | 0.077 | 0.155 | 0.056 | 0.064 | 0.028 | 0.009 | 0.033 | 0.010 | . | 0.100 | 0.000 | 0.062 | . | . | . | . | . | 0.992 |
| 2006 | 0.382 | 0.081 | 0.148 | 0.064 | 0.064 | 0.026 | 0.008 | 0.029 | 0.009 | . | 0.100 | 0.000 | 0.060 | . | . | . | . | . | 0.971 |
| 2007 | 0.368 | 0.085 | 0.141 | 0.070 | 0.062 | 0.024 | 0.007 | 0.026 | 0.008 | . | 0.100 | 0.008 | 0.048 | . | . | 0.010 | . | . | 0.956 |
| 2008 | 0.355 | 0.087 | 0.134 | 0.072 | 0.061 | 0.023 | 0.006 | 0.023 | 0.007 | . | 0.100 | 0.015 | 0.038 | . | 0.010 | 0.020 | 0.030 | 0.030 | 1.010 |
| 2009 | 0.340 | 0.080 | 0.128 | 0.073 | 0.062 | 0.020 | 0.005 | 0.021 | 0.006 | . | 0.090 | 0.015 | 0.031 | 0.035 | 0.025 | 0.020 | 0.065 | 0.075 | 1.091 |
| 2010 | 0.326 | 0.074 | 0.122 | 0.073 | 0.061 | 0.019 | 0.005 | 0.019 | 0.005 | . | 0.074 | 0.013 | 0.025 | 0.050 | 0.030 | 0.018 | 0.090 | 0.072 | 1.074 |

(1) Includes NGLs from Central Gas Facility shipped to TAPS
(2) Midnight Sun, Polaris, Aurora, Borealis, and Orion.
(3) West Sak, Tobasco, Tarn and Meltwater
(4) Milne Point includes Schrader Bluff and Sag River
(5) Endicott includes Sag Delta, Eider and Badami
(6) West Beach and North Prudhoe Bay State
(7) Sourdough

## E. Historical General Fund Unrestricted Revenue

$ Million

| FY | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | (1) 1997 | (1) 1998 | (1) 1999 | (1) 2000 | (1) 2001 | (1) 2002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TAX PORTION** | | | | | | | | | | | | |
| **Property Tax** | 85.0 | 69.0 | 66.9 | 61.5 | 57.3 | 56.0 | 53.6 | 51.3 | 48.8 | 45.0 | 45.1 | 49.6 |
| **Sales/Use** | | | | | | | | | | | | |
| Alcoholic Beverages | 12.2 | 12.0 | 11.9 | 12.0 | 12.0 | 12.0 | 11.6 | 11.8 | 12.2 | 12.7 | 12.0 | 12.9 |
| Tobacco Products | 14.0 | 14.3 | 14.0 | 14.1 | 14.4 | 14.2 | 13.7 | 15.4 | 15.2 | 16.3 | 16.3 | 15.5 |
| Insurance Premium | 24.4 | 25.5 | 26.3 | 26.1 | 27.9 | 28.2 | 28.4 | 33.7 | 28.4 | 28.7 | 32.2 | 37.4 |
| Motor Fuel Tax (2) | 39.8 | 43.3 | 40.8 | 40.5 | 39.6 | 37.7 | 35.3 | 35.6 | 37.8 | 42.1 | 37.5 | 40.2 |
| Total | 90.4 | 95.1 | 93.0 | 92.7 | 93.9 | 92.1 | 89.0 | 96.5 | 93.6 | 99.8 | 98.0 | 106.0 |
| **Income Tax** | | | | | | | | | | | | |
| Corporation General | 37.9 | 33.7 | 25.1 | 44.3 | 67.0 | 53.3 | 48.4 | 53.4 | 53.8 | 56.3 | 59.5 | 53.4 |
| Corporation Petroleum | 185.1 | 165.5 | 117.6 | 17.8 | 128.5 | 173.7 | 269.4 | 200.1 | 145.1 | 162.7 | 338.1 | 178.4 |
| Total | 223.0 | 199.2 | 142.7 | 62.1 | 195.5 | 227.0 | 317.8 | 253.5 | 198.9 | 219.0 | 397.6 | 231.8 |
| **Severance Tax** | | | | | | | | | | | | |
| Oil and Gas Production | 1,253.8 | 1,022.2 | 989.4 | 662.8 | 769.8 | 771.7 | 907.0 | 564.4 | 358.6 | 693.2 | 694.4 | 486.7 |
| Oil and Gas Conservation | 2.3 | 2.3 | 2.1 | 2.3 | 2.0 | 1.8 | 1.7 | 1.6 | 1.4 | 0.0 | 0.0 | 0.0 |
| Oil and Gas Hazardous Release | 28.0 | 28.7 | 26.1 | 27.0 | 22.1 | 13.7 | 12.9 | 11.8 | 11.1 | 9.5 | 9.4 | 9.6 |
| Total | 1,284.1 | 1,053.2 | 1,017.6 | 692.1 | 793.9 | 787.2 | 921.6 | 577.8 | 371.1 | 702.7 | 703.8 | 496.3 |
| **Other Natural Resource Tax** | | | | | | | | | | | | |
| Salmon and Seafood Marketing | 3.3 | 2.8 | 3.6 | 5.8 | 7.9 | 8.6 | 7.6 | 5.6 | 5.3 | 7.2 | 5.7 | 4.8 |
| Salmon Enhancement | 6.2 | 4.2 | 6.8 | 5.0 | 5.7 | 5.2 | 4.2 | 4.2 | 3.9 | 5.3 | 3.6 | 3.7 |
| Dive Fishery Management | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Fisheries Business | 31.1 | 30.1 | 42.2 | 33.9 | 39.0 | 38.2 | 31.0 | 28.5 | 25.9 | 36.7 | 30.5 | 25.3 |
| Fish Landing | 0.0 | 0.0 | 0.0 | 0.1 | 7.3 | 7.1 | 7.3 | 3.8 | 5.9 | 5.3 | 7.3 | 7.1 |
| Total | 40.6 | 37.1 | 52.6 | 44.8 | 59.9 | 59.1 | 50.1 | 42.1 | 41.0 | 54.7 | 47.3 | 41.1 |
| **Other Tax** | | | | | | | | | | | | |
| Estate | 3.3 | 1.0 | 0.9 | 1.6 | 1.2 | 1.7 | 1.7 | 5.5 | 1.7 | 2.5 | 2.7 | 3.1 |
| Other | 4.1 | 4.1 | 4.1 | 4.7 | 4.8 | 4.9 | 5.0 | 6.1 | 6.5 | 8.9 | 7.4 | 6.1 |
| Total | 7.4 | 5.1 | 5.0 | 6.3 | 6.0 | 6.6 | 6.7 | 11.6 | 8.2 | 11.4 | 10.1 | 9.2 |
| **TOTAL TAXES** | 1,730.5 | 1,458.7 | 1,377.8 | 959.5 | 1,206.5 | 1,228.0 | 1,438.8 | 1,032.8 | 761.6 | 1,132.6 | 1,301.9 | 934.0 |

| FY | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | (1) 1997 | (1) 1998 | (1) 1999 | (1) 2000 | (1) 2001 | (1) 2002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **NON TAXES** | | | | | | | | | | | | |
| Licenses and Permits | 29.1 | 32.4 | 32.7 | 35.7 | 34.7 | 60.9 | 69.0 | 74.6 | 63.7 | 69.2 | 37.3 | 42.2 |
| Intergovernmental Receipts | | | | | | | | | | | | |
| Federal Shared Revenues | 14.8 | 11.4 | 10.3 | 4.3 | 4.2 | 1.0 | 2.0 | 2.2 | 0.8 | 1.0 | 0.3 | 0.1 |
| Charges for Services | | | | | | | | | | | | |
| Marine Highways | 40.7 | 42.3 | 40.8 | 40.4 | 41.5 | 38.5 | 38.6 | 37.1 | 38.8 | 38.3 | 37.6 | 32.2 |
| Other | 16.5 | 44.1 | 14.3 | 18.0 | 18.1 | 36.9 | 39.5 | 34.9 | 31.8 | 43.7 | 27.0 | 20.2 |
| Total | 57.2 | 86.4 | 55.1 | 58.4 | 59.6 | 75.4 | 78.1 | 72.0 | 70.6 | 82.0 | 64.6 | 52.4 |
| Fines and Forefeitures | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.4 | 8.2 | 37.7 | 12.5 | 46.2 | 33.6 | 10.6 |
| Rents and Royalties | | | | | | | | | | | | |
| Mineral Bonuses, Rents, Royalties | 24.8 | 6.5 | 44.3 | 5.2 | 5.6 | 6.9 | 7.4 | 23.0 | 25.6 | 4.0 | 7.1 | 14.6 |
| Oil and Gas Royalties | 951.6 | 702.4 | 711.3 | 512.1 | 628.3 | 642.2 | 759.2 | 480.4 | 322.6 | 727.9 | 781.0 | 581.2 (3) |
| Timber Sales | 0.4 | 0.6 | 0.6 | 0.4 | 0.6 | 1.5 | 1.9 | 0.8 | 0.3 | 0.3 | 0.4 | 0.2 |
| Sale of State Property | 4.7 | 1.0 | 4.0 | 9.0 | 21.8 | 8.1 | 8.6 | 8.1 | 10.6 | 9.4 | 10.5 | 11.6 |
| Total | 981.5 | 710.5 | 760.2 | 526.7 | 656.3 | 658.7 | 777.1 | 512.3 | 359.1 | 741.6 | 799.0 | 607.6 |
| Investment Earnings | 125.0 | 101.8 | 70.9 | 31.7 | 72.4 | 64.1 | 77.1 | 60.6 | 46.5 | 48.1 | 78.8 | 43.1 (4) |
| Miscellaneous Revenue | 14.9 | 61.4 | 45.0 | 36.2 | 49.2 | 35.8 | 44.6 | 33.5 | 37.3 | 27.1 | 34.9 | 28.3 |
| **Subtotal NON-TAX REVENUE** | **1,222.5** | **1,003.9** | **974.2** | **693.0** | **876.4** | **905.3** | **1,056.1** | **792.8** | **590.5** | **1,015.2** | **1,048.5** | **784.3** |
| Plus: Income from prior years | 33.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **TOTAL NON-TAX REVENUE** | **1,256.1** | **1,003.9** | **974.2** | **693.0** | **876.4** | **905.3** | **1,056.1** | **792.8** | **590.5** | **1,015.2** | **1,048.5** | **784.3** |
| **TOTAL TAX REVENUE** | **1,730.5** | **1,458.7** | **1,377.8** | **959.5** | **1,206.5** | **1,228.0** | **1,438.8** | **1,032.8** | **761.6** | **1,132.6** | **1,301.9** | **934.0** |
| **TOTAL GENERAL FUND UNRESTRICTED REVENUE** | **2,986.6** | **2,462.6** | **2,352.0** | **1,652.5** | **2,082.9** | **2,133.3** | **2,494.9** | **1,825.7** | **1,352.1** | **2,147.8** | **2,351.4** | **1,718.3** |

(1) Starting in FY 1996, all General Fund program receipts are included under Unrestricted Revenue. FY 1996 also includes additional royalties due to payment from the TAPS Liablility Fund. However, starting in FY 1998, many General Fund program receipts have been moved from unrestricted to restricted categories such as "Statutorily Designated Program Receipts" and "Receipt Supported Services."
(2) Motor Fuel Tax includes aviation, highway and marine.
(3) FY 2001 oil and gas royalties adjusted to include interest earnings.
(4) FY 2001 investment revenue adjusted to exclude oil and gas interest earnings.

## F. Historical Petroleum Revenue
$ Million

| FY | Corporate Petroleum Tax | Production Tax | Petroleum Property Tax | Reserve Tax | (1) (2) Royalties | (1) (2) Bonuses & Rents | (3) (4) Petroleum Special Settlements | Total Petroleum Revenue | (5) Cumulative Total Petroleum Revenue | Total General Fund Unrestricted Revenue | % of Total General Fund Unrestricted Revenue |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1978 | 8.4 | 107.7 | 173.0 | . | 150.6 | 1.8 | . | 441.5 | 2,797.8 | 764.9 | 58% |
| 1979 | 232.6 | 173.8 | 163.4 | . | 250.2 | 1.6 | . | 821.6 | 3,619.4 | 1,133.0 | 73% |
| 1980 | 547.5 | 506.5 | 168.9 | . | 689.4 | 344.2 | . | 2,256.5 | 5,875.9 | 2,501.2 | 90% |
| 1981 | 860.1 | 1,170.2 | 143.0 | . | 1119.7 | 11.3 | . | 3,304.3 | 9,180.2 | 3,718.0 | 89% |
| 1982 | 663.9 | 1,581.7 | 142.7 | . | 1174.4 | 7.1 | . | 3,574.8 | 12,755.0 | 4,108.4 | 87% |
| 1983 | 236.0 | 1,493.7 | 152.6 | . | 1105.6 | 38.7 | . | 3,026.6 | 15,781.6 | 3,631.0 | 83% |
| 1984 | 265.1 | 1,393.1 | 131.0 | . | 1058.5 | 13.9 | . | 2,861.6 | 18,643.2 | 3,390.1 | 84% |
| 1985 | 168.6 | 1,389.4 | 128.4 | . | 1042.2 | 14.9 | . | 2,743.5 | 21,386.7 | 3,260.0 | 84% |
| 1986 | 133.9 | 1,107.9 | 113.5 | . | 845.0 | 38.9 | 418.2 | 2,657.4 | 24,044.1 | 3,075.5 | 86% |
| 1987 | 120.4 | 648.5 | 102.5 | . | 448.3 | 4.3 | 70.5 | 1,394.5 | 25,438.6 | 1,799.4 | 77% |
| 1988 | 158.0 | 818.7 | 96.2 | . | 701.5 | 11.3 | 163.9 | 1,949.6 | 27,388.2 | 2,305.8 | 85% |
| 1989 | 166.0 | 698.8 | 89.7 | . | 611.5 | 16.7 | 257.7 | 1,840.4 | 29,228.6 | 2,186.2 | 84% |
| 1990 | 117.2 | 1,001.6 | 89.8 | 0.0 | 753.7 | 4.2 | 154.8 | 2,121.3 | 31,349.9 | 2,507.2 | 85% |
| 1991 | 185.1 | 1,284.8 | 85.0 | 0.0 | 958.7 | 24.7 | 33.5 | 2,571.8 | 33,921.7 | 2,986.6 | 86% |
| 1992 | 165.5 | 1,053.2 | 69.0 | 0.0 | 708.2 | 6.8 | 4.7 | 2,007.4 | 35,929.1 | 2,462.6 | 82% |
| 1993 | 117.6 | 1,017.6 | 66.9 | 0.0 | 716.7 | 44.3 | 4.7 | 1,967.8 | 37,896.9 | 2,352.0 | 84% |
| 1994 | 17.8 | 692.1 | 61.5 | 0.0 | 516.1 | 5.1 | 0.1 | 1,292.7 | 39,189.6 | 1,652.5 | 78% |
| 1995 | 128.5 | 793.9 | 57.3 | 0.0 | 631.8 | 5.0 | 0.7 | 1,617.2 | 40,806.8 | 2,082.9 | 78% |
| 1996 | 173.7 | 787.2 | 56.0 | 0.0 | 642.2 | 5.7 | 0.0 | 1,664.8 | 42,471.6 | 2,133.3 | 78% |
| 1997 | 269.4 | 921.6 | 53.6 | 0.0 | 759.2 | 6.4 | 0.0 | 2,010.2 | 44,481.8 | 2,494.9 | 81% |
| 1998 | 200.1 | 577.8 | 51.3 | 0.0 | 480.4 | 23.0 | 0.0 | 1,332.6 | 45,814.4 | 1,825.5 | 73% |
| 1999 | 145.1 | 371.1 | 48.8 | 0.0 | 322.6 | 25.6 | 0.0 | 913.2 | 46,727.7 | 1,352.1 | 68% |
| 2000 | 162.7 | 702.7 | 45.0 | 0.0 | 731.9 | 4.0 | 0.0 | 1,646.3 | 48,373.9 | 2,147.6 | 77% |
| 2001 | 338.1 | 703.8 | 45.1 | 0.0 | 781.0 | 7.1 | 0.0 | 1,875.1 | 50,249.0 | 2,282.0 | 82% |
| 2002 | 178.4 | 496.3 | 49.6 | 0.0 | 581.2 | 14.6 | 0.0 | 1,320.1 | 51,569.1 | 1,668.0 | 79% |

(1) These categories are primarily composed of petroleum revenue, however, they include some additional revenue from other minerals (mostly coal).
(2) Royalties and bonuses and rents are net of Permanent Fund contribution and Constitutional Budget Reserve Fund (CBRF) deposits.
(3) Not subject of CBRF deposits
(4) Tax settlements are in the CBRF.
(5) This table shows historical petroleum revenue for FY 1975-2001. The cumulative petroleum revenue total is based on revenue beginning in FY 1959.

In accordance with AS 37.07.060 (b)(4), the Revenue Sources book is compiled biannually by the Department of Revenue to assist the governor in formulating a proposed comprehensive financial plan for presentation to the Alaska State Legislature. Within the publication are shown prior year actuals, revised current year estimates and future year projections.

Anticipated state income is projected through the use of a number of data sources: (1) econometric models developed by the Department of Revenue to forecast unrestricted non-petroleum revenues; (2) a petroleum revenue model created by the department's Tax Division; and (3) estimates from individual state agencies.

We thank the various state agencies for their cooperation in computing anticipated revenues for publication in this document.

The Department of Revenue complies with Title II of the Americans With Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact the division's representative at (907) 465-3692 or (907) 465-3678 (TDD) to make necessary arrangements.

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Fall 2002 Revenue Sources Book

Department of Revenue, Tax Division
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Anchorage, Alaska, 99501

www.tax.state.ak.us

November 26, 2002

1/29/03

# Alaska Science & Technology Foundation

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## ----------Project Examples----------

**Technology**

**Knowledge**

**Science & Technology Education**

**ASTF's Team -- Partners for Economic Development Infrastructure**

# Technology Projects

**Alaska Manufacturing Contractors**

**Alaska Fresh Cut**

**UniSea Fish Oil Demonstration**

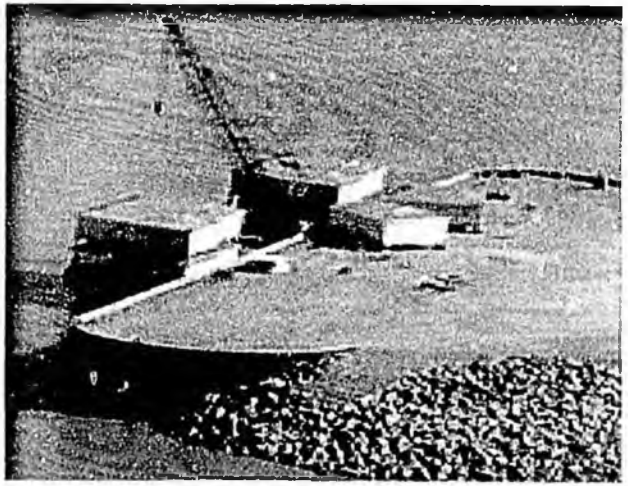
**Scientific Fishery Systems**

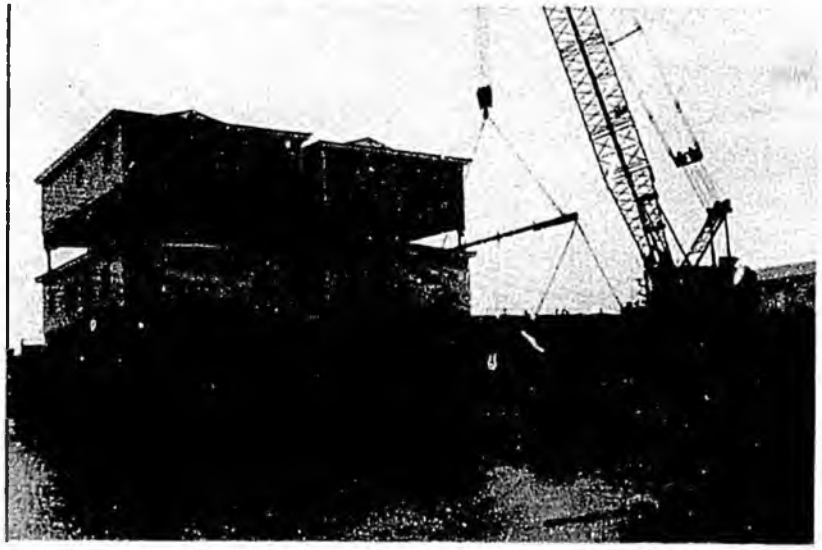
**PeopleMatter**

**Remote Airport Webcams**

**Paralytic Shellfish Poisoning Test Kits**

# Alutiiq Manufacturing Contractors





**Located at Port McKenzie, Wasilla**

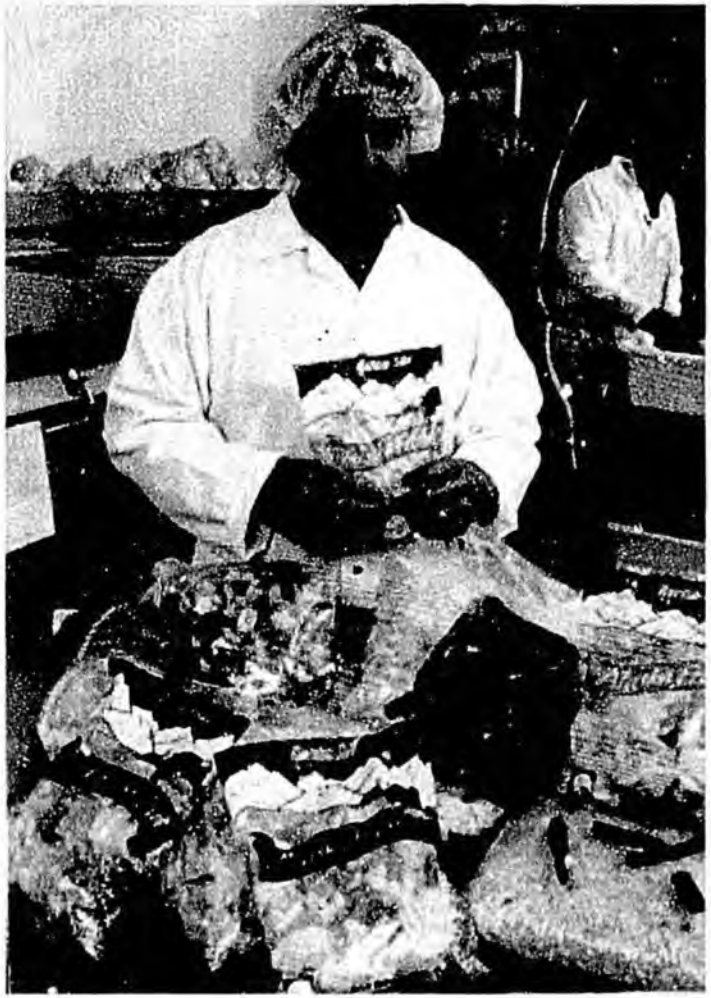
**Completed 62 portable homes built for arctic conditions**

**Employs 45 workers**

**Sales $10 million in 2001/2002**

**Replacing imported homes**

# Alaska Fresh Cut



**Located in Anchorage**

**Selling fresher chopped salads in bags and fruits**

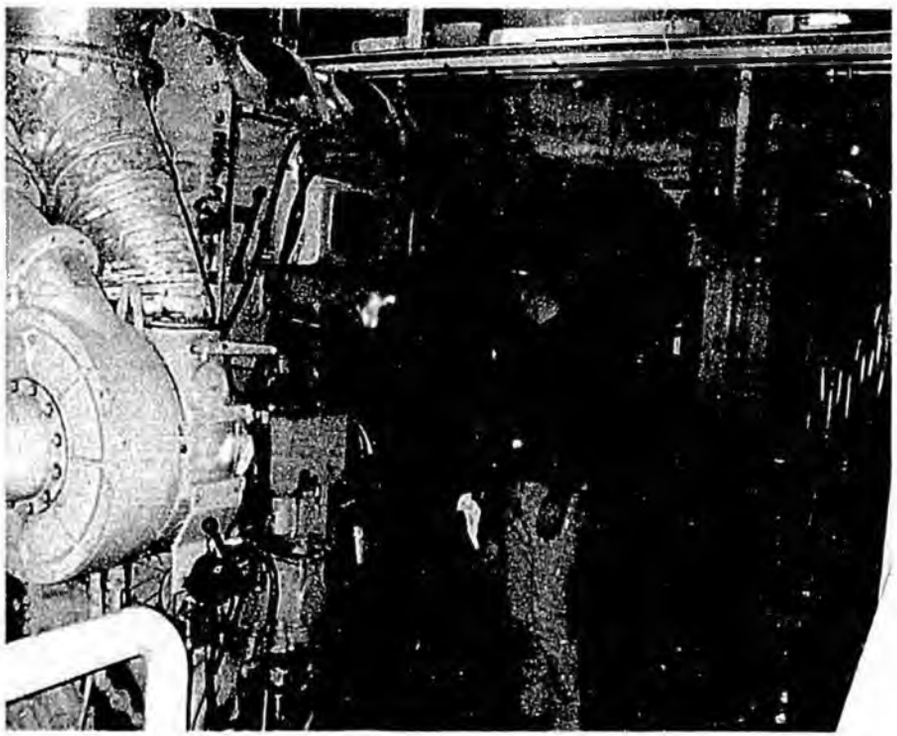
**Purchasing produce from Mat-Su Valley**

**Employs 47 people**

**Sales $6 million (99-02)**

**Replacing imports**

# UniSea Fish Oil Demonstration



**UniSea fish processing plant, Dutch Harbor**

**Using 50/50 fish oil/diesel blend to generate electricity**

**Reduced air emissions**

**Replaced expensive diesel with low value fish oil (0.7 million gallons first year)**

**Project paid out in under one year and is being expanded**

# Scientific Fishery Systems

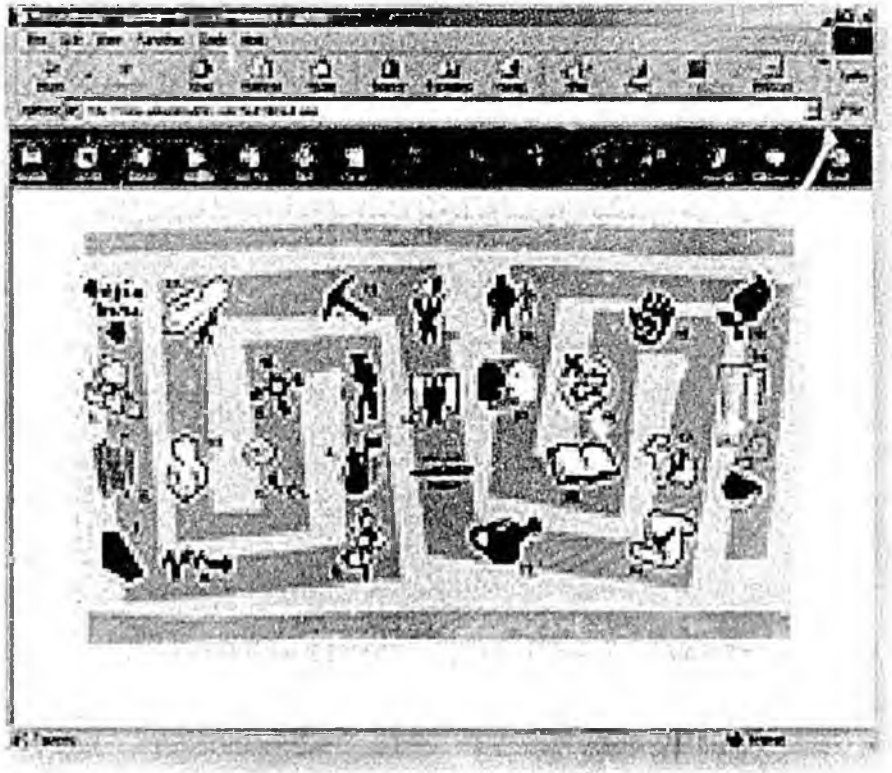
**Located in Anchorage**

**Sonar systems to increase fish harvest and reduce by-catch**

**Employs 10 people**

**Sales $5 million (last 5 yrs)**

# PeopleMatter



Click For Flash Demo

**Software for human resources & organizational development**

**Employs 10 people**

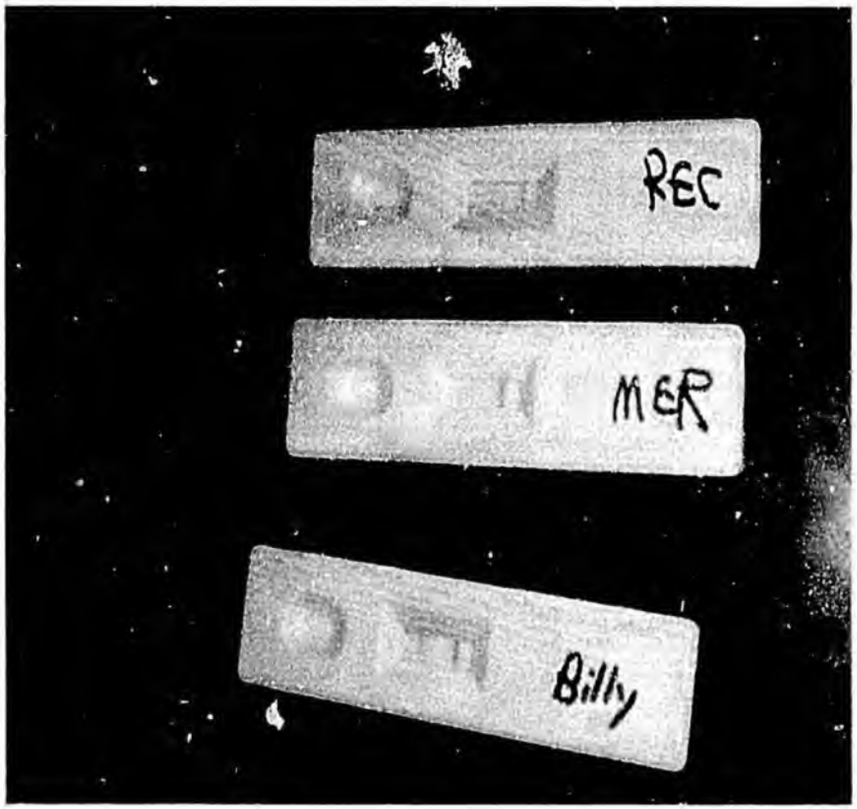
**Sales $0.5 million in first year**

# Remote Airport Webcams

**Demonstrated feasibility of putting real time photos of remote airstrip weather conditions on the web.**

**FAA is duplicating application throughout Alaska**

# Paralytic Shellfish Poisoning Test Kits




**Kits are quick & inexpensive**

**Two thousand distributed**

**Training conducted in Kodiak, Anchorage, and Ketchikan**

**Commercial sales planned in 2003**

# Knowledge Projects

**Surimi Manufacture**

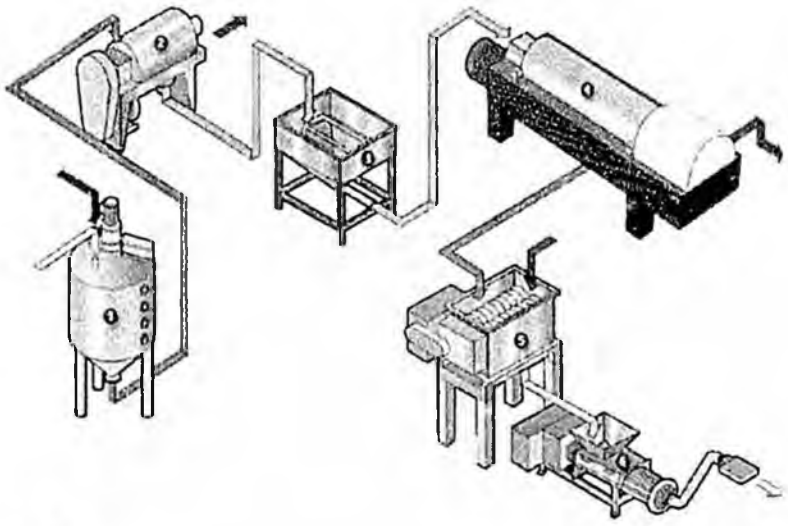
**Earthquake Severity Maps for Anchorage**

**Alaska Sea Ice Atlas**

**New Permeable Wave Barriers**

**Guidebook to Geology of Anchorage, Alaska**

# Surimi Manufacture



- Conditioned water
- Mince slurry
- Discharge
- Refined slurry
- Drain
- Dewatered mince
- Additives
- Surimi

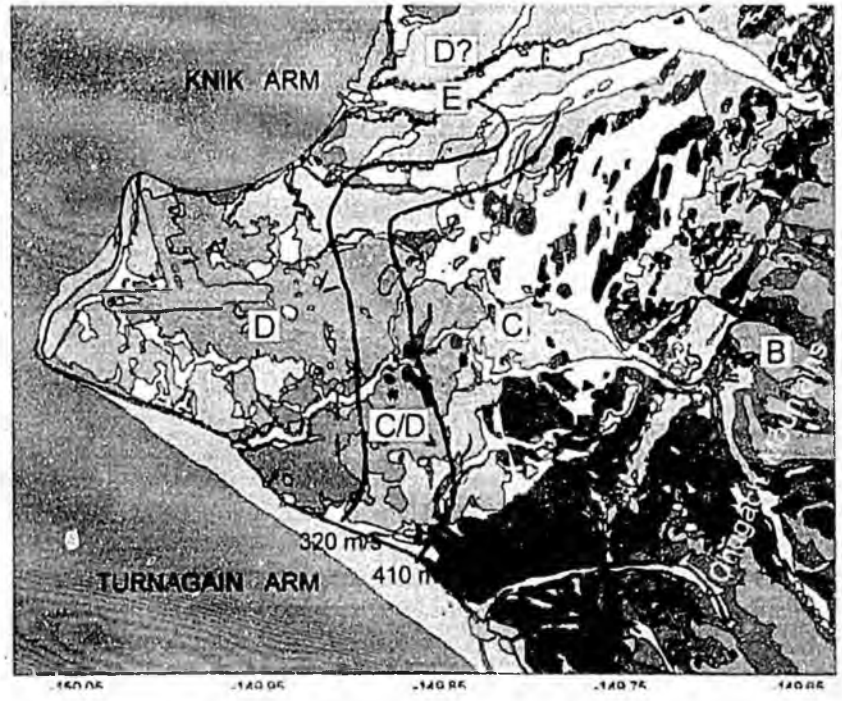
1. Mixing tank 1
2. Refiner
3. Mixing tank 2
4. Decanter centrifuge
5. Mixer
6. Extruder

**Surimi is a seafood byproduct made from fish waste – Japan is the largest market**

**Advanced centrifuge decanter process demonstrated use of pollack and other bottom fish**

**Industry surimi sales showed a $150 million/yr increase**

# Earthquake Severity Maps for Anchorage



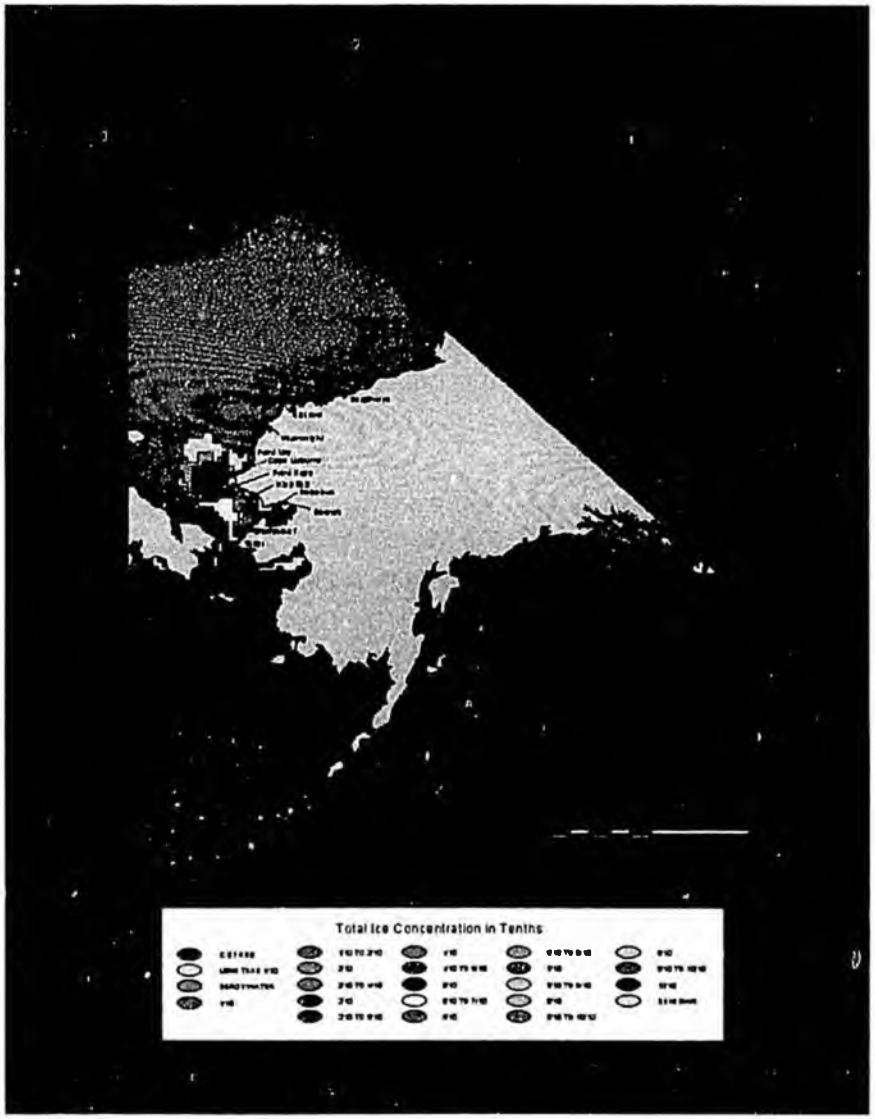

**Being integrated into much larger national network maintained and supported by USGS.**

**UAF created new earthquake severity maps based on soil conditions and seismic readings from 25 Anchorage sensors**

**Building codes being reevaluated**

**Architectural & engineering firms using maps in siting and design**

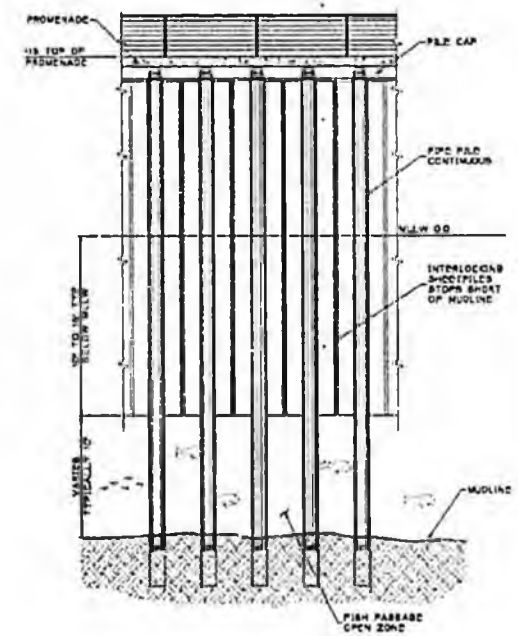
# Alaska Sea Ice Atlas

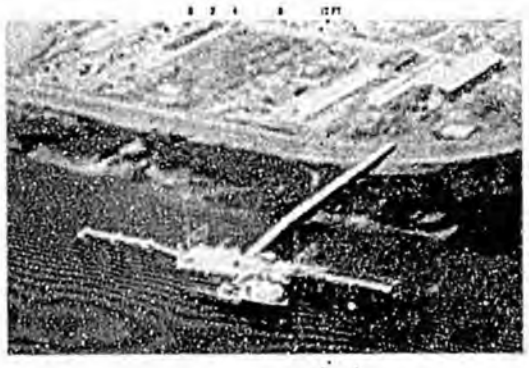



**UAA created updated web-based ice atlas**

**Being used by development and transportation planners**

# New Permeable Wave Barriers



Designed by Pertrovich, Nottingham, and Drage of Anchorage

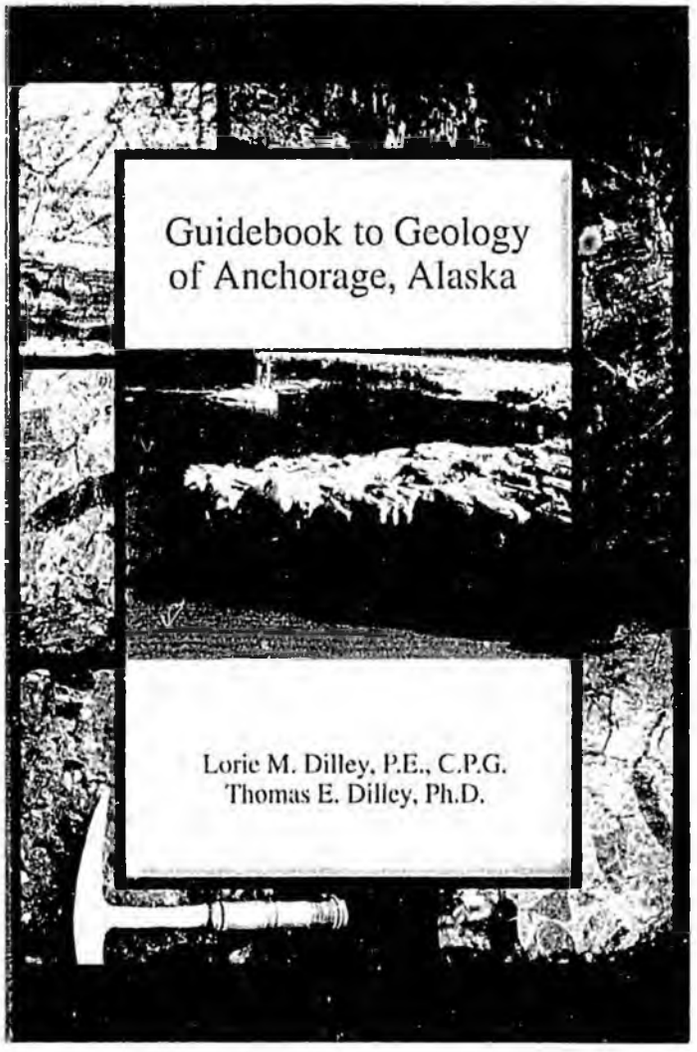
Reduces wave impacts on structures and shoreline

New design significantly reduces costs and environmental impacts

Built in Glacier Bay, Valdez and Lower-48

Won national design awards

# Guidebook to Geology of Anchorage, Alaska




**Authored by two Anchorage based geologists**

**250 page photo-illustrated paperback book**

**Used by engineers, planners, and general readers**

# Science & Technology Education

**Direct Grants to Teachers**

**K-12 Information Technology**

**Science Lecture Series**

**Wiring Alaska's K-12 Schools & Science Museums**

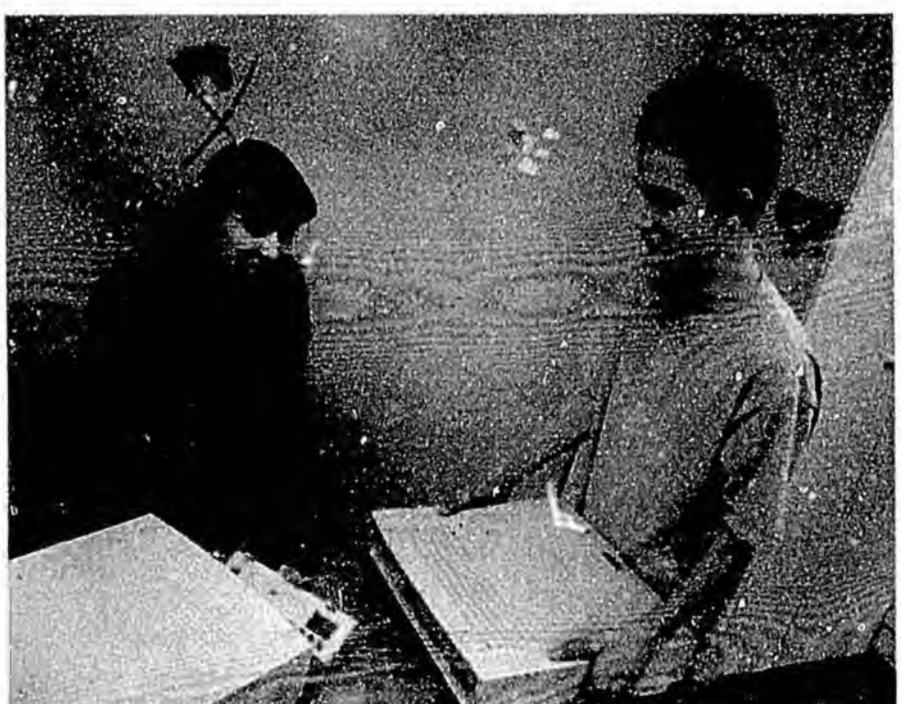
# Direct Grants to Teachers


**Nearly 400 grants to math & science teachers**

**Reaching approximately 47,500 students**

**Surveys indicate about 85% of students show an increased interest and achievement in science**

# K-12 Information Technology



**Programs so far in Kodiak and Kenai**

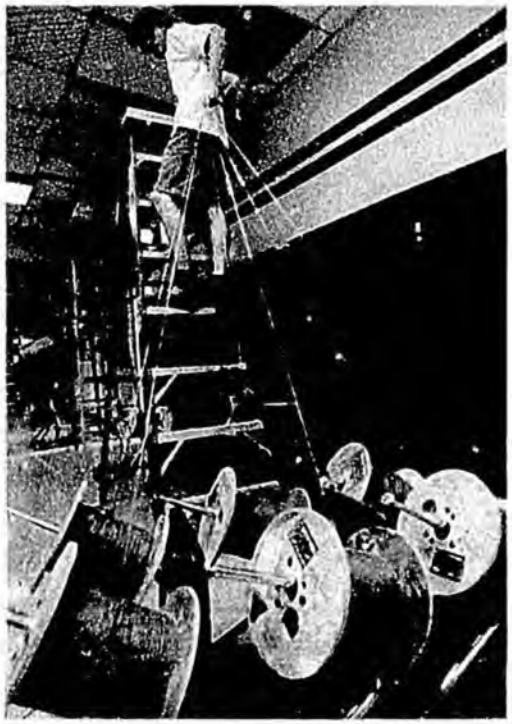
**School district and local village programs for students to install, repair, and network computers, become A+/MSCE certified, and build websites for commercial use**

# Science Lecture Series

**Popular ASTF and UA sponsored Science Lecture Series presented in Anchorage, Fairbanks and Juneau**

**Over 5,000 persons attended last winter, 48% increase over previous year**

# Wiring Alaska's K-12 Classrooms & Science Museums



**ASTF provided funding to wire over 500 Alaska schools (8,000 classrooms) for computer networks and internet access as well as science museums in Homer, Kenai, Seward, and Anchorage.**

# ASTF's Team -- Partners for Economic Development Infrastructure

---

ALASKA Growth Capital

ak/ma
Alaska Manufacturers' Association

ALASKA HI-TECH BUSINESS COUNCIL

Alaska InvestNet

# ALASKA Growth Capital

**Subsidiary of Arctic Slope Regional Corp.**

**High risk lending (regulated and audited as a bank) – nearly $29 million to 38 organizations with hundreds of jobs created or retained**

**Business consulting**

**Grown from $6 to 11 million in capital ($3 million from ASTF)**

**10 employees (Anchorage)**

Mission: to enable the growth and economic development of the technology industry in Alaska

ALASKA HI-TECH BUSINESS COUNCIL

**Largest statewide trade association for information & computer technology, founded 1996**

**Major projects include: workforce development, industry advocacy, and member services.**

Alaska InvestNet


**Matches Alaskan entrepreneurs with Alaskan investors**

**Venture forums, seminars, training, and intern program**

# ak/ma

**Alaska Manufacturers' Association**


**Lumber grading**

**Wood testing**

**Salmon grading**

**Manufacturing consulting, courses, and trade association**

**10 employees (Anchorage & Ketchikan)**

1/29/03

Team Members

ALASKA Growth Capital

ak/ma
Alaska Manufacturers' Association

Alaska investNET

ALASKA HI-TECH BUSINESS COUNCIL

# PRODUCTS
# +
# RISK CAPITAL
# +
# HIGH-TECH WORKERS
# +
# KNOWLEDGE
# +
# KNOWHOW NETWORK

---

# G R O W T H

**CONTENTS**

**ASTF 2002 ANNUAL REPORT**



*As the newly appointed Executive Director of ASTF, I inherit a foundation full of promise in a time and place full of challenge. As oil revenues continue to decrease, and the full impact of America's troubled financial markets is felt, the need for a highly diversified Alaskan economy is more pressing than perhaps ever before.*

*The convergence of digital information, including information technology and telecommunications, now impacts every sector of our economy. Business opportunities are all around us, and it is important that we look and listen for the ideas that will help Alaska grow and prosper. I look forward to meeting this challenge with you.*

*I would like to thank Jamie Kenworthy for his leadership of the foundation and his positive contributions to the Alaska economy.*

*J.A. Hans Roeterink,*
*Executive Director,*
*Alaska Science & Technology Foundation*

Honorable Frank Murkowski, Governor
Honorable Members of the Legislature
Citizens of Alaska

The test of a business or organization is often whether it can sustain customers and momentum even in tough times. In the face of sharply lower endowment earnings, we think ASTF met that test in FY02 and is now poised to continue to expand the state's technology-based economic development.

## LETTER FROM THE EXECUTIVE DIRECTOR & CHAIR

ASTF weathered the last year by cutting back operations, funding no new projects and working with partners and entrepreneurial grantees to keep projects going by minimizing ASTF cash and by maximizing non-ASTF resources and relationships. The last year told us that we are doing business with the right entrepreneurs and partners.

This year's report features our partner organizations and how we are working together to provide the investment capital, business know-how, technology workers and manufacturing expertise necessary to grow technology companies.

As you will see from reading this report, our partner organizations, launched with ASTF funds and private sector leadership, now have more than twice the impact of ASTF as measured by funds distributed on the street. The continued success of our partners and new ASTF projects is critical to carrying out ASTF's mission to use science and technology to grow an Alaskan economy and to create sustainable wealth.

Critical to that strategy is the decision to use five percent of the value of the ASTF endowment to fund ASTF's ongoing programs. This amount allows ASTF to continue to fund projects through the ups and downs of the stock market, inflation-proof the value of the endowment and carry out ASTF's mission.

We will be working with Governor Murkowski and the legislature to work within the five percent budget, to guarantee ASTF's long-term ability to build the businesses and projects that match the science base of the state with industry needs and opportunities.

Sincerely,

Ron Duncan,
Chair

Jamie Kenworthy,
Executive Director

2002

# ASTF's FINANCIAL STATUS

## ENDOWMENT EARNINGS HAVE DECLINED

Endowment earnings have declined beginning in FY99:

- ASTF's endowment is co-invested with the Alaska Permanent Fund; and,
- Earnings have significantly declined due to the stock market downturn and a smaller earnings base.

## ASTF'S RESPONSE TO THE STOCK MARKET DOWNTURN

The ASTF Board reduced distributions in FY02 by:

- Reducing operations costs;
- Deferring consideration of new proposals;
- Reducing payments to partners;
- Prorating available earnings to ASTF, UA and AADC; and,
- Closely managing payments to existing grantees.

## LEGISLATIVE APPROPRIATIONS FOR NON-ASTF PURPOSES

Over the last five years, the legislature appropriated $14.2 million of ASTF's endowment earnings for non-ASTF purposes:

- $11.4 million to the University of Alaska;
- $2.3 million to Alaska Aerospace Development Corp.;
- $0.5 million for DCED International Trade;
- In FY02, the ASTF Board prorated available income and paid $1.1 million to UA and AADC equivalent to approximately 100 percent of its FY02 endowment earnings; and,
- For FY03, the legislature appropriated $2.3 million to UA from the ASTF endowment.

## EXPENDITURES FOR ASTF PURPOSES AND THE OVERALL ENDOWMENT VALUE HAVE DECLINED

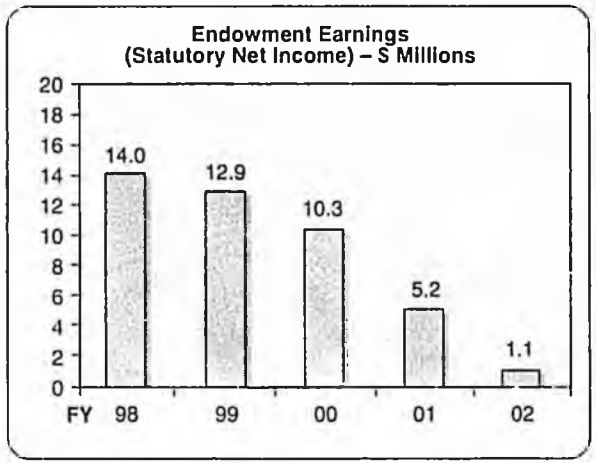
Expenditures for ASTF purposes have declined and fallen short of legislative appropriations due to:

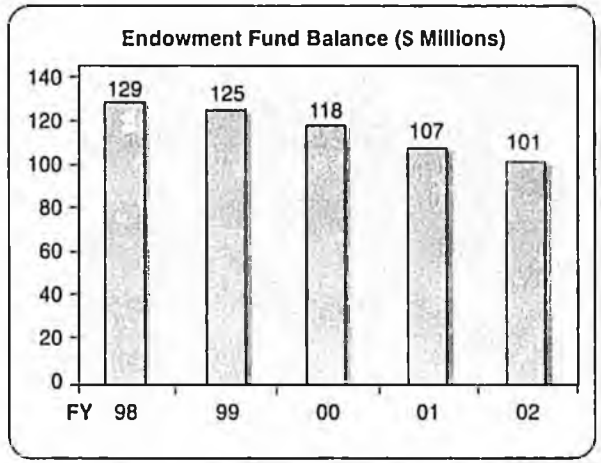
- The signification reduction in endowment earnings; and,
- Continued legislative appropriations for non-ASTF purposes.

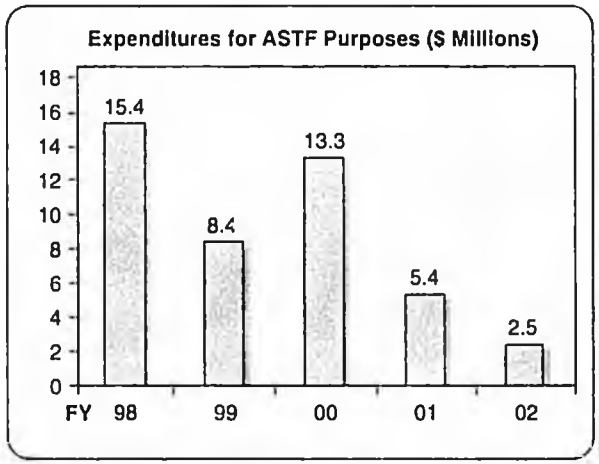
## THE FUTURE

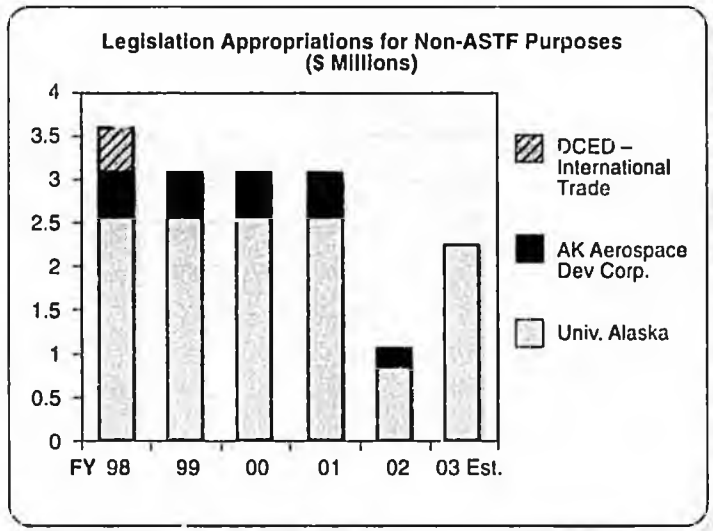
To smooth future year-to-year distributions and inflation-proof the endowment, the ASTF Board adopted a policy to limit distributions to five percent of the five-year rolling average of the market value of the endowment, a practice consistent with many foundations.

The ASTF Board resumed approving new projects in November 2002.



## 2002 HIGHLIGHTS

ASTF's commitment to fund worthwhile projects continues even though our financial returns precluded awarding new grants in FY02. However, many notable accomplishments were attained by our partners and ASTF-funded organizations.

### PARTNERS

Alaska Growth Capital – Last year's portfolio included 27 loans totaling over $9.4 million.

Alaska Manufacturers' Association – In addition to consulting with manufacturers, AKMA worked in four regions to develop salmon quality programs (over 100,000 lbs marketed last year) and is developing engineered wood products in addition to the lumber grading program.

Alaska InvestNet – In addition to sponsoring numerous seminars, eight entrepreneurs reported raising capital and 13 service providers gained clients this year.

Alaska Hi-Tech Business Council – Cooperative programs with ASTF, technology industry and other government partners delivered nearly $2 million in training for IT professionals in Alaska during FY02.

### ASTF PROJECTS

New Decanter Process – In 2002, the production of surimi (a seafood product from pollock) using the advanced decanter process demonstrated under ASTF sponsorship, yielded over $150 million to processors in Alaska.

Fish Oil – Fish oil/diesel fuel mixtures were demonstrated to effectively burn in diesel powered generation units in the UniSea fish processing plant. The fuel reduced emissions and no adverse wear was detected.

Earthquake – The recent 7.9 magnitude earthquake confirmed the accuracy of the attenuation maps produced by the Microzonation program. The program developed the finest free-field instrumentation network in the country.

Alaska Fresh Cut – Employs nearly 50 full-time workers with annual sales in excess of $2.5 million.

Qutekcak Hatchery – Now sells oysters, littleneck clams, rock scallops, cockles and geoducks to producers.

Geology Guidebook – A 251-page guide outlining the geological features of the Anchorage area.

Wave Barrier Technology – In 2001, Peratrovich, Nottingham and Drage won an outstanding design award for Bell Street Pier in Seattle.

Alaska Sea Ice Atlas – Using GIS technology, the web-based atlas compiles historical information for Alaska sea ice conditions.

## EDUCATION PROJECTS

K-12 Teacher Grants – 85 percent of students have greatly increased interest and achievement in math, science or technology.

IT Workers – In Kodiak, 18 students installed 100 refurbished computers in homes. Six students passed the A+ hardware exam and prepared commercial web pages.

Science Lecture Series – Over 7,600 people attended—a 48 percent increase overall.

**Alaska Science & Technology Innovation Index**

**2002 Report Card**

| State Trend | Alaska Compared to Nation | Indicator |
|---|---|---|
| Increasing ▲ / Flat – / Decreasing ▼ | + Above Average / = Same as Average / – Below Average | |
| | | **Population and Economic Infrastructure** |
| ▼ | – | Age Distribution (Share of Young Workers) |
| ▼ | – | Growth in Real Gross State Product |
| ▼ | + | International Exports |
| ▼ | – | Employment Growth Rate |
| ▼ | + | Unemployment |
| ▲ | + | Median Household Income |
| ▲ | = | Per Capita Personal Income |
| ▲ | = | Average Earnings Per Job |
| ▲ | – | Technology Industry Jobs |
| ▼ | – | Number of Manufacturing Jobs |
| | | **Innovation** |
| – | – | Patents |
| – | – | Research & Development Expenditures |
| ▲ | + | R&D at the University of Alaska Fairbanks |
| | | **Financial Capacity** |
| – | – | Initial Public Offerings |
| – | – | Venture Capital |
| – | – | Small Business Investment Companies Financings |
| – | – | Small Business Innovation Research Awards |
| | | **Infrastructure and Human Resources** |
| ▲ | + | Online Population |
| ▲ | + | Digital State Government |
| – | = | Ph.D. Scientists and Engineers Per 1000 Workers |
| – | = | SAT Scores |
| ▲ | – | High School Graduates Enrolling in College |
| ▼ | – | Science and Engineering Graduate Students |
| – | – | Science and Engineering Doctorate Awards |

## A MARKET SUSTAINABLE ECONOMY

### A Market Sustainable Future–Can the Alaska Economy be Easily Explained?

For the past few years ASTF has been working with the State Chamber of Commerce, the Resource Development Council and the Hi-Tech Business Council on developing a clear picture of the Alaska economy and a broader consensus for expanding the state's private sector base.

Two key success measures have been identified:

+ increased per capita income in the state and in each region of the state; and,

+ a larger private sector economic base.

The business groups now function as the Economy Group of Alaska 20/20, a statewide goal-setting effort. Representatives of the economy group, including past ASTF Executive Director Jamie Kenworthy, have spoken at many local community meetings, 20/20 work sessions and local Chamber lunches. The goal is to give Alaskans a clearer picture of what drives the state's economy and to encourage local communities, regions and statewide groups to decide what form of economic development is appropriate and motivates Alaskans to build a more robust and diversified economy.

In November 2002, 20/20 published a booklet A Market Sustainable Future: A Closer Look at Alaska's Economy that explains the dynamics of the state's economy and the market-based actions that could be taken by Alaskans to grow it. The full booklet is available at *www.akhf.org*, from the Alaska Humanities Forum or ASTF. Also available is a game that lets you play out various future scenarios of the state's economy at *www.akfuture.org*

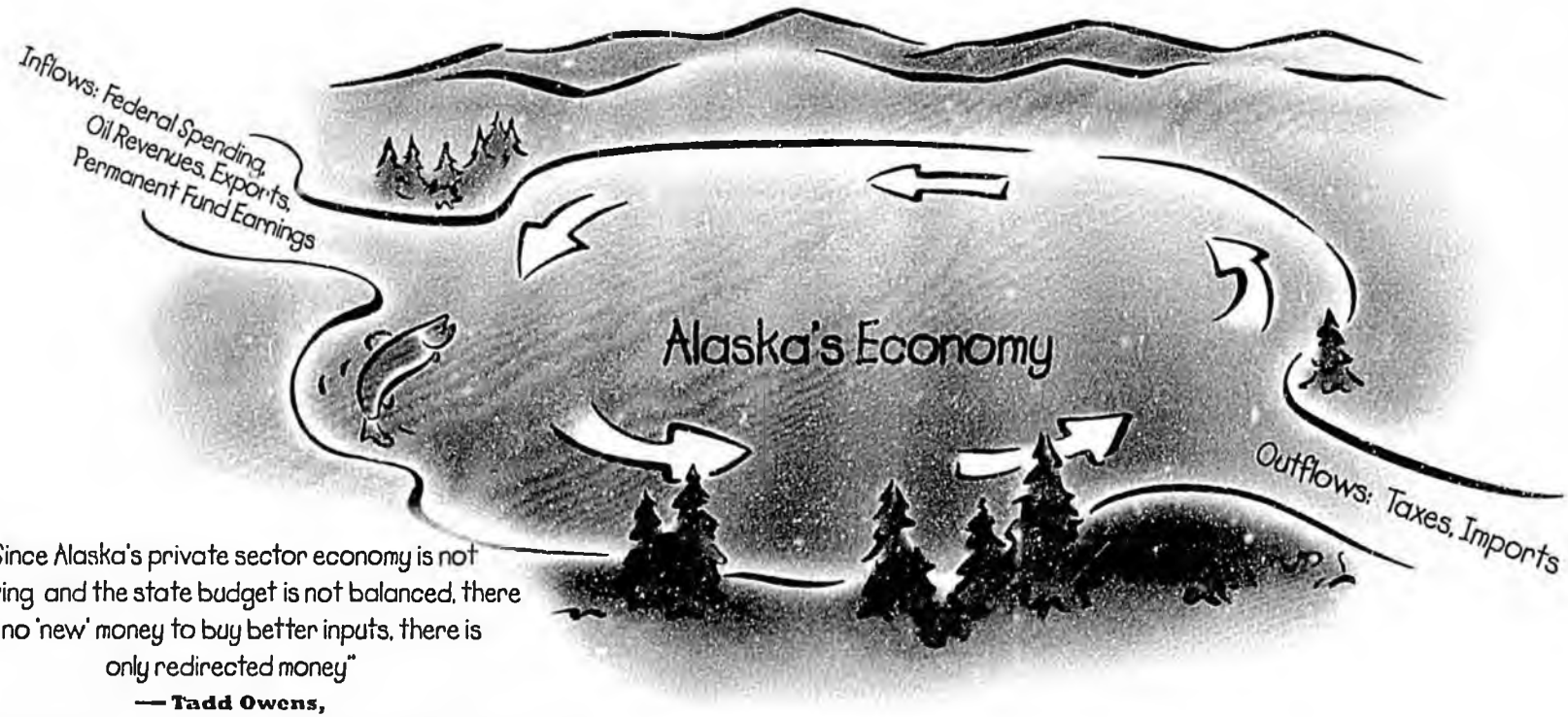
## THE LAKE

In simple terms, you may think of Alaska's economy as a lake.

Streams and rivers are dollars that flow into and out of the lake. As in-flows decrease, the lake level drops (economy declines). As in-flows increase, the lake rises (economy improves). The lake level can only be raised by increasing the flow from outside (selling goods and services outside the state) or by decreasing the rate of out-flow (replacing imports with local goods and services).

How can Alaska's economy be more market sustainable? From a market perspective, an economy that expands the products and services it sells to the world is the principal long-term form of sustainable economic security.

Recently, University of Alaska Anchorage economist Scott Goldsmith attributed the state's growth in the 1990s to the increased Permanent Fund dividends and increased federal spending. The 1990s were one of the longest business expansions in our nation's history, yet in Alaska, none of our increased wealth was due to the private sector. Alaska did not create net additional wealth through succeeding in markets.




"Since Alaska's private sector economy is not growing and the state budget is not balanced, there is no 'new' money to buy better inputs, there is only redirected money"

**— Tadd Owens,**
**Executive Director, Resource Development Council**

Goldsmith said that once the impact of the increase in federal spending and higher Permanent Fund dividends have been filtered out, the Alaska economy created no additional private sector generated wealth. Alaska hasn't increased exports or replaced imports; it has just increased consumption.

In effect, during the last decade Alaskans have become more dependent on government revenue and less capable of earning their own living in world markets. And with a population growing about two percent a year, the same wealth must support more people. What's the solution?

Economists call the enterprises that sell goods or services outside the state its Base Economy. "The Base" in Alaska differs from other states. With a small private sector, Alaska's base is less diversified than other states. Still, Alaska's base is just as important as those in other states in driving the entire state economy. While every job is important, all jobs are not equal in terms of the impact they have on the state's economy. Broadly speaking, export activity brings new money into Alaska by selling products and services to customers in the rest of the world. By contrast, most activity in the local services sector simply recirculates money within the state.

The two largest segments of Alaska's base economy are federal spending and oil. Together, they make up about two-thirds of all earned income in Alaska. Add in the Permanent Fund Dividend, and 70 percent of Alaska's economy is related to government spending or oil.

Timber, fishing, mining and tourism are traditional Alaskan industries and all are a part of Alaska's base economy.

Engineering, software development and the export of professional and technical expertise and services are areas that also can increase the base economy. Oil field service contractors are now selling their services on the global market. Certainly, other professionals and technical enterprises can compete in global markets.

Economists like to talk about "guns or butter" to demonstrate competing opportunities. In Alaska, the culture suggests we should choose either "mining or tourism," "fishing or timber" or "oil development or eco-tourism."

In fact, we need all base industries to grow: fishing, timber, mining, information technology, services and tourism, etc. In addition, Alaska needs more value-added industries like seafood processing, manufacturing and high-tech.

The 20/20 booklet describes "Four Steps Communities Can Do Today" to increase the base.

- Create local and regional vision of the future.
- Enhance local competitive advantages and fix disadvantages.
- Improve key inputs to economic development such as improved worker skills, access to capital, infrastructure and regulatory and tax regimes.
- Measure success and abandon failure.

When public funds are involved in economic development, the booklet recommends the following questions be asked and answered:

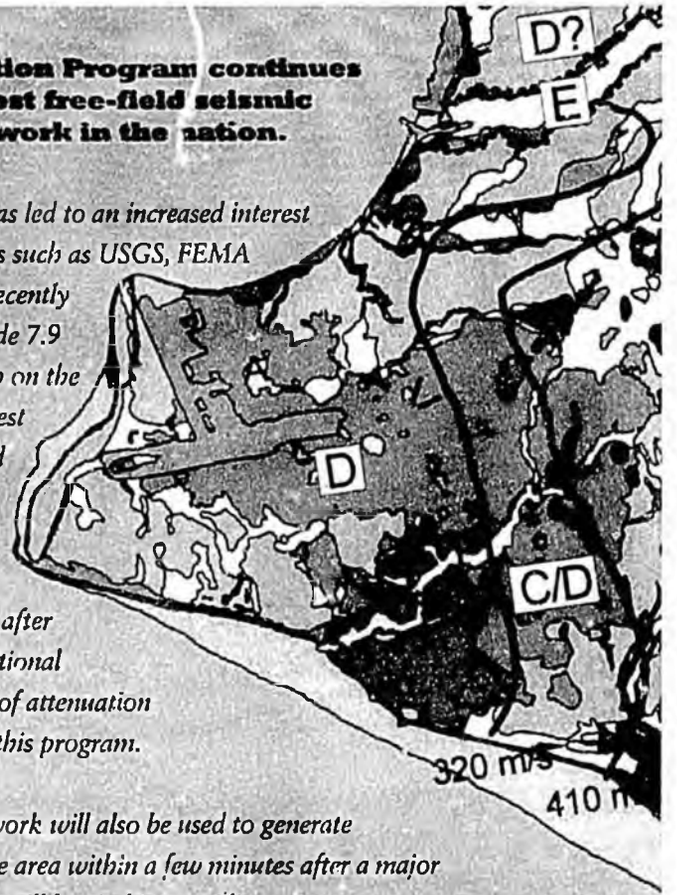
- Is there a market?
- Is there private investment?
- If there is any public investment, is the risk shared and appropriate?
- Are the economics transparent?
- Is there an acceptable business plan?
- Is there a competitive process for the government funds?

## ASTF's Role

ASTF's process for assessing technology projects asks and answers these questions before funding is granted.

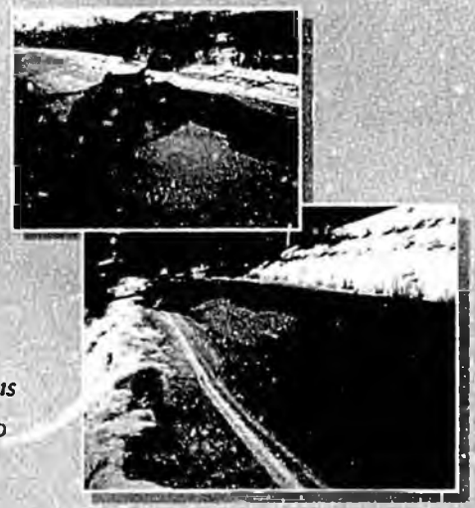
The rest of the annual report describes the activities of ASTF and its partner organizations to help put in place the manufacturing assistance, risk capital and business and investor know-how to grow technology-based firms. By one estimate, Alaska now has 321 technology firms that generates $300 million in revenue. This is still a minor part of the economy but the tech sector – information technology, software, advanced manufacturing – is critical to the competitiveness of Alaska's other basic industry sectors.

**The ASTF Microzonation Program continues to operate as the finest free-field seismic instrumentation network in the nation.**




*The success of the program has led to an increased interest in Alaska by national agencies such as USGS, FEMA and NSF. The network was recently tested by the Nov. 3 magnitude 7.9 earthquake resulting from slip on the Denali Fault– one of the longest continental faults in the world rivaling California's San Andreas Fault. Peak ground acceleration data obtained from the Anchorage network after the earthquake provided additional confirmation to the accuracy of attenuation maps being developed under this program.*

*In the future, the seismic network will also be used to generate ShakeMaps for the Anchorage area within a few minutes after a major earthquake. Such a capability will be vital in providing emergency managers with a quick picture of where shaking was greatest and what the possible extent of the damage might be.*



*Dr. John Aho, Advisory Panel Chairman noted that "the Alaska Science & Technology Foundation should be commended for its foresight in originally funding this program for it will have positive repercussions for Alaskans now and in the future. This will continue to be a program emulated by others".*

Economic growth is a total of many factors including; innovative products, investment or venture capital, a pool of skilled workers, knowledge of the industry sector in play and a network of individuals with the skills and knowledge to assist in developing ventures.

**ECONOMIC GROWTH = Products + Risk Capital + Hi-Tech Workers + Knowledge + KnowHow Network**

Recognizing these factors are all critical in enhancing the state's economy, ASTF set about to create organizations that add to the entrepreneurial infrastructure of the state.

ASTF has supported the development of innovative products for existing companies or for new ventures as part of its mission for 14 years. ASTF has funded partner organizations to address shortages of venture capital, IT workers and manufacturing and business knowledge.

Alaska Fresh Cut–Update
*In its fourth year of business, Alaska Fresh Cut is continuing to replace imports of prepared vegetables and salad mixtures. Using Alaskan produce whenever possible (imported produce during the winter) Alaska Fresh Cut produces prepared value-added salads and cut fruit for distribution in Alaskan markets. Employing nearly 50 full-time workers, its sales exceed $2.5 million per year.*

**CAPITAL**

About seven years ago, ASTF seeded a new financial institution in Alaska to address the need for venture capital. Through a Request for Proposals, ASTF sought to form a Business and Industry Development Corporation (BIDCO) to fill a need for investment capital to fuel the entrepreneurial activity.

Alaska Growth Capital was formed with Arctic Slope Regional Corporation and ASTF each investing $3 million. Now the institution has over $11 million in funds it is investing in a wide variety of ventures.

**MANUFACTURING**

Several years ago, ASTF partnered with the US Department of Commerce to sponsor a Manufacturing Extension Center to assist the manufacturing sector of Alaska's economy. This lead to the establishment of the Alaska Manufacturers' Association. Services provided include helping manufacturers: find partners, create business plans, design and implement quality programs and improve cost systems. In addition, the Association conducts research in the Ketchikan Wood Testing Center for the establishment of quality and strength specifications for Alaska lumber products. It conducts the lumber grading program for Alaska's sawmills and the salmon grading program for fishermen's co-ops in the state.

Fish Oil –
*Fish oil/diesel fuel mixtures were demonstrated to effectively burn in diesel power generation units in the UniSea fish processing plant. The fuel yielded emissions below the regulatory limits with no adverse wear.*

## BUSINESS KNOWLEDGE

The last three years has seen the beginning of Alaska's InvestNet, a non-profit organization aimed at bringing together the entrepreneurs with potential investors. The approach is to highlight and showcase the businesses searching for investment capital to investors interested in that type of venture. InvestNet also conducts training programs around the state on timely topics important to emerging companies.

## IT SHORTAGE

The Alaska Hi-Tech Business Council is an organization of companies in the information technology (IT) industry. The Council has worked with ASTF over the years on several activities. Recently it participated with ASTF, the University of Alaska, Charter College and the industry to define the needs of Alaska companies and government agencies for skilled IT workers. When the needs were defined, the recognition was reached that there was a shortage of trained individuals completing training in Alaska.

Science Lecture Series –
*Over 7,600 people attended the presentations, a 48 percent increase over the previous year.*

Education projects–
*K-12 Teacher Grants – Reports indicate that 86 percent of students involved in these projects have greatly increased interest in math, science, or technology. 85 percent have increased achievement.*

## THE TEAM

The matrix below illustrates how the ASTF team meets with requirements for economic development. Each has a primary role (**XX**) and secondary roles (XX) with some overlap. This breakdown of roles and responsibilities helps applicants find the assistance they need as they move from product inception through manufacturing and commercialization.

| Team Member | Innovative Product | Knowledge | Hi-Tech Workers | Venture Capital | Knowhow Network |
|---|---|---|---|---|---|
| ASTF | XX | | | | |
| Alaska Growth Capital | | | | XX | |
| Alaska InvestNet | | | | XX | XX |
| Alaska Manufacturers' Association | | XX | | | |
| Alaska Hi-Tech Business Council | | | XX | | |

ASTF has invested in four other partnership organizations to build infrastructure for technology-based economic development:

- $3 million to capitalize Alaska Growth Capital (BIDCO) matched by $3 million initially (now $11 million)
- $1.6 million to Alaska Manufacturers' Association matched by $2.5 million
- $0.6 million to Alaska InvestNet matched by $0.5 million
- $0.7 million to Alaska Hi-Tech Business Council matched by $0.6 million

**The Team**

# ALASKA Growth Capital

Alaska Growth Capital (AGC) is a commercial lending institution that is licensed and regulated by the State of Alaska. AGC makes loans to viable businesses that are deemed "too risky" by banks. It also provides financing for all business needs, including construction, lines of credit, permanent working capital, equipment and leasehold improvements. AGC was started in 1997 with a $3 million ASTF grant and $3 million in match from Arctic Slope Regional Corporation.

The AGC mission includes reaching out to nontraditional borrowers, targeting businesses that expand Alaska's economy. They accomplish this through loan services and consulting.

AGC customizes each financial package to meet the specific needs of the applicant. Loans range from $100,000 and up with terms from 1 to 15 years. Interest rates depend on the risk level of the venture. Many loans are guaranteed by the Small Business Administration or USDA Business & Industry. It also can make direct equity investments in businesses. By defining clear exit strategies on this type of investment, its money is retrieved once the company has achieved its financial goals. Characteristics they look for in applicants are: dedicated/experienced management; past performance; economic viability; market strengths; high profitability potential; and, a high potential for growth.

AGC offers two types of consulting services. First, before and after a loan is closed, managerial and financial advice is provided at no cost. It is in AGC's interest to assure the applicant's success. An extensive network of professionals can provide valuable assistance to their clients. Secondly, a unique approach to corporate planning is provided to non-borrowing clients on a fee basis. They help clients develop practical strategies, plans and goals that can be attained – grounded in the realities of the business world.

At year end AGC's portfolio included 27 loans totaling $9,486,254. Nine of these loans are guaranteed by SBA or USDA. These businesses generated $10.25 million in payroll.

ALASKA HI-TECH BUSINESS COUNCIL

Founded in 1996, the Alaska Hi-Tech Business Council (AHTBC) is the statewide computer and information technology industry trade association. With a mission to enable the growth and development of the technology sector in Alaska, the AHTBC provides member services and partners with other organizations in economic development initiatives.

The AHTBC in 1999 identified workforce development as a critical need for growth in the sector, which has experienced a significant shortage in technical workers. In a partnership with the ASTF, the council formed the IT Careers Consortium (ITCC) in 2000 to respond to the critical need for these technology professionals statewide – to increase both the quantity and quality of the tech workforce.

Cooperative programs with ASTF, technology industry and other government partners delivered nearly $2 million in training for information technology (IT) professionals in Alaska in 2001-2002.

One of these AHTBC / ITCC programs, partnered with the Anchorage & Mat-Su Workforce Investment Board, provided special federal grants to incumbent workers for updating and advancing their skills. The "H1B" grant program was established by Congress to reduce the number of foreign workers with H1B visas in high technology careers and by providing advanced training to Americans. The Alaska program has evolved as a national model.

From August 2001 through July 2002, the AHTBC approved 348 H1B applications from tech professionals for $715,048 in grants, representing 40 percent of training costs. Overall, 95 employers invested the 60 percent matching funding of $1.05 million for staff improvement. A total of 19 training providers delivered courses ranging from Microsoft certifications to Cisco, Oracle, GIS, telecommunications and other applications.

Data collected from the program also indicate that the average computer-training-hour cost in Alaska is $50.85, and that Alaska IT professionals currently earn an average salary of $23.68 per hour (generally on par with the overall national average in the industry).

Another partner in the $2.4 million H1B program, Mat-Su College, developed a new, two-year Computer Systems Technology AAS degree program that was approved by the University of Alaska Board of Regents in September 2002. The new degree program incorporates four computer industry certifications (A+, Net+, CCNA, MCSE) with soft skills, standard business courses and IT theory. It's the first such degree program in the state, and can be replicated at other campuses in the university system.

An ASTF-sponsored IT Fellowship program also invested $141,000 in training and development for new entrants into the industry. Fellows are matched with employers who mentor and guide them over a one-year period that leads to full-time, permanent employment.

As part of AHTBC's ongoing research on computer and IT skills demand, an industry survey during the summer of 2002 identified a series of employment and workforce trends in the Alaska information technology industry. Among them: the skills in highest demand are database developers and administrators (89 percent of employers citing as high or moderate need); network design and administrators (89 percent); technical support (82 percent); programmers and software developers (82 percent); certified LAN/WAN administrators (81 percent); and, information & data security specialists (81 percent).

IT vacancies over the year were projected at 498 jobs among 78 organizations. The Alaska Hi-Tech Business Council estimates that demand (vacancies) for IT professionals for 2002-2003 will total 700 to 950 positions, with a majority of these found in non-IT-related organizations. A total of 102 responses were included in the survey, with 75 percent related to the computer and technology industry, and 25 percent representing non-IT companies with a demand for technology workers.

From ASTF's original investment in the workforce development program, additional partnerships have been leveraged with the Information Technology Association of America, the US Dept. of Labor (Employment & Training Administration and Women's Bureau); the Computer Technology Industry Association (CompTIA) and the Anchorage & Mat-Su Workforce Investment Board.

During the year, the AHTBC joined with five other industry-based workforce groups in the formation of the Alaska Industry Skills Coalition, to work on issues of common concern to the information technology, hospitality, construction, health, seafood and oil and gas industries. The multi-sector industry workforce coalition is the first of its kind in the nation. Planned for late 2002–2003 is a multi-industry media project to promote Alaska careers, with the goal of retaining talent in Alaska.

ak/ma

**Alaska Manufacturers' Association**

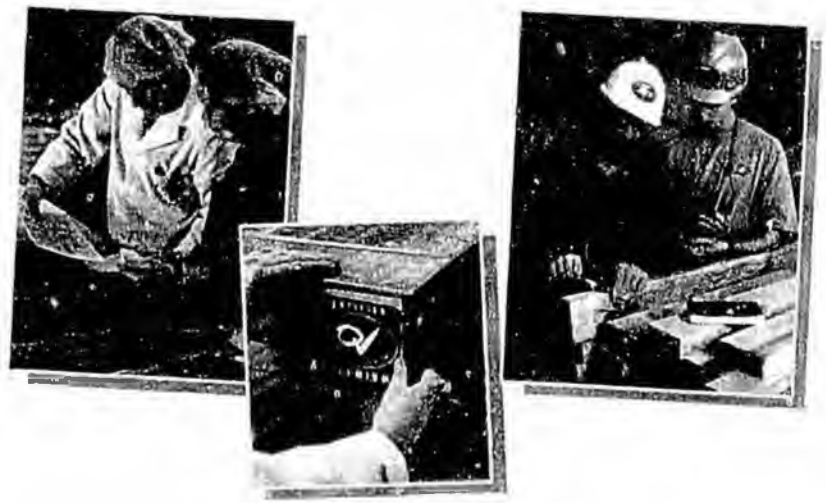
AKMA's Mission is "to strengthen the global competitiveness of Alaska-based manufacturing by providing assistance to small manufacturing firms in adopting new, more advanced manufacturing technologies, techniques and best practices. Further AKMA seeks to help remove barriers and encourage the development of systems that will support new formation and growth of manufacturing companies."

AKMA is the US Department of Commerce NIST Manufacturing Extension Partnership Affiliate for Alaska. This federal program helps fund centers to work with small manufacturers around the country and has had a significant impact on firms it has worked with. AKMA also is supported by funds from the US Department of Agriculture, the US Forest Service and fees for client assistance.

Manufacturing in Alaska has some unique characteristics. First, it is a very small activity compared to other states in total size and in percent of the economy. There are only about 100 manufacturers in the state with more then 20 employees. Second, two thirds of manufacturing employment in Alaska is in seafood processing. Distance and logistics are also huge barriers. Alaska has a world renown, unique resource in its seafood, and any strategy to help manufacturing should logically include a focus on that sector. In seafood the focus is on salmon. Farmed salmon has taken much of the market away from Alaska wild salmon. AKMA is working with salmon processors and fisherman in four regions to define a quality program, teach people the requirements, create an organization to monitor conformance to standards, create a quality brand and market the quality program to buyers. Alaskan wild salmon has many intrinsic properties that could make it a highly sought after product if it can be produced with a consistently high quality. Over 100,000 pounds of salmon were marketed last year under this program and at least one producer was able to get a premium price for its product.

Another area of focus is forest products. Forest products, while never the size and importance of seafood, also has some unique advantages, particularly some of the native woods that have both excellent decorative and structural properties. The lumber strategy is to help sawmills increase the value of the products. This effort started by helping mills produce graded lumber (on-going for three years), then worked with them to install dry kilns, and now while continuing earlier efforts is also working with the mills to help them learn how to use their kilns and other equipment more efficiently. Limitations on log supplies limit the size of mills but increasing the value of each log increases the success of the operations. At the same time, AKMA is testing Alaska wood species for strength values. This will increase the strength values in the building code and thus increase the value of the lumber and engineered wood products. AKMA is also helping companies produce engineered wood products, and assisting in finding new markets for products. The impact of all of these efforts can be significant. One mill has noted that each log now produces twice the revenue it did two years ago.

AKMA is also working with a variety of other manufacturers in Alaska, from small start-ups to larger well established companies. It is helping them find partners, create business plans, design and implement quality programs and improve cost systems.



Alaska InvestNet's (AIN) purpose is to create wealth and jobs. They accomplish this by linking Alaska's most talented and resourceful individuals to local financial support for their diverse enterprises, creating a natural synergy and successful business development. Alaska private equity investments keep entrepreneurial talent and businesses in Alaska, and entrepreneurs build fresh economic infrastructure with sales, new jobs and enduring wealth. AIN fulfills its purpose by providing education, facilitating business relationships, catalyzing the formation of venture capital in the state and fueling development. The businesses in AIN's current membership cumulatively generate $5 million in sales, employ 100 and are increasing in value over time.

In the mid-1990s ASTF began mobilizing forces to create a venture network – a logical extension of the mission to build an entrepreneurial economy. AIN was established in 1998. The AIN program focuses on educating entrepreneurs and investors on private equity financing issues and linking entrepreneurs with service providers who assist them to make their businesses attractive to investors.

Current strategy is to deliver quality core educational services and building business infrastructure in Alaska. This is accomplished in many ways. The signature event is the Capital Investment Conference held in early spring. It combines AIN's educational and networking activities with the Early Stage Venture Forum showcasing Alaska's top 10 companies seeking investments. Other activities include Venture Breakfasts and Investor Dinners, featuring entrepreneur's presentations.

HIGHLIGHTS FROM THIS YEAR:

The software and training company PeopleMatter, accompanied by InvestNet intern, Jeanne Huangli, made two successful presentations to Alaska investors. They received capital from a variety of angel investors and are currently attracting venture capital interest from the Pacific Northwest.

The character education program Tools For Life created by Chris and Vashti Young, was officially launched. A significant sale was made to a small country that purchased Tools for Life as the fundamental curriculum for all their schools.

GreatLand Laser licensed their first product last year and is on the way to licensing a second. In November, GLL began demonstrating their runway lighting system at the Ted Stevens International Airport.

In 2003, Alaska InvestNet will formalize its Entrepreneur in Residence program. Last year, AIN placed 10 InvestNet interns in the private sector. Donations support interns in Juneau and Anchorage, fund seminars and events, and help subsidize the KnowHow Network database. Special thanks to the Rasmuson and Kozmetsky Foundations for ongoing assistance.

With the help of Alaska Science & Technology Foundation, Alaska InvestNet is now a non-profit, statewide corporation with an active governance board.

We look forward to fueling Alaska's entrepreneurial economy in 2003.

Even though no new technology or knowledge projects were initiated in 2002, many ongoing projects attained high degrees of success. This section summarizes some significant accomplishments for FY02. Some covered in recent years are also briefly updated. Additionally, K–12 education projects, the university lecture series and K–12 high-tech training projects are updated.

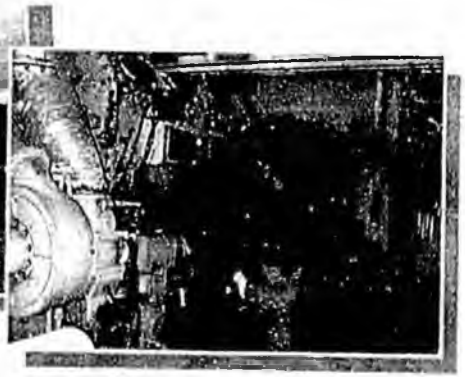
## 2002 Program Updates

### UNISEA FISH OIL DEMONSTRATION

UniSea, Inc., a fish processor in Unalaska, completed testing of fish oil as a supplemental fuel for diesel engines. Partially funded by ASTF, the UniSea Fish Oil Demonstration Project showed the practical use of blended fish oil and diesel fuel in one of the six 2.3-megawatt engine-generators UniSea operates to serve its seafood processing facilities in the Unalaska/Dutch Harbor community in the Aleutian islands with electricity.

Approximately 3.5 million gallons of fish oil are currently produced annually from pollock processing operations in Unalaska. More is produced in other locations in the Aleutian Islands, Kodiak and the Southeast coast.

*Unalaska/Dutch Harbor, Alaska, Seafood Processing Facility of UniSea, Inc. (October 1999)*



*UniSea Powerhouse Operators, Eraclio Benitez, left and Shane Elliott, right, take engine readings during Emission Source Testing (October 2001)*

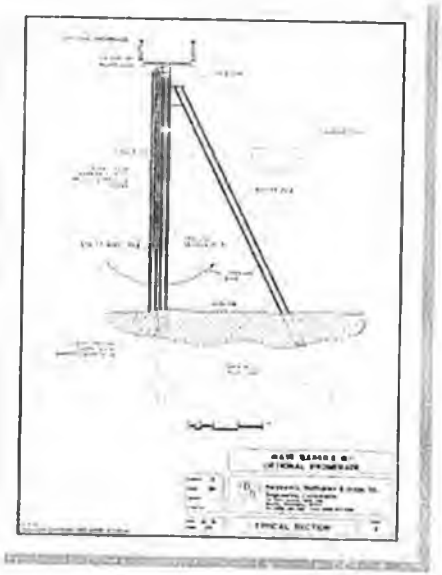
An independent contractor-tested engine exhaust emissions over a five-day period with fuel blends ranging from 100 percent diesel to 100 percent fish oil. Results yielded up to 30 percent reductions of airborne particulate matter and carbon monoxide and 45 to 90 percent reduction in sulfur dioxides with the use of blended fuel. The engine has operated normally throughout the testing with no apparent adverse effects from the change in fuel. The demonstration will next determine any long-term affects on the generators.

### WAVE BARRIERS

An ASTF knowledge project has had significant impact and resulting cost savings for Alaska marine construction. Dennis Nottingham, president of Peratrovich, Nottingham and Drage, applied for a grant to establish the relationship between the theoretical design calculations, small-scale model tests and a full-scale installed wave barrier. This allowed improved designs for this type of construction. The results have been used to design many structures and have resulted in design awards for two structures.

A permeable wave barrier is a pile-supported series of panels that form a wall oriented usually vertically and blocks wave propagation. It is permeable because it is open at the bottom, allowing water to move under it, minimizing environmental impact.

Because of its design, the wave barrier requires less material to build and decreases disturbance of the sea floor. This saves money and reduces impacts on the environment.



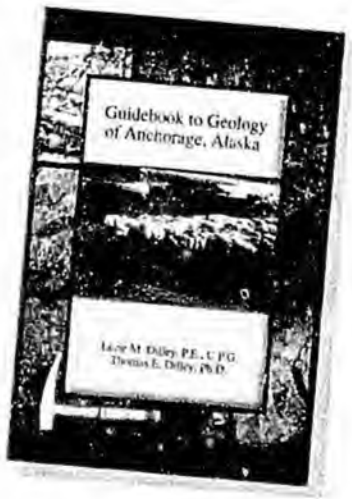
Previous work resulted in incomplete data which led to in an overly conservative estimate for construction designs. This study filled in the data gaps and permitted more precise designs. Installations have been completed in Alaska at Glacier Bay and Valdez, and in other parts of the US, including Pier 66 and Shilshole Marina in Seattle.

The Bell Street Pier in Seattle won the Deep Foundations Institutes 2001 Outstanding Projects Award Program's special recognition ward.

Inquires have been received from many places outside the US including most recently from Trinidad.

## GEOLOGY GUIDEBOOK TO ANCHORAGE

The authors of this guidebook recognized the need for the book from their work with geologists, city planners, biologists, developers, engineers, students and others over the years. A guide did not exist for professionals or lay people with an interest in the geology and geological history, or consequences of urban development of the Municipality of Anchorage from the Knik River to Girdwood. The authors wrote this guide to bridge the gap between highly technical manuscripts and non-technical light reading. The guide is the result of intensive literature research and extensive field work to select, examine and describe the various localites around Anchorage which best illustrate the variety of geological processes and hazards, and landforms.




The guide is 251 pages and is available in local bookstores and through Amazon.com.

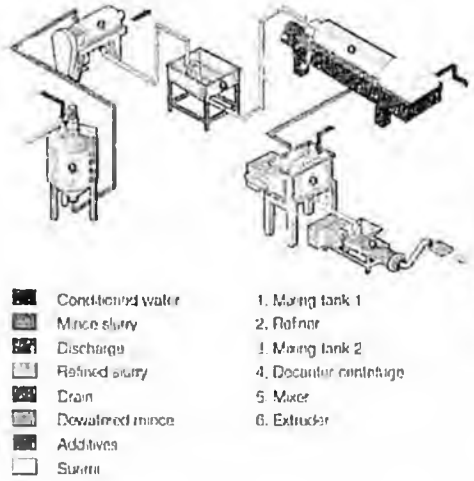
## NEW DECANTER SURIMI PROCESS

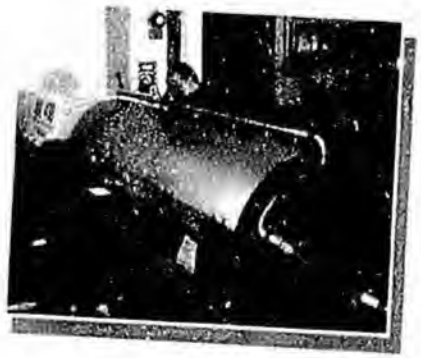
ASTF helped fund a project in Kodiak that demonstrated a new process to produce surimi, a highly prized product made from trimmings and waste from bottom fish processing (Pollock, cod, arrowtooth flounder, etc). The process proved to be simpler, less expensive and adaptable to smaller operations. Mock crab meat is one product made from surimi.

The application has resulted in $150 million in gross revenues to the industry in 2002. Japan dominates the market in consumption of surimi.

The new process employs centrifugation to remove the water and lower the moisture content to the critical range for high product quality. Alfa Laval, a process equipment supplier, developed the "decanter".

Previous methods for preparation of surimi used large quantities of fish waste and large amounts of process water. It is capital intensive to set up production. The industry needed a process that could be scaled more closely to the volumes of protein material available at Alaskan processing plants.



## EQUIPPING ALASKA STUDENTS FOR SCIENCE & TECHNOLOGY CAREERS

Students in Alaska are learning and applying science, math and technology through ASTF Direct Grants to Teachers classroom projects. This program provides Alaska K-12 teachers with support and up to $5,000 for innovative, hands-on classroom projects in math, science and technology.

In one Fairbanks middle school, social studies teacher Carl Addington, developed a teacher and student self-primer for applying geography information systems (GIS) data to create problem-solving information applicable to Interior Alaska. Addington's students digitally mapped the elevation of selected areas of the Tanana Valley using GPS receivers and altimeters, and using raw data of auto thefts from the Fairbanks Police Department created a Crime Analysis Study showing where and at what time of year auto thefts occurred in Fairbanks.

Sharon Gherman, ASTF's Outreach Administrator, reports that in the 2001-2002 school year, more than 2,700 students participated in ASTF teacher grant projects statewide. During this time, ASTF teacher grantees reported increased or greatly increased interest in math, science or technology by 86 percent of their students.

Even more importantly, the same teachers reported increased or greatly increased achievement in the sciences by 85 percent of their students. One teacher commented: "Since the beginning of this project, all but 10 percent of our students have passed standard areas in science and some have even completed two. Considering there are only six levels in our curriculum from K-12 that is a significant improvement in science standard achievement... interest and involvement is greatly increased among our student body."

Students in Alaska researched boat hull designs in relation to riverbank damage; used gases to create neon signs while studying physics; studied bill mutations in local chickadee populations; worked on DNA mapping; learned how groundwater becomes polluted by what we put on or in the ground; built and entered competitions with robots to learn higher-level thinking skills. They studied the relationship between soil moisture and birch tree sap production; performed volcanic ash analyses; and, built a fully-functional observatory.

## SHELLFISH HATCHERY UPDATE

The Qutekcak Shellfish Hatchery in Seward provided five species of bivalve seed stock to Alaska's mariculture industry and restoration projects over the last year. Demand for oyster seed was met, with just over five million shipped to the state's farmers. Half a million littleneck clam seed were shipped, also meeting the demand. Geoduck clam and rock scallop seed, both products of ASTF funded research, were shipped in limited commercial quantities for the first time, at 47,000 geoducks and 3,500 scallops. A trial shipment of cockles went to Metlakatla.

Demand for all species has increased markedly over the past year as the industry and demand grows. Farmers are recognizing the profit potential demonstrated in growout trials of new species, and are now acquiring the necessary permits for those species. Difficulty in acquiring permits, especially for on-bottom activities, has previously been a limiting factor, but regulations are being put in place which eases the process.

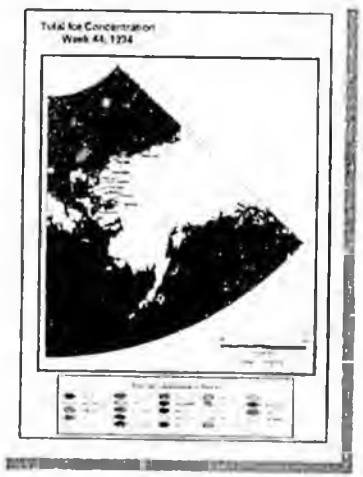
Restoration and enhancement programs continue to provide some market for seed, which is also expected to expand. Littleneck clam and cockle seed will go to existing and new programs in Seldovia, Nanwalek, Port Graham and Tatitlek. Others are in the permitting process. The Metlakatla tribe is starting restoration and farming projects, and plans to purchase several million clam and considering a million cockle seeds. TDX Corporation has taken the lead in organizing some Bering Sea communities to explore the potential for shellfish farming in their area. Some seed have been purchased and growout trials are underway. Results are encouraging, but not yet quantified.

Qutekcak Hatchery – *now selling five varieties of shellfish to producers. Oysters, littleneck clams, rock scallops, cockles and geoducks were identified by the industry as the needed species – now they are all being sold.*

## THE ALASKA SEA ICE ATLAS

The Alaska Sea Ice Atlas, led by UAA's Dr. Orson Smith, is intended to aid mariners, regulatory agencies, engineers and disaster response planners in the assessment of sea ice impacts on current and future logistical operations and construction works.

Precision and comprehensive coverage of reported ice conditions has increased during the last 17 years through use of satellite imagery and an expanding network of aerial, shipboard and coastal observations. The US National Ice Center (NIC) has recently compiled weekly summary ice reports from 1972 to the present (NIC 2001) The US National Weather Service also has archived periodic ice reports at different scales (NWS 2001). Furthermore, geographical information systems (GIS) and computer database software improvements make archiving, analysis and portrayal of geospatial information, much more practical to distribute as digital products via electronic media, especially on the Internet. The Alaska Sea Ice Atlas applies these new resources to improve the service offered by the earlier work. It incorporates NIC digital reports, the Cook Inlet Ice Atlas, meteorological data and simulated ice-related parameters.



GIS software is directly applied for planning and design decisions by computing geo-referenced parameters derived from a geospatial database. Availability of this service on the Internet assures streamlined transfer of technology to the widest possible population of ice information users.

## TECH LEADERS FOR THE 21st CENTURY

Tech Leaders for the 21st Century, funded by ASTF, is a partnership between the Kodiak School District, the Kodiak campus of the University of Alaska and local Kodiak Native organizations. Now approximately 90 percent complete, the project has been an excellent example of investing in Alaska's youth to increase Alaska's knowledge workers and assist local economic development.

One hundred refurbished computers were placed in the villages in and around Kodiak and students are receiving training that could lead to certification as a Microsoft Certified Systems Engineer. Six students have already passed the A+ hardware certification exam. All students in the web design program have prepared a commercial web page, and four of them have been hired by local businesses to design web pages. Kodiak students have all completed a minimum of 200 hours of computer mentorship.

The A+ program has been so successful the Kodiak School District has elected to fund the program for FY03. Discussions are being held with other Alaska school districts to both replicate this project and initiate new student technology projects around the state.

**FY02 Funds Expended by Sector**

| SECTOR | $ AMOUNT | # OF GRANTS |
|---|---|---|
| Agriculture | $ 85,826 | 3 |
| Energy | 40,300 | 1 |
| Engineering | 102,118 | 2 |
| Environment | 37,687 | 3 |
| Forestry & Wood Products | 4,871 | 1 |
| Fisheries & Aquaculture | 396,065 | 11 |
| Infrastructure for Economic Development | 386,113 | 4 |
| K–12 Teachers & Information Technology | 91,517 | 60 |
| Mining | 165,631 | 5 |
| Public Health & Safety | 75,614 | 4 |
| Software Development | 166,920 | 3 |
| TOTAL | $ 1,552,662 | 97 |

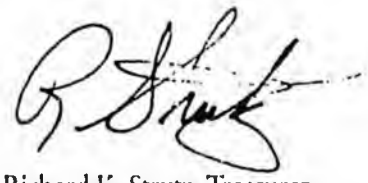
## FINANCIALS *Alaska Science & Technology Endowment Fund*

| | | |
|---|---|---|
| Total Fund Balance on June 30, 2002 | $ 101,019,000 | |

| **FISCAL YEAR 2002** | Actual | Legislative Appropriation |
|---|---|---|
| EXPENDITURES FOR ASTF PURPOSES | 1,552,662 | 9,214,200 |
| Grants | 986,734 | 1,277,700 |
| Operations | 2,539,396 | 10,491,900 |
| Subtotal Expenditures | | |
| LEGISLATIVE APPROPRIATIONS OF ASTF EARNINGS FOR NON-ASTF PURPOSES | | |
| University of Alaska | 876,667 | 2,630,000 |
| Alaska Aerospace Development Corporation | 185,067 | 566,200 |
| Subtotal Legislative Appropriations | 1,061,734 | 3,196,200 |
| TOTAL EXPENDITURES & LEGISLATIVE APPROPRIATIONS | $ 3,601,130 | 13,688,100 |

At its October 2001 meeting, the Board voted to distribute available funds prorata to ASTF, UAF and AADC.

| **FISCAL YEAR 2003** | Projected | Legislative Appropriation |
|---|---|---|
| EXPENDITURES FOR ASTF PURPOSES | | |
| Grants | 4,890,000 | 9,214,200 |
| Operations | 1,000,000 | 1,394,400 |
| Subtotal Expenditures | 5,890,000 | 10 608,600 |
| LEGISLATIVE APPROPRIATIONS OF ASTF ENDOWMENT FOR NON-ASTF PURPOSES | | |
| University of Alaska | 2,315,000 | 2,315,000 |
| TOTAL EXPENDITURES & LEGISLATIVE APPROPRIATIONS | $ 8,205,000 | 12,923,600 |



Richard K. Strutz, Treasurer

*Alaska Science & Technology Foundation 2002*

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