

PRINCE WILLIAM SOUND/COPPER RIVER AREA  
TRANSPORTATION PLAN

ASSESSMENT OF POTENTIAL  
FINANCIAL RESOURCES  
TECHNICAL MEMORANDUM

*DRAFT*

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# INTRODUCTION

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This technical memorandum constitutes a preliminary assessment of financial resources with which to support the transportation alternatives developed in the course of the Prince William Sound/Copper River (PWS/CR) Area Transportation Plan effort.<sup>1</sup> It considers local, regional, state, and federal funding sources – from local sales taxes to the federal gas tax. Included in this discussion is the recently reauthorized federal surface transportation funding legislation, known as TEA-21.<sup>2</sup> Consideration is also given to innovative funding strategies including public-private partnerships.

While the federal government is the major source transportation funding in Alaska, it is the Alaska Department of Transportation and Public Facilities (DOT&PF) that prioritizes, arranges, and administers the vast majority of capital projects. In addition, the State pays for maintenance and operations for State roadways, most Alaska airports, and the marine highway system. The resources necessary to accomplish these objectives are considerable.

DOT&PF, along with other State agencies, is under particular duress given the State's \$1 billion budget shortfalls for FY 1999 and 2000, due to the precipitous drop in worldwide oil prices. About three quarters of the State General Fund budget comes from oil taxes and royalties. In addition to budget cuts, austerity measures, and restrictions aimed to avert the short-term crisis,<sup>3</sup> Governor Tony Knowles, now in his second term, is working to develop a more diversified, stable revenue base, "rather than just be on the caboose of the oil price train and get whipped around" (*Anchorage Daily News*, January 14, 1999).

The element of the Governor's plan to balance the State budget most directly related to transportation is a proposed motor fuel tax increase. This proposed tax increase, which would apply to gasoline and diesel, but not aviation fuels, would raise the State's gas tax from 8 to 17 cents a gallon. Alaska's current motor fuels tax is the nation's lowest; even with the increase to 17 cents a gallon, it would rank as the country's sixth lowest (Dennis Poshard, special assistant to the Transportation Commissioner, personal communications, January 12, 1999). A key provision of the Governor's gas tax increase proposal is the stipulation that proceeds from this tax be tied to transportation expenditures.

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<sup>1</sup> This technical memorandum draws on work performed by KJS & Associates, Inc. on behalf of the Alaska Department of Transportation and Public Facilities for the *Southeast Alaska Transportation Plan*. Where applicable, material from the original Southeast report has been used, although many changes in organization, content, and graphics have been made to update the work and to reflect conditions particular to the PWS/CR area. Substantial reliance on this earlier work was specifically negotiated in the project scope of work in order to avoid duplication of effort.

<sup>2</sup> TEA-21 is an acronym that stands for Transportation Equity Act for the 21<sup>st</sup> Century. Its predecessor was ISTEA, the Intermodal Surface Transportation Efficiency Act.

<sup>3</sup> "Alaska's budget, which has been cut \$247 million since 1995 would continue to be reduced as Knowles directs State departments to achieve more efficiencies and consolidation in delivery services. According to the National Governor's Association, Alaska is the only state to have cut its budget over the past four years, despite population increases. At the same time, all other states, including 35 with Republican governors—increased their budgets an average 22 percent." State of the State Talking Points, January 21, 1999, "Balanced Budget Plan Keeps Economy Healthy," gov-list@list.state.ak.us.

Despite the scale and complexity of DOT&PF's responsibilities, it is important to note that DOT&PF's autonomy is more limited than that of most State departments of transportation because Alaska dedicates no revenue source to transportation purposes.<sup>4</sup> In fact, any such dedication is constitutionally prohibited. As such, Alaska's Legislature retains an unusual degree of control over the State's transportation programs and priorities.

Whereas most states have established highway trust funds, supported by State gas taxes, motor vehicle excise taxes, licensing fees, and other transportation-related user fees, transportation projects and programs must compete each year for General Fund appropriations with other pressing social and infrastructure needs, including education, health, and utilities. State revenue shortfalls, resistance to increased taxes, and constant legislative scrutiny mean that the pressure is on DOT&PF as never before to find ways to reduce its operating costs, secure the state match for federal funds, and meet growing demand for transportation facilities and services.

## OVERVIEW OF ALASKA'S TRANSPORTATION SYSTEM AND FUNDING SOURCES

Alaska's transportation system includes surface transport (rail, highway, and marine modes) and air. Federal monies (from a multitude of agencies) are the single most important source of funding for capital improvements. Statewide, by far the largest portion of funding is provided for surface transportation, which was recently reauthorized as the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). TEA-21 contains funding for the six-year period from 1998–2003. Its predecessor, ISTEA, covered the period from 1991–1997. TEA-21 encompasses programs administered by the Federal Highway Administration (FHWA), Federal Railroad Administration and the Federal Transit Administration (FTA). In 1996, it accounted for about 75 percent of total federal funding (ISTEA). Federal funding for air transportation, which the Federal Aviation Administration provides through the agency's Airport Improvement Program (AIP), accounted for about 21 percent of Alaska's federal aid in that year. The remaining 4 percent of federal funding came through the U.S. Army Corps of Engineers (COE) for ports and harbor projects.

Statewide, the largest source of federal funding for surface transportation facilities and services has been from the Highway Trust Fund. Under ISTEA, appropriations to Alaska totaled \$1.36 billion over the period 1992–1997, or an average of \$227.1 million per year.<sup>5</sup> Under the recently passed TEA-21, Alaska did quite well. Under TEA-21, Alaska's apportionment from the Highway Trust Fund rose from 1.166 percent to 1.191 percent, while the overall pot from which this share is drawn also increased. The bottom line is that Alaska's authorized federal apportionment has increased by over 47 percent. However, since Congressional appropriations for transportation programs are generally lower than the amount authorized, DOT&PF anticipates an incremental, rather than large increase in federal funding levels.

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<sup>4</sup> Currently, the State's only source of dedicated revenue is the International Airport Revenue Fund, a sub-fund of the General Fund, which supports operation and maintenance of Alaska's two International Airports. There are other sub-funds that are typically used to support DOT&PF operating programs, including the AMHS Fund and Highway Equipment Working Capital Fund. However, these are not *dedicated* funding sources. Revenues from various fees, charges, and taxes go into the General Fund and are typically appropriated back to DOT&PF as program receipts with which to operate specific programs.

<sup>5</sup> Although these figures represent the distribution of spending authority according to formulas established in authorizing legislation, they do not reflect obligation limitations—the ceiling on the amount of obligations that can be incurred each year. In 1997, the obligation limitation was 87.3 percent of total appropriations to the State.

Federal aviation funding is disbursed under the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP). Congress funded the AIP for half of fiscal year 1999, as opposed to the usual full-year funding. A two-month extension of the AIP was signed into law by the President on March 31, 1999. AIP funding to Alaska has averaged around \$63 million a year over the period from 1991 to 1997, although the FAA's Alaskan Region Airports division issued \$45 million in AIP grants for the first six months of FY 1999. This compares with \$81.2 million issued for all of FY 1998 ([http://www.tc.faa.gov/NM/news\\_releases/aal/99-34](http://www.tc.faa.gov/NM/news_releases/aal/99-34)).

Two other federal programs, the Essential Air Service Program (EAS), administered by the Federal Aviation Administration, and Bypass Mail program administered by the US Postal Service constitute two other important (although indirect) sources of support for Alaska air service. EAS in Alaska, which is funded through the FAA, costs the federal government \$1.9 million a year. Bypass Mail in Alaska, which is administered by the US Postal Service (USPS), costs the federal government over \$95 million a year. Each of these funding programs is detailed in a subsequent section of this report.

Funding for ports and harbors, upon which residents of the Prince William Sound/Copper River area, in particular, are dependent for both commercial and transportation purposes, is volatile. This is because there are so few federal resources devoted to this mode. While the COE funds some navigation projects, the overall levels of funding are quite low – and nowhere near the levels provided for surface transportation or aviation.

## TRANSPORTATION PROJECT SELECTION IN ALASKA

In Alaska, similar processes determine the nomination, ranking, and funding of transportation projects, regardless of mode. Typically, nominations are solicited from a broad range of constituencies and compiled into a master "Needs List." Needs List Items are then ranked according to multiple selection criteria. Surface transportation projects, including National Highway System, Alaska Marine Highway System, Community Transportation Program, and Trails and Recreation Access for Alaska projects, are prioritized in the three-year Statewide Transportation Improvement Program (STIP). Top-ranked projects are matched with available funding and scheduled for construction. Aviation projects and port and harbor projects undergo similar processes, although they are not included in the STIP, but listed in separate documents.

Until recently, funding for Alaska's transportation infrastructure was allocated to each of the State's three regional offices, which then determined which projects within each region would be funded. This system was replaced in 1996 with a statewide open project selection process. DOT&PF explained the reason for the shift to the new project selection process,

Alaska's transportation needs are not well served by this (regionally based) method of allocation as there are no readily identifiable factors that equitably allocate funds on a geographic basis. Measurable parameters such as population, land area, vehicle miles traveled, or existing road miles create one or more imbalances. Using population as an allocation tool fails to consider the need to connect far-flung communities separated by largely unpopulated regions. Using land area as a factor underserves more densely populated areas that need high-level investments in transit, or grade-separated highways. Using vehicle miles traveled or existing road miles is unfair to communities that lack roads or that need buses or ferry service. Alaska's extremes of climate and landscape and vast expanses require that large segments of the population rely on ferries, winter trails for sleds and snow machines, and other non-conventional means of surface transportation. In this setting it appears that the most equitable allocation method is statewide competition. The key is balancing the

criteria such that projects of greatly different scale and type can be compared (*Statewide Transportation Improvement Program, 1996-1998, DOT&PF, May 1996*).

New project selection criteria were also adopted in 1996, giving priority to projects that include local community/user contributions. Under this new system, projects are initially evaluated at the regional level using statewide criteria. In the next step, the highest-scoring projects are forwarded for evaluation at the statewide level.

# FUNDING SOURCES: THE FEDERAL ROLE

## SURFACE TRANSPORTATION

The primary funding source for surface transportation projects in Alaska is federal-aid highway funding, which flows through two U.S. Department of Transportation administrations: the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Although some federal funding is provided to states as a lump sum, most is apportioned to specific programs, including the National Highway System, the Surface Transportation Program, Interstate Maintenance, Bridge, and Congestion Mitigation and Air Quality Improvement (Table 1).

Table 1  
Major Federal Surface Transportation Funding Programs

<b>Apportionment Category</b>	<b>Description</b>	<b>Federal Share</b>
Interstate Maintenance	Resurfacing, restoration and rehabilitation of the Interstate Highway System	93.4 percent
State Planning and Research	Planning, research, statistical measurements, engineer and economic studies and applied research	80 percent
Bridge Rehabilitation and Replacement	Replacement or rehabilitation of substandard bridges with a span of 20' or more on and off the federal system	80 percent
National Highway System	Funding for Alaska 2,1000 miles of designated NHS highways, 1,900 miles of ferry routes and eight AMHS vessels	90.7–93.4 percent
Safety	Hazard elimination and railroad crossing and protective devices based on accident history	90 percent–100 percent
Surface Transportation Program	Road construction, resurfacing, etc. and transit projects. Must include 10 percent each for safety and enhancement projects	90.7–93.4 percent
Scenic Byways	Discretionary funds for planning, design, and development of scenic byways on existing designated highways	100 percent
Ferry Boat Discretionary Funds	Construction of ferry boats and/or terminal facilities on NHS routes	80 percent
Elderly and Persons with Disabilities	To private and non-profit agencies for capital improvements and for the provision of transportation services to the handicapped and elderly	80 percent
Nonurbanized Area Formula Program	Public transit activities outside of Anchorage. Includes Rural Transit Assistance Program	50–80 percent
Federal Lands Highway Program	Road improvements on federal lands, including Bureau of Indian Affairs, U.S. Park Service, U.S. Forest Service	NA

Apportionment Category	Description	Federal Share
Minimum Guarantee	Provides that each state receives a share of the total annual Highway Trust fund apportionments based on the state's estimated gas tax payments. Funding for special projects is included in the calculation, along with other programs and formula funding.	NA
Discretionary Bridge Program	For the replacement or rehabilitation of high-cost deficient highway bridges and for the seismic retrofit of highway bridges	80 percent
Public Lands Discretionary	Provides funding for a coordinated program of public roads and facilities serving federal lands.	100 percent

## TEA-21 DISTRIBUTION PROCESS AND MECHANISMS

Nationwide, the six-year, \$218 billion Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) authorizes a 40 percent increase in spending over six years from current levels. Alaska's authorization level increased by an even greater percentage: 47.3 percent. However, it must be noted that given low State General Fund revenues due to the funding shortfall that is in turn attributable to low oil prices, the legislature may decide that the match needed for maximum federal funding may not be politically affordable in the short term. The higher overall authorization level was achieved not by raising taxes, but by setting the spending level equal to the previous year's gas tax revenues, and consciously disallowing the diversion of gas tax revenues for deficit reduction. Its supporters point out that even though this level of funding increase is substantial, that the amount authorized is still less than a quarter of what is needed "to improve the condition of aging roads and crumbling bridges, based on a study by the American Society of Civil Engineers" (*Congressional Quarterly* 1998).

A key outcome of the legislation was the adjustment in Alaska's apportionment, which rose from 1.1660 percent to 1.1915 percent. Under various reauthorization proposals, Alaska's reapportionment had ranged from a low of 0.78 percent to a high of 1.301 percent. Of all states, Alaska experiences the highest rate of return on its gas taxes paid. Whereas many pay in more than they get back, Alaska receives over \$5 in federal funding for every gas tax dollar paid in. Given that some had feared that Alaska's 1.166 percent apportionment would fall (KJS 1996), the 2.1 percent increase in apportionment was a very positive outcome for the State.<sup>6</sup>

Since passage of TEA-21, the amount of funding anticipated from both FHWA and FTA programs has increased substantially, as reflected in funding estimates from (1) the *1998-2000 Statewide Transportation Improvement Program* published in February 1998; and (2) the *1998-2000 Statewide Transportation Improvement Program Major Amendment #11*, published in January 1999. Compared to the initial STIP released in February 1998, the STIP Amendment #11 anticipates about 26 percent more money from highway programs and over 37 times more funding from FTA sources (due to innovations in the Ferry Boat Discretionary program). The increase in anticipated FHWA funding is shown in Table 2, while the much larger percentage increase in FTA funding is shown in Table 3.

<sup>6</sup> The state with the largest gain was Georgia, whose funding leaped by 69.7 percent. Meanwhile, Massachusetts, the only state with a negative change, lost 41.2 percent over its previous ISTEA funding level.

Table 2  
Increased Anticipated FHWA Funding due to TEA-21 Authorization

	Anticipated FHWA Funding Levels 1999	Anticipated FHWA Funding Levels 2000
Initial 1998-2000 STIP Total Federal FHWA Funding Anticipated*	\$313,550,000	\$296,350,000
1998-2000 STIP Major Amendment #11 Total Federal FHWA Funding Anticipated**	\$425,561,200	\$398,666,400
Percent Increase	26.32%	25.66%

\*The source for these figures is the *1998-2000 Statewide Transportation Improvement Program*, DOT&PF February 1998. "Federal Highway Administration-Assisted Program Fiscal Summary," p. A-1. This figure was derived by subtracting State match from Total Program Funding. \*\*The source for these figures was the *1998-2000 Statewide Transportation Improvement Program Amendment #11 (Major)*, January 1999, "Federal Highway Administration-Assisted Program Fiscal Summary," p. B-1.

Table 3  
Increased Anticipated Federal Transit Administration Funding  
Due to TEA-21 Authorization

	Anticipated FTA Funding Levels 1999	Anticipated FTA Funding Levels 2000
Initial 1998-2000 STIP Total Federal FTA Funding Anticipated*	\$520,800	\$520,800
1998-2000 STIP Major Amendment #11 Total Federal FTA Funding Anticipated**	\$19,442,200	\$17,303,100
Percent Increase	3,733%	3,322%

\*The source for these figures is the *1998-2000 Statewide Transportation Improvement Program*, ADOT&PF February 1998. "Federal Transit Administration-Assisted Program Fiscal Summary," p. B-1. This figure was derived by subtracting state and local match from Total Program Funding. \*\*The source for these figure was the *1998-2000 Statewide Transportation Improvement Program Amendment #11 (Major)*, January 1999, "Federal Transit Administration-Assisted Program Fiscal Summary," p. C-2.

#### AUTHORIZATION VS. APPROPRIATION

Under ISTEA, about 85 percent of highway authorization was eventually appropriated. Transit, however, did not fare as well, with about 70 to 75 percent of the amount authorized ultimately being appropriated. However, TEA-21 has been crafted to change the relationship between authorization and appropriation in two ways: (1) TEA-21 creates budgetary "firewalls" around transportation funding; and (2) TEA-21 for the first time ties transportation funding levels to HTF receipts on an annual basis; this is done via a mechanism called Revenue Aligned Budget Authority (RABA). Each of these is summarized below.

## TEA-21'S BUDGETARY "FIREWALLS"

In an important departure from ISTEA that is intended to preserve the integrity of critical transportation funding, a substantial portion of transportation spending has been taken "off budget," i.e., it will no longer be subject to the discretionary budget cap governing other non-mandatory spending.<sup>7</sup> This was accomplished by creating a separate budget category outside the domestic discretionary cap for a significant proportion of federal transportation funding. More simply put, cuts in transportation funding will no longer (or at least to as much of an extent) allow Congress to appropriate more for other discretionary programs, such as education or defense.

Of the \$216.3 billion authorized in TEA-21, \$198 billion has either already been appropriated or is guaranteed to be spent under new provisions that establish budgetary "firewalls" around the federal highway and mass transit programs. The guaranteed spending for highways is \$162 billion, which includes \$157 billion for funds distributed to the states and about \$5 billion for mandatory programs such as emergency relief and minimum allocation. Guaranteed spending for mass transit amounts to \$36 billion of the \$42 billion authorized (Table 4).

Table 4  
TEA-21 Nationwide Transportation Funding Levels  
Authorized vs. Funding Levels Guaranteed

	Highway	Mass Transit	Total
Total Authorized	\$175 billion	\$42 billion	\$217 billion
Minimum Guarantee	\$162 billion	\$36 billion	\$198 billion
Percentage Guaranteed	92.57%	85.71%	91.24%
Amount beyond Minimum Guarantee	\$13 billion	\$6 billion	\$19 billion

Assuming that the percentage of authorized funding that Alaska actually gets due to the minimum guarantee is similar to the nationwide percentage, the State can expect an average of \$289 million a year in TEA-21 apportionment funding through the life of TEA-21. Allocations from discretionary programs would raise the total beyond this minimum guarantee (Table 5).

Table 5  
Minimum Guarantee Assumption under TEA-21

Authorized under ISTEA (annual average)	\$211,780,000
Authorized under TEA-21 (annual average)	\$311,860,000
Minimum Guarantee assumption under TEA-21 (\$311,860 * 0.9257)	\$288,689,000

<sup>7</sup> Federal spending falls into two broad categories: mandatory and discretionary. Mandatory spending includes Social Security, Medicaid, Medicare, other means-tested entitlements, and a miscellaneous assortment of programs that includes federal retirement and insurance programs, unemployment insurance, and payments to farmers. The fastest growing element of the federal budget by far, mandatory spending accounts for a whopping 68 percent of all federal outlays. Discretionary funding accounts for the remaining 32 percent. Of this 32 percent, defense spending accounts for 15 percent, and all other programs, including transportation, are funded out of the remaining 17 percent. Given that so many needs must be funded out of a relatively small portion of the budget, it is not surprising that transportation priorities have often been sacrificed to Congressional leaders' political agendas. The budgetary firewalls developed in TEA-21 are designed to protect transportation funding by establishing minimum guaranteed levels.

### *Revenue Aligned Budget Authority (RABA)*

The firewalls established under TEA-21 are structured not only to set most transportation funding aside from the discretionary spending cap, but also for the first time, tie the level of transportation expenditure to highway trust fund revenues. In effect the bar indicating the minimum will rise or fall with fluctuations in HTF revenues.<sup>8</sup> The mechanism by which such adjustments will occur (for the first time in FY 2000) is called "Revenue Aligned Budget Authority" (RABA). More simply put, the firewall level itself will float with annual fluctuations in HTF revenues. The bar is expected to rise substantially in FY2000, in so far as HTF revenues exceed projections by \$1.45 billion.

The HTF, which was established in 1956 to finance the Interstate Highway System, generates some \$24 billion a year. The largest component of the HTF is the 18.4 cent a gallon gasoline tax. Taxes on diesel, other fuels, tires, truck and trailer sales, and heavy vehicles also flow into the HTF. In the past, outlays from the HTF have been substantially lower than income. While total income over the HTF's history has summed to \$394.3 billion, outlays have amounted to only \$371.8 billion, leaving the HTF with a \$22.4 billion surplus.<sup>9</sup>

Section 110 of Title 23 authorizes contract authority in an amount equal to the additional obligation limitation. Each year, the RABA level will be determined based on new HTF information and revised revenue projections from the Department of Treasury. TEA-21 legislation also specifies how the RABA adjustment is to be distributed. First, a determination is made of the proportion of federal-aid highway program authorization in allocated (non-apportioned) programs versus apportioned programs. Then, based on this split, all allocated programs receive a share of RABA based on their relative proportion of all such programs, including Federal Lands Highway programs, and High Priority projects.

Given that the administrative aspects of this new method have not yet been worked out in practice, it is difficult to predict exactly the amount of Alaska's share. However, it is clear that RABA could substantially increase Alaska's level of federal funding. To make a crude estimate, assuming that Alaska's share of the added RABA funding will correspond in some way to the State's apportionment share under TEA-21, which is 1.191 percent, Alaska stands to gain in the neighborhood of an additional \$17.3 million for FY 2000 (Table 6).

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<sup>8</sup> Congress will of course be free to appropriate transportation funding above and beyond minimum guarantee; however, appropriations in excess of minimum guarantees will be subject to the discretionary spending cap.

<sup>9</sup> While the HTF must maintain a positive balance to ensure that prior obligations can be met, Congress has acted through TEA-21 to spend part of this balance on much needed transportation improvements. However, a minimum balance of some \$7 billion will remain in the HTF. This "cushion," which is equivalent to about three months worth of expenditures, will ensure that funds are available to reimburse states in any emergency situation.

Table 6  
Minimum Guarantee Assumption under TEA-21 Due to RABA

	<b>Anticipated Funding Level 2000</b>	<b>Plus Possible RABA Increase</b>	<b>Total</b>
Anticipated FY 2000 Total Federal Funding Level (FHWA and FTA)	\$415,969,500*	\$17,269,500	\$433,239,000
Percent Increase due to RABA		4.15%	

\* The source for these figures is the *1998-2000 Statewide Transportation Improvement Program*, DOT&PF February 1998. Federal Highway Administration-Assisted Program Fiscal Summary," p. B-1 and "Federal Transit Administration-Assisted Program Fiscal Summary," p. C-2. This figure was derived by subtracting state and local match from Total Program Funding

### FERRY BOAT FUNDING

One feature of TEA-21 that is of special interest to Alaska is its provision for ferry boat funding. Two developments in ferry boat funding (in addition to the existing FBD (327) program) under TEA-21 are noteworthy. First, the Federal Highway Administration Ferry Boat Discretionary Program [1207] is intended to fund the construction of ferry boats and terminal facilities. This program continues funding from the Highway Trust Fund, and the federal share remains at 80 percent. Of the \$39 million authorized, \$20 million per year is earmarked for the states of Alaska, New Jersey, and Washington. Alaska's earmark is \$10 million per year, while Washington and New Jersey's shares are \$5 million per year each. Alaska is also eligible to compete for the other \$19 million that is available through the non-earmarked portion of the program. TEA-21 expands eligibility for ferry boats and terminals beyond those that are publicly owned to also include those that are publicly operated or those that are majority publicly owned and that provide "substantial" public benefit.

The second development is FTA's Transit Ferry Boat Program [3009(g)], under which a total of \$14 million a year for FY 1999-2003 is authorized to be set aside from the New Starts program under Transit Capital Investment Grants and Loans for capital projects in Alaska or Hawaii. Hawaii is thought to be unlikely to qualify for this funding until at least 2002. It is likely that DOT&PF will be blending both FTA and FHWA funding for auto and passenger ferries. This blending of FTA and FHWA funding will make project development somewhat more complex insofar as two agencies' administrative requirements and criteria, rather than one, will have to be met.

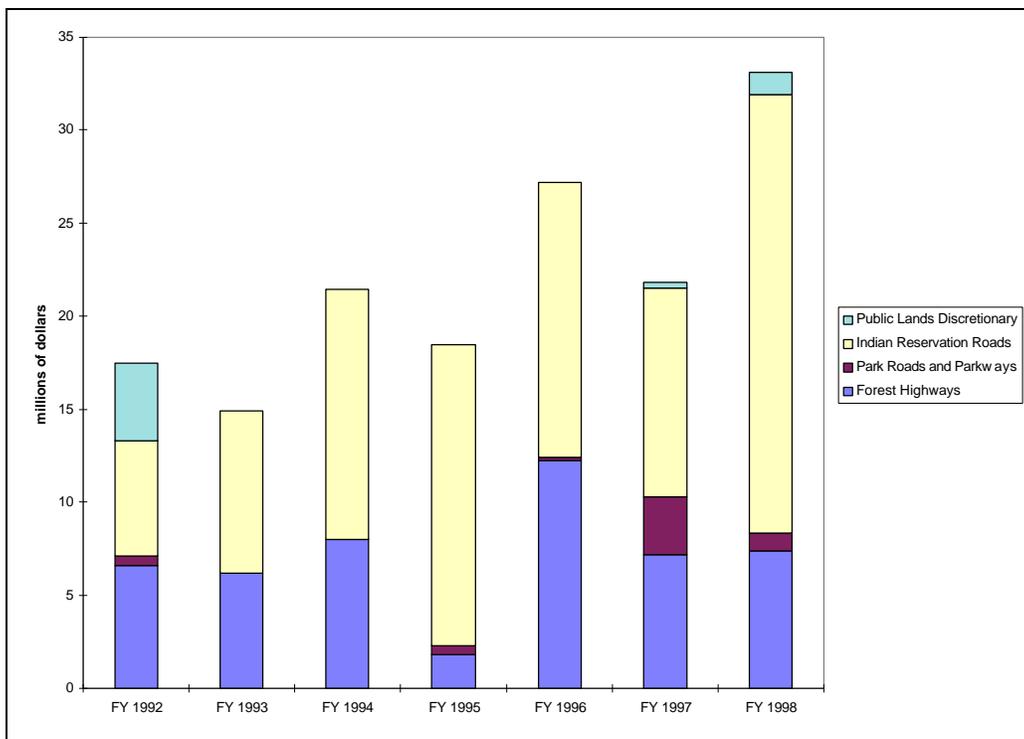
### Federal Lands Programs

Unlike most TEA-21 programs, federal lands monies are not apportioned according to formulas prescribed by Congress. Rather, funds from these programs are allocated administratively. For instance, the Bureau of Indian Affairs (BIA) is given upwards of \$200 million per year, which it distributes to tribes and native organizations across the country according to its own administrative criteria. BIA money can be used under "force account," wherein, essentially, local government acts as general contractor and employs local labor. This is distinct from FHWA funding, which is generally not eligible for use in this manner. Meanwhile, funding from the Public Lands Discretionary Program considers competitive applications on a nationwide basis. Programs in the Federal Lands Highway Program include the Forest Highway Program, Park Roads and Parkways, Indian Reservations Road Program, Public Lands Discretionary, and Emergency Relief Programs. Over the past six years, Alaska has received funding fairly consistently from the

Indian Reservation Road Program, and the Forest Highway Program but sporadically from others (Figure 1). Overall, funding for the Federal Lands Highway Program is a somewhat unpredictable source of long-term funding, particularly in light of recent political attacks at the national level, labeling the program as “corporate welfare” (Salant 1997). Preliminary estimates indicate that Alaska will receive about \$16.6 million each in FY’s 1999-2001. Native associations will be actively participating in the establishment of needs and prioritization of projects. There may be opportunities for local communities to work with these associations to provide matching funds for mutually beneficial projects. In the near term, however, it may be difficult to develop such joint projects because of BIA hiring rules and Alaska’s constitutional prohibition against hiring discrimination.

In any case, some changes appear to be underway in the Forest Highways Program. Historically, these funds have been used to improve existing roads on US Forest Service (USFS) land, with an emphasis on upgrading logging roads and turning them over to the State for operation and management. Recently, however, the emphasis appears to be on managing the transportation impacts on land owned by the USFS. For example, the Auke Recreational Bypass (Juneau) is a new route that improves road safety and recreation access on the way to Echo Cove. The USFS is willing to contribute to the road cost because the bypass provides better separation of uses on USFS land by routing traffic away from recreational areas. Project selection for improvements funded with Forest Highways Program monies undergoes a tri-agency process involving the FHWA, the USFS, and DOT&PF. This change is likely a natural progression as timber harvests on federal forest lands decline and as recreational uses are emphasized.

Figure 1  
Federal Lands Allocations to Alaska, 1992-1998



Sources: <http://www.fhwa.dot.gov/flh/overview>; <http://www.fhwa.dot.gov/flh/reports/indian/intro.htm>; Cynthia Bobik, Federal Lands, FHWA, personal communications, October 14, 1998.

## Special Federal Appropriations

### *The Denali Commission*

In another special appropriation, Senator Ted Stevens led Congress in establishing a seven-member Denali Commission<sup>10</sup> the purpose of which is to concentrate the resources of government and private enterprise on the problems of rural Alaska. Jeff Staser, formerly a legislative aide to Senator Stevens will serve as the Commission's first administrator.

According to Governor Tony Knowles, the Commission's mission is broad, and as yet, not clearly defined. "In a broad sense, it will direct itself toward sound economic development in rural Alaska. There is no issue more important to Alaskans." Congress has initially provided the Commission with \$20 million in seed money for use in establishing operations and conducting studies that will determine areas of need. By the end of FY 1999, some observers expect that the Commission will have been provided with up to \$60 or \$80 million for basic infrastructure services including clean water, sewage systems, electric energy, and transportation (*Anchorage Daily News*, February 27, 1999).

The Commission's first appointees were as follow: Julie Kitka, president of the Alaska Federation of Natives; Mark Hamilton, president of the University of Alaska; Mano Frey, executive director of the state AFL-CIO.; Heinrich Springer, executive director of the Associated General Contractors of Alaska; and Kevin Ritchie, executive director of the Alaska Municipal League. According to Staser, the Denali Commission will target areas where unemployment is high and where economic development is hindered by a lack of programs and/or infrastructure (Jeff Staser, personal communications, 1/12/99). One important goal of the Denali Commission will be to reduce bureaucratic gaps and inefficiencies by taking the decision making power for a systematic range of infrastructure programs and services out of the hands of federal bureaucrats in Washington, D.C. and put them into the hands of Commission.

## AVIATION

Aviation funding, which is administered through the FAA's Airport Improvement Program (AIP), takes two primary forms; (1) entitlements, which are apportioned to states based on objective criteria established by Congress; and (2) discretionary funding, which is allocated after the entitlement obligations have been met, and in which case airport capital projects compete on a nationwide basis for funding in various categories. Unlike surface transportation spending, which is authorized every six years, federal aviation funding is authorized on a yearly basis.

The AIP is supported primarily through an excise tax on airline ticket sales. AIP money can be used for capital projects, while the sponsor (DOT&PF in almost every case) is responsible for maintenance and operations costs. "In Alaska paying for airport maintenance and operations is more of a concern than funding capital projects" (*Alaska Aviation System Plan Update*, March 1996). The State's role in airport sponsorship is reflected in the selection process for airport capital projects. Project nominations are generated by DOT&PF, which evaluates aviation projects at the regional level, then ranks top regional projects according to statewide criteria. The Aviation Project Evaluation Board (APEB) which is made up of DOT&PF's three regional directors, statewide planning director, and deputy commissioner responsible for aviation, ranks the

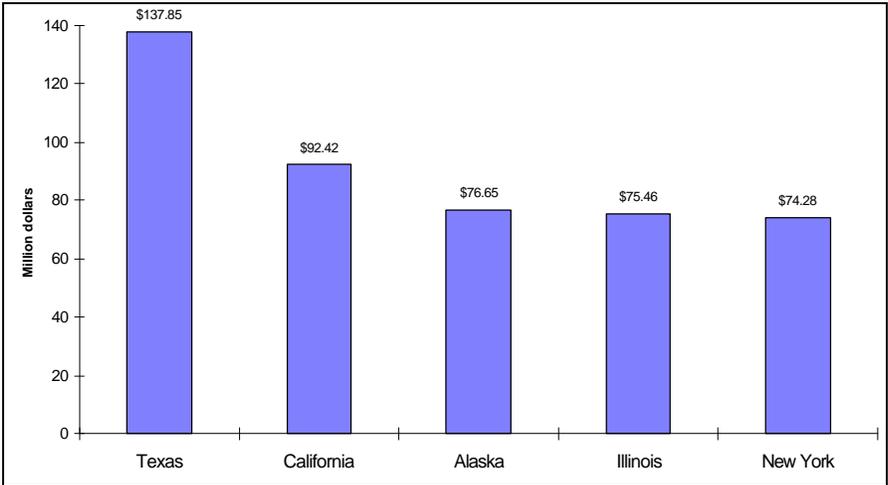
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<sup>10</sup> The Denali Commission is modeled after the Appalachian Regional Commission which oversees and funds infrastructure and economic development projects across 13 eastern states.

projects for funding. The APEB process for potential airport projects very closely parallels the PEB process for roads.

Alaska competes quite well compared with other states in terms of the amount of federal aviation funding received, ranking third after Texas and California (Figure 2). Alaska's highest levels of aviation funding reflect the critical importance of air transport to its residents, 30 percent of whom are not served by roads connected to the continental road network. Moreover, Alaska has more airports than most states, and more airports that do not meet national safety standards. The extremely high cost of airport construction in remote and environmentally inhospitable areas of the state is another reason for the State's relatively high funding levels.

Figure 2  
Alaska Ranks Third Nationwide in AIP Funding  
FY 1997



Source: "Airport Improvement Program, FY 1997: Number of Grants Awarded and Total Amount," <http://www.faa.gov.aip>

### AIP Programs

While some AIP funds can be pooled for flexible use statewide, others can only be used for specific types of projects at specific airports. Between 1992 and 1997, Alaska has received an average of \$49.1 million in entitlement funding per year, and an average of \$15.2 million in discretionary funding.

#### ENTITLEMENT PROGRAMS

**Passenger Entitlements.** Primary airports (those serving 10,000 or more enplanements annually) receive funding based on the number of passengers enplaned. These funds can only be used for capital improvements. Of the seven airports in the Prince William Sound/Copper River area, two, Cordova and Valdez, are primary airports.

**Cargo Entitlements.** Airports that handle at least 100 million pounds of cargo a year receive entitlement funding. None of Prince William Sound/Copper River area's airports approaches the 100 million pound threshold. In fact, Anchorage and Fairbanks are the only airports in Alaska that do receive cargo entitlements.

**State Apportionments.** Each state receives funding based on state population and area. State apportionment funding can be used at any non-primary airport.

### *ALASKA SUPPLEMENTAL*

Currently 46 large and 124 small airports in Alaska have “grandfathered entitlements” of nearly \$11 million annually. There are not individual entitlements for the grandfathered airports. The entitlements will cease as each airport reaches 10,000 enplanements annually and becomes eligible for passenger entitlements. The grandfathered funding is a percentage of authorization, rather than a fixed amount. No grandfathered airport has an entitlement specific to the airport, and some grandfathered airports may never receive any funding from the supplemental pot. The \$10.7 million pot can be used at the grandfathered airports only, but these airports may also receive Alaska Supplemental funding. Although there is no “expiration date” associated with the supplemental funding, the potential for losing the supplemental funding increases with time. Major factors affecting this are:

- financial pressure, both to reduce federal appropriation levels and by other states to get a larger piece of the pie; and
- changing perspectives regarding unique circumstances in Alaska that require special consideration.

### *POOLING*

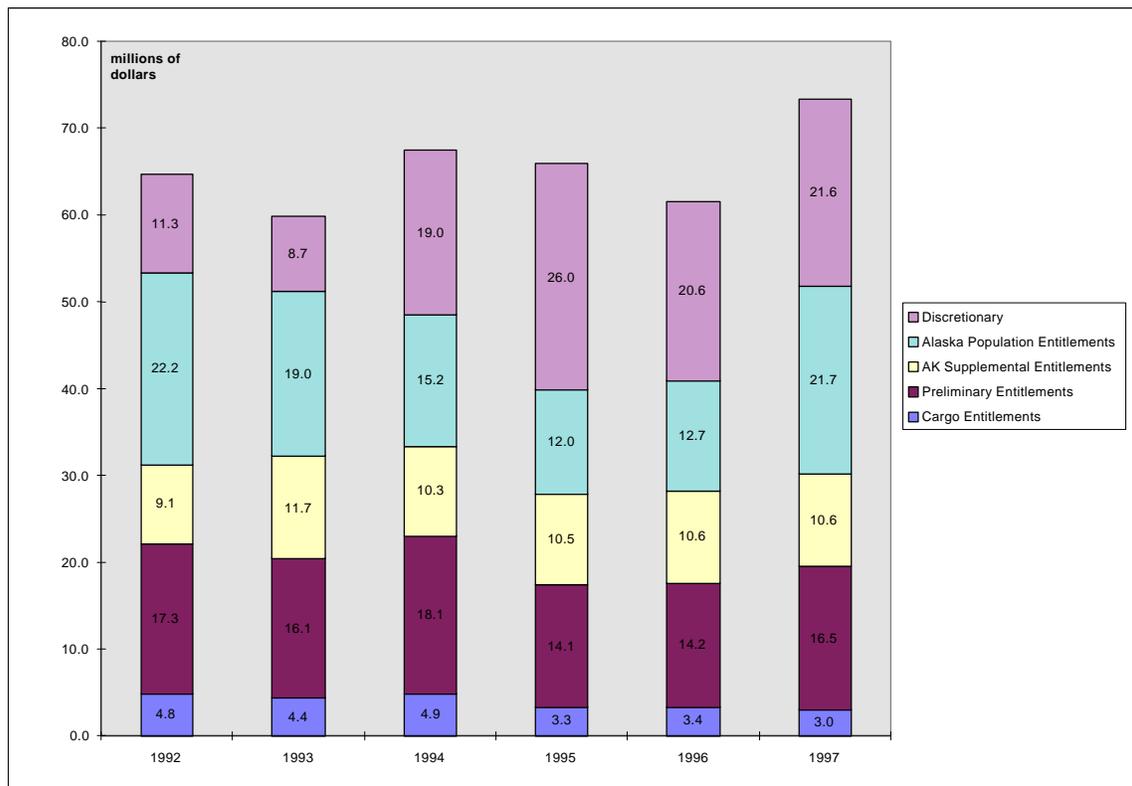
For the most part, monies from the entitlement programs just discussed may be pooled, such that funding “earned” under these programs by any state-owned airport may be spent at any state-owned airport throughout the state. However, there are notable exceptions. Cargo entitlements, for example, must be spent at the airport where they are earned and cannot be pooled. In addition, as a matter of departmental policy, the Primary Passenger Entitlements earned by the Anchorage and Fairbanks international airports are only spent at the airport earning the entitlement – they are not shared with the Rural Airport System. Where the State’s “pooled” entitlement money is ultimately spent is a function of project rankings.

### *DISCRETIONARY FUNDING*

Multiple categories of federal aviation discretionary funds are available each year. Projects compete for discretionary funds at the national level within each category. In FY 1997, approximately \$460 million was available for discretionary funding statewide. Only Anchorage International Airport can compete for capacity, safety, security and noise (CSSN) funding made available to the top 100 capacity airports in the U.S. (\$215 million). Alaska’s 181 general aviation airports can compete for funds in the Non-Commercial Category (\$31 million). There are 25 airports in Alaska that can compete for funding in the non-hub (10,000–293,163 enplanements per year) category (\$62 million). Within the Prince William Sound/Copper River area, these are the airports at Cordova and Valdez.

Airports with an approved Noise and Land Use Study can compete for funds in the Noise category (\$144 million). There is also a pure discretionary category to supplement other categories. As reflected in Figure 3, Alaska has received between \$4.4 million and \$25.9 million annually in discretionary funding since 1990. Discretionary funds, which are appropriated for specific projects, cannot be pooled.

Figure 3  
Federal Aviation Entitlement  
and Discretionary Funding to Alaska, 1990-1997



## Essential Air Service

Essential Air Service (EAS) constitutes an *indirect* form of federal aviation funding in Alaska. This federal support takes the form of subsidies negotiated with private air carriers to provide scheduled service to remote communities where such service would not otherwise be profitable. Were it not for EAS, many Alaska communities, including two in the Prince William Sound/Copper River area (Cordova and Seward), would probably not receive scheduled air service. Moreover, residents of such communities would have to pay more for their chartered passage to major hubs, such as Anchorage.

The EAS was created by Congress in 1978, in the wake of airline deregulation. Deregulation gave airlines almost total freedom to determine which markets to serve domestically and what fares to charge for that service. The EAS program was established to guarantee that small communities that have been served by certified air carriers before deregulation would retain at least a minimal level of scheduled air service. The FAA currently subsidizes commuter airlines to serve about 104 rural communities across the country that otherwise would not receive any scheduled air service. In Alaska alone, 27 communities are served, including, as noted, Cordova and Seward.

Over the years the Congress and the US Department of Transportation have worked to streamline the EAS program and increase its efficiency, mostly by eliminating service guarantees and subsidy support for communities that are within a reasonable drive of a major hub airport.

Currently, communities are not eligible to receive subsidized air service if they are within 70 driving miles of an FAA-designated Large or Medium Hub airport, or if their subsidy per passenger exceeded \$200 (there is an exception from the \$200-per-passenger standard for communities that are more than 210 highway miles from the nearest medium or large hub). The federal EAS budget has ranged from about \$100 million early in the program down to about \$25 million as recently as the last couple of years. Communities in Prince William Sound/Copper River area receive a federal subsidy level of \$346,595 per year, which accounts for about 18.2 percent of the Alaska total (Table 7).

Although it has been rumored that the survival of this program is in danger of Congressional cuts, the President's proposed FY 2000 budget called for EAS funding to remain at current levels, and Senator Stevens' Washington D.C. office denied knowledge of any such prospect, at least in the near term (Mitch Rose, Senator Stevens' Washington, DC, office, personal communication, February 12, 1999).

Table 7  
Prince William Sound/Copper River Area Communities  
Receiving Essential Air Service (1999)

Community	Subsidized Carrier	Service to (hubs)	Annual Subsidy	Aircraft Type
Cordova	Alaska Airlines	Anchorage, Juneau	\$273,097	B-737 or Larger
Seward	F.S. Airlines	Anchorage	\$73,498	Piper Navajo (9 seats)
<b>TOTAL ANNUAL VALUE OF EAS SUBSIDY TO PRINCE WILLIAM SOUND/COPPER RIVER STUDY AREA</b>			<b>\$346,595</b>	<b>ALASKA TOTAL \$1,906,697</b>
<b>PERCENTAGE OF ALASKAN EIS PROGRAM THAT GOES TO PWS/CR AREA COMMUNITIES</b>				<b>18.2%</b>

### Bypass Mail

Alaskans receive another indirect source of federal aviation subsidy in the form of the US Postal Service's (USPS) Bypass Mail Program. This program, *per se*, allows large parcel post shipments to bypass a post office, with postage affixed at its origin, thus benefiting from the uniform postal service rate. The USPS is required by federal law to provide universal mail service throughout the U.S. at uniform rates, regardless of the fact that it is far more expensive to carry out this service in places like Prince William Sound/Copper River area, where long distances and harsh conditions make air movement of the mail (including freight, such as groceries, carried as mail) necessary. Because mail rates must be uniform throughout the country, it costs far less to mail freight by parcel post through the USPS than it would to send goods through a private charter. Given these rate differences, it is not surprising that so much rural cargo is shipped via the USPS (Table 8).

Under the current system, the USPS allocates mail equally among all carriers offering regularly scheduled service within a similar time frame. "The requirement to maintain competitive service frequency to handle a share of the mail has resulted in more frequent passenger service between Anchorage and Fairbanks and Western Arctic hubs, and between hubs and outlying vil-

lages that could be supported otherwise” (*Alaska Intermodal Transportation Plan*, Alaska Department of Transportation and Public Facilities, October 1994). Regular mail service is provided to Cordova, Chenega, Tatitlek, and Chitina by a few smaller air carries.

Table 8  
 Typical Air Freight and Mail Rates  
 Between Representative City Pairs (\$/Pound)

City Pairs	Freight Rate (Charter Price- One Way)		USPS Priority Mail 2 days			USPS Parcel Post (Bypass) Mail 4-7 Days		
	Piper PA-31 Navajo	Sky- van	Up to 1lb	10lb	10lb- 70lb (limit)	1lb	10lb	70lb (limit)
Anchorage–Seward	225.00	380.00	10.00	1.00	.48	2.31	.31	.08
Anchorage–Cordova	450.00	775.00	10.00	1.00	.48	2.31	.31	.08
Anchorage–Valdez	450.00	775.00	10.00	1.00	.48	2.31	.31	.08
Anchorage–Chenega	425.00	750.00	10.00	1.00	.48	2.31	.31	.08
Anchorage–Tatitlek	450.00	775.00	10.00	1.00	.48	2.31	.31	.08
Anchorage–Chitina	475.00	790.00	10.00	1.00	.48	2.31	.31	.08

The costs borne by the USPS to serve Alaska with the Bypass Mail Program have multiplied rapidly over the past decade (Table 9). Between 1986 and 1991, the intra-Alaska air transportation costs paid by the USPS increased from \$59 million to \$95 million, most of which went to pay to move parcel post mail. “The increase in costs is due to increased volume, especially to bush destinations, as well as rate increases made under the continuing ratemaking responsibility of the US Department of Transportation to regulate the mail pay rates to air carriers in Alaska. The deficit resulting from the difference between Alaska parcel post revenue from postage and the cost of purchased air transportation alone has risen from \$23 million in 1986 to \$70 million in 1991” (*Alaska Parcel Post Task Force Report*, 1993, provided by Carl Siebe, DOT&PF, January 1999).

Table 9  
Alaska Parcel Post  
Financial and Operating Summary, 1986–1991  
(millions of \$)

Fiscal Year	Volume (pounds) Mainline	Volume (pounds) Bush	Revenues	Costs	Losses
1986	90.5	36.4	\$8	\$31	\$23
1987	96.2	38.5	\$8	\$47	\$39
1988	102.3	42.6	\$9	\$58	\$49
1989	108.5	47.0	\$11	\$62	\$51
1990	113.2	49.5	\$10	\$79	\$69
1991	113.7	52.0	\$12	\$82	\$70
% Increase	25.6%	42.9%	50.0%	164.5%	204.4%

Source: *Alaska Parcel Post Task Force Report* (1993).

According to the report just referenced, the USPS, which was separated from direct Congressional control in 1971, is under pressure to operate more cost-effectively, and to balance user fees, in the form of postage, with delivery methods that allow the USPS to meet the actual costs of providing service. With this goal in mind, the USPS is seeking ways to deliver mail to remote regions of Alaska at a lower cost. Any such efforts will be monitored carefully by Alaska's congressional delegation, insofar as their effects on Alaskans' mobility and access to goods and services will be significant, particularly in the bush.

## MARINE

### Ports and Harbors

Funding for marine ports and harbors is unique among Alaska transportation modes. This uniqueness originates at the federal level. Nationwide, ports and harbors have no federal assistance program wherein funding is allocated to the states via Congressionally negotiated allocations and apportionment, as is the case of surface transportation or aviation funding. The lack of such a program is experienced acutely in Alaska, where 90 percent of the population lives within ten miles of the coast or along a major river, and where the roadway system is skeletal at best (*Sustaining and Developing Alaska's Ports and Harbors: A Statewide Proposal*, DOT&PF, 1994).

Although both surface and aviation funding programs contain various discretionary subprograms, at the core of each are apportionments to which each state is entitled based upon complex formulas that take into account factors such as federal taxes, population, miles of interstate roadway miles, passenger and cargo enplanements, and many others. Because of these federal funding formulas, which are hammered out via a political process in Congress, each and every state receives a share of the total federal program.

The situation for ports and harbors, however, is radically different. The main source of ports and harbors funding is the US Army Corps of Engineers (COE), which is under no obligation to distribute the resources it is granted on anything other than a nationally competitive, project-by-

project basis. The COE, moreover, only develops projects; funding depends on Congressional approval on a line-item basis. In other words, the State cannot plan on receiving *any* portion of the COE's support in any given year, nor can the State "flex" any COE funding; any and all funding is appropriated on a project-specific basis. As such, rather than being driven by any state prioritization or program, the federal port and harbor funding process is driven by the COE's assessment of a project's merit, and by Congress's willingness to fund the COE's recommendation.

Basically the process for securing COE funding projects set forth by communities that have the potential to meet stringent federal requirements are developed by the DOE for possible Congressional appropriation. While port and harbor projects are submitted by communities for inclusion on the Statewide Needs List, and while they are ranked using a process similar to that used to rank highway and airport funding systems, these projects are not included in the STIP since they are not funded or programmed in any manner remotely analogous to that governing other types of transportation projects.

Within the COE, requests for projects are submitted to the Alaska Division, prioritized, and then forwarded to the Pacific Ocean Division for screening. The Pacific Ocean Division includes Alaska, Hawaii, Japan, and Korea. Typically, projects are screened on their ability to provide national economic benefits as well as regional and quality of life benefits, including improvement of a community's health, safety, and welfare. Once projects have been screened, they are submitted to Corps Headquarters in Washington, DC for additional review. In general, projects with the greatest demonstrated need are recommended, subject to budgetary and funding constraints. COE headquarters has discretion in selecting projects for submission to the Federal Office of Management and Budget for inclusion in the President's budget. Projects are often added by Congress to the President's budget during the appropriations process.

There are two basic COE programs that civil works projects can fall within: (1) general investigation (GI); and (2) continuing authority (CA). Roughly, if the estimated cost of a project is over \$4 million it will go into the GI program. These projects are submitted for Congressional appropriation with specific budgets attached (and typically receive 10 to 15 percent less due to savings and slippage factors). The CA program includes several authorities for navigation, flood control, emergency stream and protection and environmental restoration. Each of these authorities has a specific federal funding limit. Navigation projects, for example, are limited to a maximum of \$4 million and have funding limits for federal operation and maintenance of the general navigation features (e.g., breakwaters, entrance channels) following construction. For these projects, the total estimated cost for both study and construction must not exceed \$4 million. Once a project has begun, future funding is generally more predictable and is usually funded annually until it is completed. Brisk nationwide competition for limited COE funding makes getting a project started difficult without strong Congressional support.

#### *PORTS AND HARBORS PROJECT SELECTION AT THE STATE LEVEL*

In terms of project selection at the state level, the State Harbor Engineer is the functional equivalent of the Project Evaluation Board for surface transport and aviation modes. Unlike these other processes, however, there is no constrained funding plan akin to the STIP for port and harbor projects. Rather the State Harbor Engineer maintains the needs and priorities list for ports and harbors; the top-ranked projects are simply and typically those that have or are likely to receive federal funds. It is this subset of projects that is submitted each year during the budgeting process and recommended for State appropriation. Once the State determines the

appropriation it will make for ports and harbors, scoring criteria are used to further prioritize projects for that fiscal year. The State's score indicates which projects among those that will receive federal funding are of higher importance to the State. In this way, the federal funding drives port and harbor projects in Alaska. This situation is problematic because worthy projects such as those involving major renewal or replacement will not advance over a project that attracts a sizable federal contribution even if the project is in question.

Moreover, the COE is quite restrictive in terms of the types of projects it will even consider for funding. Only those projects that involve breakwater and/or entrance channel improvements can be considered. However, not all port and harbor development needs in Alaska meet these restrictive eligibility criteria. (Harold Moeser, DOT&PF, personal communications, February 17, 1999). The other requirement for COE funding is that the project must undergo and pass a rigorous cost-benefit analysis.

In the past, the State has been able to either to make a substantial contribution on behalf of the (local) sponsor, or at least participate to some degree by providing technical assistance (Table 10). The practice seems to be around a 50/50 state and local partnership around the local share match. On a total project cost basis, therefore, this represents an effective 22.5% state share; a 22.5% community share; and a 55% COE share. Breakwater and entrance channel improvements generally require a smaller local match, 20–35%, depending on navigation channel depth.

Table 10  
Non-Federal Match Requirements for Selected USCOE Programs

	Non-Federal Share	Federal (COE) Share
Construction of Navigation Projects	20%	80%
Flood Control Projects	35%	65%
Studies	50%	50%

Of all federal transportation funding sources, spending by the COE for ports and harbors projects represents the smallest share of Alaska's transportation appropriations. Between 1992 and 1997, for example, COE funding for Alaska ports and harbors accounted for between 1 and 4 percent of total federal transportation aid. Over the past six years, Alaska has received an average of \$8.6 million annually in federal funding from all COE programs.

## FUNDING SOURCES: THE STATE ROLE

At the state level, required matching funds for federal grants are typically appropriated from the General Fund. The Alaska constitution prohibits the dedication of funds, except when required by the federal government for state participation in federal programs. Currently, the only source of dedicated funds is the International Airport Revenue Fund, a sub-fund of the General Fund, which supports operation and maintenance of the two International Airports. There are other sub-funds that are typically used to support DOT&PF operating programs, including the Alaska Marine Highway Fund and Highway Equipment Working Capital Fund. However, these are not dedicated funding sources.

The DOT&PF operating budget outlines spending authority for the current fiscal year and the source of funding. In FY 1997, the operating budget totaled \$339.6 million, a small increase (about 1.0 percent) over the 1996 operating budget. Approximately 38 percent of the operating budget consists of General Fund appropriations, including matching funds and program receipts. Approximately 28 percent of the operating budget consists of CIP receipts – the amount authorized for personnel services that are charged against projects in the capital budget – and Marine Highway stabilization – the amount appropriated from the General Fund for deposit in the Alaska Marine Highway Fund. The virtually unchanged level of spending in DOT&PF’s operating budget over time, despite inflation and increased transportation demand, is depicted in Table 11.

Table 11  
Selected ADOT&PF Funding Sources, Allocations  
and Total Budget, FY 1992-1997  
(millions of nominal dollars)

	1992	1993	1994	1995	1996	1997
General Fund Appropriations*	\$134.6	\$130.7	\$128.5	\$129.1	\$129.7	\$128.1
Capital Improvement Program (CIP) Receipts**	\$58.9	\$63.4	\$66.2	\$65.6	\$65.6	\$65.2
Marine Highway Stabilization***	\$30.6	\$30	\$28.7	\$28.3	\$28.2	\$28.4
Maintenance and Operations Budget	\$90.5	\$87.7	\$88.7	\$90.5	\$91.1	\$91.3
Total DOT&PF Budget	\$241.6	\$238.8	\$238.9	\$241.3	\$242.2	\$245.9

\* Includes General Fund, General Fund Match and General Fund Program Receipts. \*\* CIP receipts in the operating budget reflect the authority to spend personnel services that are then charged against projects in the capital budget. \*\*\* Marine Highway Stabilization is the amount of General Funds appropriated for deposit to the Alaska Marine Highway Fund. The amount of stabilization funding should be subtracted from the total to avoid overstating how much can actually be spent. Sources: "Technical Memorandum 4: Preliminary Assessment of Potential Financial Resources: Southeast Alaska Transportation Plan," prepared for DOT&PF, November 1997; Patty Olson, DOT&PF [M&O data only].

## MOTOR FUEL TAXES

Motor fuel taxes are an important source of revenue for the State. The State currently levies highway, aviation and marine fuel taxes on both gasoline and diesel fuels. A historical comparison of these taxes is shown in Table 12. Tax collections totaled \$39.6 million in FY 1997 and \$38 million FY 1998. The highway fuel tax accounts for about 56 percent of total motor fuel

revenues, while aviation and marine fuel taxes each account for about 22 percent. Highway fuel taxes are expected to account for a greater percentage of total motor fuel tax revenues due to recent changes in the aviation fuel exemption.

Table 12  
State Fuel Tax Revenues by Type, 1995-1998  
(millions of dollars)

	FY 1995	FY 1996	FY 1997*	FY 1998*
Highway	\$23.9	\$21.0	\$20.2	\$26.0
Aviation**	\$8.0	\$8.2	\$8.1	\$5.3
Marine	\$7.7	\$8.5	\$7.3	\$6.
Total	\$39.6	\$37.7	\$35.6	\$38.0

\*Preliminary estimates for FY 1997 and 1998. Projections for FY 1998 calculated to reflect changes in HB 63 (Aviation Fuel Exemption).

\*\* Alaska Statute 43.40.010 provides that 60 percent of aviation motor fuel tax collected at an airport owned and operated, or leased and operated by a municipality be shared with the municipality.

## AVIATION REVENUES

Program receipts for DOT&PF include airport leasing revenues, fuel flowage fees, tie-down and parking fees, utility fees and specific right-of-way leases. Airport related revenues generally go to support leasing and airport maintenance programs. M&O costs at Alaska's rural airports are supported by appropriations for the State's General Fund. Sources of revenue to the General Fund include a land rental, concession fuel and fuel flowage tax of \$0.02/gallon, an aviation fuel tax of \$0.047/gallon and a jet fuel tax of \$0.032/gallon. It should be noted that revenues generated by these taxes are not typically sufficient to cover M&O costs. In FY 1996, for example, total M&O expenditures were \$19.2 million, while revenues were \$10.5 million. The deficit of \$8.7 million was covered through additional appropriations. Revenue shortfalls have ranged from a low of \$3.6 million in FY 1987 to \$11.2million in FY 1991.

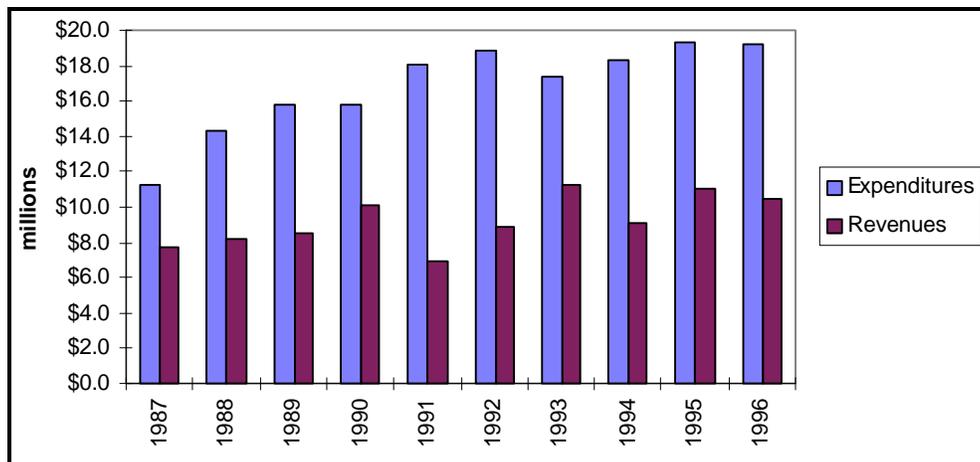
Rural airports in Alaska, including those in Prince William Sound/Copper River area, receive the majority of aviation fuel tax revenues (Table 13 and Figure 4). A recent change in the law has the potential to reduce available revenues for these airports. As of July 1, 1997, international air carriers were exempted from paying the aviation fuel tax at the Anchorage and Fairbanks International Airports. The Transiting Aircraft Fuel Exemption exempts incoming or outgoing international flights (e.g., UPS, FedEx) from payment of the tax. It is anticipated that this exemption will reduce total aviation fuel tax revenues 30-40 percent (\$3 to \$4 million a year).

**Table 13**  
**Rural Airport System Expenditures Exceed Revenues**  
(millions of dollars)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96
<b>Expenditures<sup>1</sup></b>	\$11.3	\$14.3	\$15.8	\$15.8	\$18.1	\$18.9	\$17.4	\$18.3	\$19.3	\$19.2
<b>Revenues</b>										
Airport Revenue	\$2.1	\$2.0	\$2.0	\$2.0	\$2.1	\$3.9 <sup>2</sup>	\$2.9 <sup>3</sup>	\$2.2 <sup>3</sup>	\$2.5 <sup>3</sup>	\$2.3
Aviation Fuel Tax <sup>4</sup>	\$5.6	\$6.2	\$6.5	\$8.1 <sup>5</sup>	\$4.8 <sup>5</sup>	\$5.0	\$8.4	\$6.9	\$8.5	\$8.2
<b>FY Total Revenues</b>	\$7.7	\$8.2	\$8.5	\$10.1	\$6.9	\$8.9	\$9.3	\$9.1	\$11.0	\$10.5
<b>Revenue Shortfall</b>	<b>\$(3.6)</b>	<b>\$(6.1)</b>	<b>\$(7.3)</b>	<b>\$(5.7)</b>	<b>\$(11.2)</b>	<b>\$(10.0)</b>	<b>\$(8.1)</b>	<b>\$(9.2)</b>	<b>\$(8.3)</b>	<b>\$(8.7)</b>

<sup>1</sup> Includes only the costs directly related to the operation of the rural airport system. Excludes costs related to airport planning projects, and airport capital improvement, design, and construction. <sup>2</sup> Includes a full year of landing fee revenues. <sup>3</sup> Land fees were terminated in 1993. <sup>4</sup> Figures are net of refunds and municipal airport share backs. <sup>5</sup> Reflects a one-time report and payment in 1990.

Figure 4  
Expenditures Exceed Revenues at Rural Alaska Airports



## AMHS REVENUES

User fees, including ticket prices, do not cover the cost of providing AMHS service. Among various AMHS user fees, which include stateroom proceeds, food, and concession sales, two types of revenue: passenger ticket sales and non-van vehicle ticket sales make up the bulk of AMHS revenues. Accounting for about three quarters of the total (Figure 5 and Table 14) passenger ticket sales account for 39.7 percent of AMHS revenues and non-van ticket sales account for 35.7 percent. Ticket sales for vans make up 4.0 % of total AMHS revenues. Combined all other sources (e.g., staterooms, dining room, bar, gift shop and vending machines) account for 20.6 percent of AMHS revenues.

Figure 5  
FY1996 AMHS Fund Revenues\*

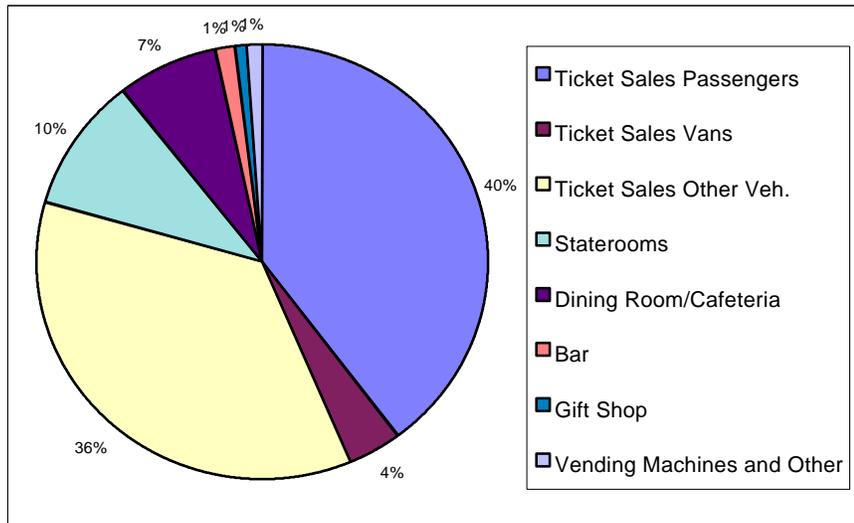


Table 14  
AMHS Fund Revenues by Type  
(thousands of dollars)

Item	Percentage of AMHS Fund Revenues	Total
Ticket Sales Passengers	39.7%	\$15,346
Ticket Sales Vans	4.0%	\$1,535
Ticket Sales Other Veh.	35.7%	\$13,811
Staterooms	10.1%	\$3,897
Dining Room/Cafeteria	7.3%	\$2,812
Bar	1.2%	\$482
Gift Shop	0.9%	\$344
Vending Machines	0.5%	\$186
Other	0.6%	\$243

Source: Brian Braley, AMHS, personal communications, January 1999.

Ticket prices for adult passengers and the average passenger fares are shown in Figures 6 and 7. Systemwide, the AMHS generated user fees of about \$37.5 million for FY 1997. Like highway and air travel, however, the revenues generated by user fees are not sufficient to pay the full costs associated with operations. Although AMHS ticket prices are considered by some travelers, particularly families, to be high, the costs of running the service, are even higher. Costs include vessel operations, shore operations, reservations and marketing, engineering, management and administration (Figure 8). In 1997, systemwide AMHS operating costs totaled \$71.1 million. Capital expenditures totaled \$57 million, for which the State was responsible for a

20 percent match (\$11.4 million). All told, AMHS operations required a \$45 million General Fund subsidy in 1997.

Figure 6  
1997 Adult Fares (dollars)

1997 ADULT FARES												
	Unalaska	Cold Bay	King Cove	Sand Point	Chignik	Kodiak	Port Lions	Homer	Seward	Whittier	Valdez	Tatitlek
Cold Bay	62											
King Cove	74	18										
Sand Point	98	42	32									
Chignik	132	76	66	42								
Kodiak	202	146	136	112	76							
Port Lions	202	146	136	112	76	20						
Homer	242	188	176	152	118	48	48					
<b>Seward</b>	250	194	184	160	124	54	54	96				
<b>Whittier</b>	316	260	250	226	190	120	120	162	116			
<b>Valdez</b>	292	238	226	202	168	98	98	138	58	58		
<b>Tatitlek</b>	292	238	226	202	168	98	98	138	58	58	30	
<b>Cordova</b>	292	238	226	202	168	98	98	138	58	58	30	30

Source: <http://www.dot.state.ak.us:80/external/amhs/tariffs>

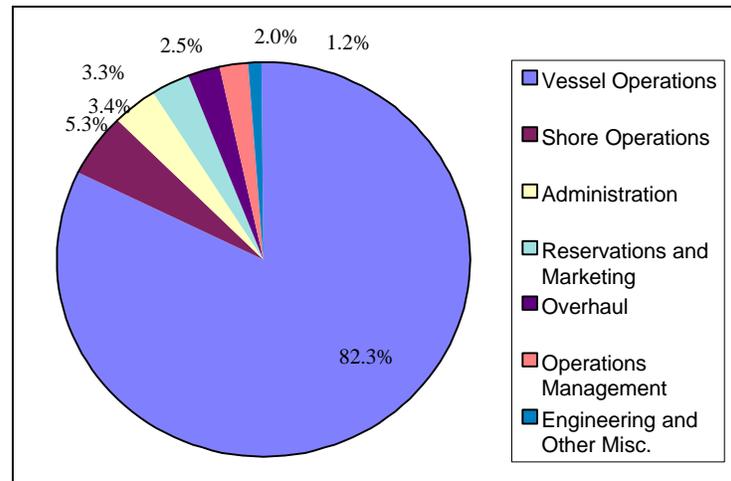
Figure 7  
1997 Average Passenger Fares\* (dollars)

MEAN PASSENGER FARE COLLECTED PER CITY PAIR*												
	Unalaska	Cold Bay	King Cove	Sand Point	Chignik	Kodiak	Port Lions	Homer	Seward	Whittier	Valdez	Tatitlek
Cold Bay	56											
King Cove	67	16										
Sand Point	88	38	29									
Chignik	119	68	60	38								
Kodiak	182	132	122	101	68							
Port Lions	182	132	122	101	68	18						
Homer	218	169	158	137	106	43	43					
<b>Seward</b>	225	175	166	144	118	49	49	86				
<b>Whittier</b>	284	234	225	204	169	108	108	146	105			
<b>Valdez</b>	263	214	204	182	151	88	88	124	52	52		
<b>Tatitlek</b>	263	214	204	182	151	88	88	124	52	52	27	
<b>Cordova</b>	263	214	204	182	168	88	88	124	52	52	27	27

\*Based on AMHS passenger type distributions in Southeast Alaska (80% adults systemwide).

Source: <http://www.dot.state.ak.us:80/external/amhs/tariffs>

Figure 8  
AMHS FY 1996 Operating Costs



## PORTS AND HARBORS REVENUES

Alaska's marine fuel tax of 5 cents per gallon has not been raised since 1977; it generates an average of over \$8 million annually and is deposited into the General Fund. In contrast to the highway fuel tax, which generates less the amount required to match federal funds, the marine fuel tax generates significantly more than the State spends on port and harbor improvements. However, revenues from the marine fuel tax are not a dedicated source of funding for port and harbor operations, maintenance and improvements.

State-level ports and harbors funding practices are strongly related to, if not driven by, federal funding mechanisms. Up until FY 99, the Legislature's primary role in funding ports and harbors related to its appropriation of state match for COE funding. In practice, the result has been the deferral of much-needed maintenance. "A primary consequence of unpredictable funding is that major maintenance at ports and harbors is often deferred...The result of this maintenance philosophy is that components deteriorate rapidly, long before the end of their potential life. As there is no funding in place for renovation, the situation limits the service life of such facilities." *Sustaining and Developing Alaska's Ports and Harbors.*

Maintenance at many Alaska ports and harbors has been deferred for three primary reasons:

- Deferring maintenance has kept user fees low, thereby making the facility more attractive to users;
- State and local operators have deferred maintenance in the belief that once a facility failed, state funding would be available to replace it; and
- Operating agreements between the state and local government have been inconsistent in defining maintenance responsibilities.

With regard to deferred maintenance, not only for ports and harbors, but also for schools, roads and other central elements of Alaska's infrastructure, FY 1999 is proving an historic year. The State Legislature has appropriated over \$55 million worth of deferred maintenance funding; including \$28.2 million for ports and harbors, one project earmarked in the Prince William

Sound/Copper River area (Table 15). The very magnitude of this appropriation, \$28,197,200 in all, the second largest in state history, underscores the unpredictability of legislative appropriations, which over the past decade, have ranged from a low of \$1,669,500, to this year's high. Figure 9 graphs the volatility of Legislative appropriations for ports and harbors.

Figure 9  
13-Year History of Revenues versus Appropriations for Ports and Harbors

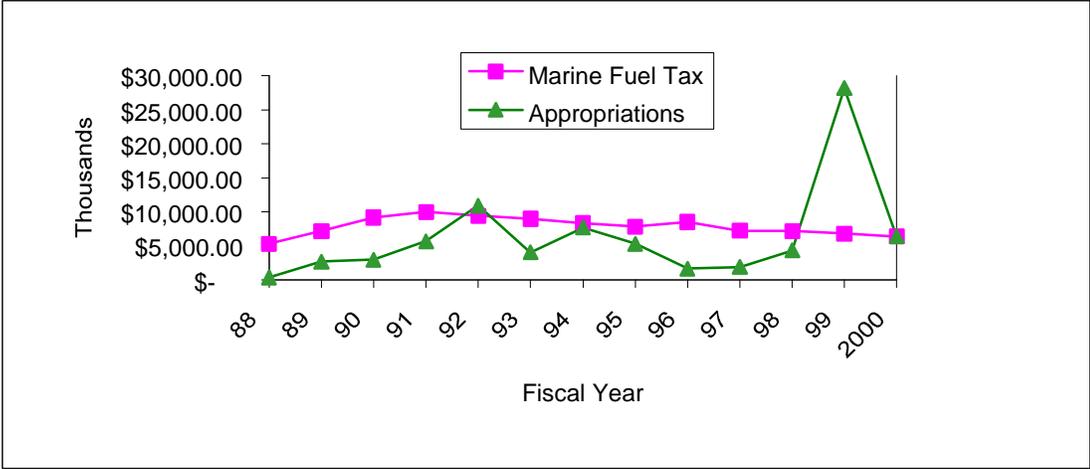


Table 15  
FY 99 Legislative Funding for Ports and Harbors

<b>Project</b>	<b>Source</b>	<b>Amount</b>	<b>Notes</b>
Sitka COE Match	Sec. 115 reappropriations	\$350,000	This project will make the post-construction audit final payment to the COE on behalf of the city and Borough of Sitka for the Sitka Breakwater project. This completes the funding for the Sitka's new \$18 million harbor.
Ouzinkie Inner Harbor	Sec. 115 reappropriations	\$260,000	Design, construction and install a minimal float system in the newly constructed harbor basin.
Akutan	Sec. 131	\$93,750	Portion of the non-federal match for navigation improvement feasibility study.
False Pass Harbor	Sec. 131	\$93,750	Portion of the non-federal match for navigation improvement feasibility study.
Program Formulation	Sec. 131	\$100,000	Portion of the non-federal match for navigation improvement feasibility study.
Wrangell Harbor	Sec. 131	\$37,500	Portion of the non-federal match for navigation improvement feasibility study.
Kodiak Harbor	Sec. 133 bond receipts	\$7,775,000	Identify and fund needed major maintenance, repairs, and replacements in the recently transferred State-to-Kodiak facilities in Kodiak Harbor
Seward Harbor	Sec. 133 bond receipts	\$3,134,200	Identify and fund needed major maintenance, repairs, and replacements in the recently transferred State-to-Seward facilities in Seward Harbor
Homer Harbor	Sec. 133 bond receipts	\$3,605,000	Identify and fund needed major maintenance, repairs and replacements in State-owned facilities in the Homer harbor.
Chignik Small Boat Harbor	Sec. 133 bond receipts	\$3,314,000	Assist the City of Chignik and Lake and Peninsula Borough in sponsoring this project. State share not to exceed 50% of the non-federal NED plan cost.
King Cove Harbor	Sec. 133 bond receipts	\$2,237,500	Assist the City of King Cove and Aleutians East Borough in sponsoring this project. State share not to exceed 50% of the non-federal NED plan cost.
St. George Harbor	Sec. 133 bond receipts	\$225,000	Assist the city of Saint George to sponsor this COE-developed project, which is ready for bid. State share not to exceed 50% of the non-federal NED plan cost.
Unalaska Small Boat Harbor	Sec. 133 bond receipts	\$500,000	Assist the City of Unalaska. This project is being developed and remains to be described in an approved feasibility study.
Sand Point Harbor	Sec. 133 bond receipts	\$2,137,000	Assist the city of Sand Point and the Aleutians East Borough. State share not to exceed 50% of the non-federal NED plan cost.
St. Paul Harbor	Sec. 133 bond receipts	\$4,044,600	Assist the City of St. Paul. State share not to exceed 50% of the non-federal NED plan cost.
Deferred Maintenance Harbors	Sec. 133 bond receipts	\$900,000	The Department will propose projects to meet the State Harbor System's most critical need. Kake, Port Lions, Gustavus, Hydaburg and Metlakatla are most likely to be addressed.

# FUNDING SOURCES: LOCAL GOVERNMENT’S ROLE

Local taxes in the Prince William Sound/Copper River area include sales taxes ranging from 3 percent to 6 percent, bed taxes, and property taxes. The 1997 tax data provided by the Department of Community and Regional Affairs (DCRA) are listed in Table 16. Local taxes in the Prince William Sound/Copper River area are limited, as are the services provided by local government. Three PWS/CR area communities – Chenega, Chitina, and Tatitlek – do not appear to levy any taxes at all.

Table 16  
Local Tax Revenues, Prince William Sound/Copper River Area, FY 1997

<b>Municipality</b>	<b>Sales Tax</b>	<b>Revenues</b>	<b>Other Special Tax</b>	<b>Revenues</b>	<b>Property Tax Revenues</b>
Cordova	6%	\$1,106,081	None	N/A	\$1,083,856
Seward	3%	\$1,567,909	None	N/A	\$443,664
Valdez	None	N/A	6% Bed Tax	\$266,628	\$3,381,040
Whittier	3%	\$21,396	None	N/A	\$83,779

Source: Department of Community and Regional Affairs “Municipal Sales Tax, Special Taxes, and Revenues,” DCRA Website.

# INNOVATIVE FINANCING STRATEGIES

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In recent years, the federal government, along with state and local government, has begun to support innovative financing of transportation projects. Over the past few years, the federal government has spent \$5 billion for “projects demonstrating new loan programs, new types of partnership, roll road concepts, and cash flow concepts that alter the timing and match of funding to get projects on line sooner” (TRB 1997). Innovative finance techniques, including public-private partnerships<sup>11</sup>, provide state and local governments with alternatives to traditional, pay-as-you go, grant-based programs. The impetus for innovative finance is rooted in generalized resistance to broad-based taxes (e.g., income and sales taxes) in tandem with increased demand for transportation facilities. The deferral of much needed maintenance on federally funded bridges and roadways throughout the nation exacerbates the funding crunch.<sup>12</sup>

The past two versions of federal transportation funding legislation, the Intermodal Surface Transportation Efficiency Act of 1990 (ISTEA), and the Transportation Efficiency Act for the 21<sup>st</sup> Century (TEA-21), have advanced the cause of innovative finance by including in these laws specific enabling legislation. These elements make it easier for states to leverage federal dollars to secure additional private sector funding, as well as providing several forms of public sector credit enhancements. Discussed in this section are key policy developments in innovative finance, along with a discussion of their possible applications in the Prince William Sound/Copper River area.

## POLICY DEVELOPMENTS IN INNOVATIVE FINANCING

The role of innovative finance is expected to play an increasingly important role in future transportation infrastructure financing in Alaska and elsewhere in the country. With passage of the National Highway System Designation Act of 1995, Congress enacted improvements in the way states and others can finance National Highway System and other transportation infrastructure projects. The 1995 Act builds on important financing options set forth in ISTEA.

Innovative financing techniques include both “leveraging tools” – designed to make more funds available to states and other transportation providers—and “cash-flow tools” – designed to get projects into construction more quickly. Leveraging tools include flexible match, federal share

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<sup>11</sup> “Public-private partnerships” in transportation are not new. Local, state and federal agencies have long contracted with private sector engineers, road builders, and management consultants for specified services. What is changing is the extent to which the private sector is being prevailed upon to provide the initial investment, and to reap some portion of the rewards (assuming that they exist), of providing public transportation facilities and services. Because this new role for the private sector is in its infancy, there exist but a handful of case studies to guide policy makers. Additionally, there still exist significant institutional barriers to public-private partnerships, which leaders in Congress and in state legislatures have not yet fully addressed. Giglio (1996) cites three chief barriers to innovative finance for transportation infrastructure maintenance and improvement: (1) states are not currently allowed to access their unobligated federal trust fund balances for credit enhancement; a domestic insurance system for public-private partnerships (akin to extant Overseas Private Investment Corporation, which insures U.S. Companies against risks for which traditional private insurance is not available or is prohibitively expensive) has not yet been developed; transportation-related bonds issued by private firms are not accorded the same tax-exempt status as those issued by government agencies.

<sup>12</sup> The U.S. is devoting a shrinking share of its Gross Domestic Product (GDP) to maintaining and developing its transportation infrastructure. Whereas the percentage of the U.S. GDP devoted to infrastructure was fully 3.7 percent in the early 1960s, this figure had fallen to 2 percent by 1990. When this figure is adjusted to account for the investment needed to simply offset capital depreciation, it turns out the only one half of one percent of the U.S. GDP goes to improving and enhancing our transportation infrastructure. This is in striking contrast to Japan, which invests between 4 and 6 percent of its GDP. The result of the lack of investment is apparent in the much discussed degeneration of the U.S. transportation infrastructure.<sup>12a</sup> “The net asset value of our roads, bridges, and streets is lower today than it was ten years ago.” (Giglio 1996). Referring to ISTEA in his 1998 article, Ota noted that “Although the bill (ISTEA) included more than \$100 million for road repairs and maintenance, that amount was less than one quarter the amount needed to improve the condition of aging roads and crumbling bridges, based on a study by the American Society of Civil Engineers.”

on toll projects, bonds and debt instruments, and ISTEA Section 1012 Loans and Section 1044 Toll Investment Credits. Cash flow tools include advance construction and partial conversion of advance construction. Selected innovative financing techniques, codified under ISTEA, are listed in Table 17.

Some of these techniques could provide additional opportunities in the Prince William Sound/Copper River area to attract new sources of capital to transportation infrastructure and to enable projects to progress more quickly. Some financing techniques would allow the State to borrow more easily to finance projects, free up State funds to be used for other needs, or otherwise leverage additional dollars for transportation projects. Greater access to capital markets is particularly important in the Prince William Sound/Copper River area, where access to conventional financing is limited. In Alaska, the legal framework appears to be in place for public-private partnerships.

To date, however, only a few projects have utilized these opportunities. However, projects identified for future development that could rely to some extent on public-private partnerships include the Juneau Access Improvements; acquisition and operation of the North Lynn Canal Ferry; and construction of the road from Thorne Bay to Kasaan. The Alaska Industrial Development and Export Authority (AIDEA) also supports public/private partnerships for economic development projects, including transportation infrastructure.<sup>13</sup> Under DOT&PF's project selection criteria, the incentive for private sector contributions to projects is provided by awarding higher project scores to those projects with strong local support (evidenced by a willingness to pay for some portion of the capital and/or maintenance and operating costs).

However, many of these innovative financing techniques require greater levels of public and/or private investment than conventional federal programs, upon which Alaska has to date relied. The savings possible due to the ability to leverage additional funds and complete projects quickly may, however, soon be seen to outweigh these "costs" and uncertainties.

Descriptions of two examples of innovative finance techniques, State Infrastructure Banks, and the TIFIA program, follow Table 17.

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<sup>13</sup> The Alaska Industrial Development and Export Authority (AIDEA) offers public/private partnerships in economic development projects, including transportation infrastructure. AIDEA is a public corporation and government entity of the State of Alaska residing within the Alaska Department of Commerce and Economic Development. The Alaska Legislature established AIDEA in 1967 to "promote, develop and advance the general prosperity and economic welfare of the people of Alaska." In 1980 the Legislature established and funded an Enterprise Development Account within AIDEA. AIDEA uses this account to participate in commercial loans through various bond, loan, and guarantee programs. AIDEA projects include the Delong Mountain Transportation System (DMTS), which includes a 52-mile road and shallow water dock, an offshore conveyor concentrate loading facility, storage, and other facilities. The road and port were constructed to support operation of the Red Dog mine near Kotzebue, one of the world's largest zinc producers. The original DMTS construction budget was \$185 million. A \$92 million expansion is underway and slated for a 1999 completion date. Other projects financed by AIDEA include the Federal Express Aircraft Maintenance Facility in Anchorage, the Healy Clean Coal Project, the Skagway Ore Terminal, and the Unalaska Marine Center. AIDEA's role in transportation infrastructure in Prince William Sound/Copper River could include financing private ferry service or road construction, if associated with some revenue generating activity. To qualify for the AIDEA Development Finance Program, projects must be "compatible with the local economy and endorsed by local government." Projects must also generate revenue from user fees and leases sufficient to repay the cost of the project. Legislative approval is required for projects that require more than \$10 million in financing.

Table 17  
Selected Innovative Funding Techniques

Innovative Finance Technique	Description	Applicability
NHS 308 Increased State Advance Construction Flexibility	Allows DOT to approve an application for advance construction for reimbursement after the final year of an authorization period, as long as the project is in the STIP.	Can provide greater flexibility to state to engage in advance construction using anticipated apportionments. Increases states' flexibility to move forward with projects.
NHS 311 Expanded Access to Capital Markets	States can be reimbursed with federal aid funds for bond, principal, and interest costs, issuance costs, and insurance on Title 23 projects.	It is easier to attract private sector capital when bonds, notes, and other debt instruments are supported by both state and federal aid funds.
NHS 313a Increased Federal Share for Toll Projects	Sets the federal share for toll projects on highways, tunnels, and bridges at a maximum of 80 percent of eligible costs. Previously, the federal share was 50 percent to 80 percent, based on activity and system designation.	Allows greater contribution of federal funds for toll projects, allowing the state to support other transportation projects. Could be particularly useful for AMHS projects.
NHS 313b Project Loans to Non-toll Projects	States can loan federal aid funds to toll and non-toll projects with dedicated revenue streams. Permits interests rates at or below markets rates.	Transportation facility fees can function as a dedicated revenue stream in order to qualify project for a loan.
NHS 321 More Flexibility State Matching Requirements	Allows private funds, materials, or assets to be donated to a specific federal-aid project and permits the state to apply the value to the state's matching share.	Allows greater flexibility in crediting the value of contributions toward the state's share of project costs. Can free up state matching funds, for use on transportation projects.
ISTEA 1012 Loans	Allows states to loan money to a project sponsor to leverage investment in any eligible Title 23 program. Loan may be repaid to the state with project-generated revenue. Gives states more flexibility to commingle federal aid funds with state and private funds.	Allows state to grant funds to one or more projects; lend the funds to new projects with repayment by project revenues; or use funds to capitalize a revolving loan fund. Can result in lower interest rates and overall project costs.
ISTEA 1044 Toll Investment Credits	Allows states to earn credit from toll revenue expenditures, which may be applied toward non-federal matching share of all programs authorized by Title 23 and ISTEA. To earn credits from toll road expenditures, a state must meet a maintenance of effort (MOE) test.	The new MOE test gives the state the opportunity to earn these credits and to free up state funds for other projects. To the extent that credits are available, the state may use up to 100 percent federal funds on benefiting projects.
Advance Construction	State can independently raise up-front capital for a project and preserve eligibility for future federal aid funding for that project. Allows state to manage federal aid funds more effectively by choosing when to seek reimbursement.	Akin to 'construction finance' in private capital markets. Short-term debt is used to finance construction. Short-term debt then replaced with long-term debt once construction is complete. Good way for public-private partnerships to share risk.
Partial Conversion of Advance Construction	State converts, obligates, and receives reimbursement for only part of its funding of an advance construction project in a given year. Allows state to obligate varying amounts for project's eligible costs in each year, depending on how much of the state's obligation authority is available.	State can reprogram partially converted funds into new projects. Eliminates a major single year draw down of federal funds and obligational authority due to a single project. Demonstrates better project cash flow.

## State Infrastructure Banks

In order to give states more flexibility in financing transportation infrastructure improvements, the National Highway System Designation Act of 1995 established a pilot program for state infrastructure banks (SIB). A SIB is an infrastructure investment fund established to facilitate and encourage investment in eligible revenue generating transportation infrastructure projects sponsored by public and/or private entities. Through a SIB, a state can use its initial capital, provided by its federal-aid highway apportionment, federal transit allocations, and non-federal monies, to make loans, enhance credit, serve as capital reserves for bond or debt financing, subsidize interest rates, ensure letters of credit, finance purchase and lease agreements for transit projects, or provide other forms of financial assistance for construction of projects qualified under the federal-aid highway program and transit capital program. As the funds are repaid or compensation is provided, the SIB can make new financial assistance available to other projects, continually recycling the initial monies, thus leveraging the initial funds available. Some estimates are that SIBs could leverage federal funds by 4-to-1.

In 1997, Alaska was selected to participate in the SIB program. The State SIB is managed within DOT&PF under the name of Alaska Transportation Infrastructure Bank (ATIB). The ATIB currently has legislative authority to provide loans to State and local governments. Additional legislative authority is needed for the ATIB to expand the types of financial assistance provided as allowed for in the 1995 NHS Act.

DOT&PF is in the process of designing procedures for identifying, soliciting, evaluating, and approving potential ATIB financed projects. The selection process will look at the financial feasibility of the project and build upon the current criteria used to select projects for the STIP, which favor intermodal connectivity, project sponsor funding contributions, local government responsibility for operation and maintenance, and projects which have cleared environmental hurdles and which are well-supported in official local plans. The first pilot loan from the ATIB was made to the Whittier Access Project in December of 1998 utilizing \$4.6 million from a special allocation from the Federal Highways Administration and a portion of the FFY 1997 federal-aid highway apportionment.

However, SIBs generally, and the ATIB more particularly, were dealt a considerable blow under ISTEA reauthorization. Under TEA-21, the federal SIB program was shrunken from 39 to 4 states: Missouri, California, Rhode Island, and Florida. SIBs in states not on this list (including Alaska) do not cease to exist, but do not have the authority to capitalize their SIBs with federal apportionments beyond FFY 1996–1997. In contrast, the four states on this list may use up to 10 percent of their federal apportionments in specified programs on a continuing basis, beyond the FFY 1996–1997 and onward indefinitely.

The SIB program contraction at the federal level is purely political, and stems from a fundamental disagreement regarding what is perceived as the federal government's appropriate role in transportation infrastructure funding. Whereas the consensus in the Senate is that SIBs are a worthwhile concept that should be extended to all states wishing to pursue them, the feeling in the House is that the historical reliance on federal grants, as opposed to federally guaranteed or enhanced debt, should remain intact (Bob Cowan, Manager, Transportation Financial Partnership, Washington State Department of Transportation, personal communication, October 15, 1998). In any case, SIBs chief proponent, Rhode Island's Senator John Chafee, who chairs the Senate Committee on Environmental and Public Works, has pledged to reintroduce legislation expanding the role and support of SIBs. In the case of Alaska, it had been hoped by the

DOT&PF that the ATIB would provide local communities, whose access to capital markets are limited, with a means of leveraging local resources, in partnership with the State. The State will use the ATIB to assist the financing of revenue generating transportation projects through loans. ATIB funds would be replenished as loans are repaid and the ATIB could make new loans. It is anticipated that these mechanisms will work particularly well for projects with potential dedicated revenue sources or user fees that will support debt financing.

## TIFIA

Another form of innovative finance authorized under TEA-21 is the Transportation Infrastructure Finance and Innovation Act (TIFIA) which is designed to provide federal assistance in the form of secured direct federal loans with flexible repayment terms; loan guarantees backed by the full faith and credit of the federal government; and standby lines of credit, representing secondary sources of funding in the form of contingent federal loans that may be drawn upon to supplement project revenues in the first ten years of project operations. The program is intended to fill market gaps and to leverage private co-investment by providing supplemental and subordinate capital. The program provides \$530 million to pay the subsidy cost of supporting loans, loan guarantees and lines of credit worth up to \$10.6 billion. Eligibility for TIFIA assistance is determined on the basis of several criteria:

- The project should represent a major transportation investment of critical national importance (e.g., intermodal facilities, border crossing infrastructure, expansion of multi-State highway trade corridors).
- The transportation project must cost at least \$100 million or use 50 percent of a state's federal aid funds (whichever is less).
- The project must be supported in whole or in part by user charges or other non-federal dedicated funding sources.
- The project must be included as part of the State Transportation Plan.
- Each project must receive an investment grade rating on its senior debt obligations before its Federal credit assistance may be fully funded.

Proposed projects meeting these threshold criteria are evaluated by the U.S. Secretary of Transportation on the basis of further criteria – including the extent to which the project generates economic benefits, leverages private capital, and promotes innovative technologies. Examples of eligible projects include the Woodrow Wilson Memorial Bridge near Washington, DC; New York City's Pennsylvania Station; and a proposed high-speed rail line connecting Tampa, Orlando, and Miami, Florida.

## INNOVATIVE FINANCE: EXAMPLES AND OPPORTUNITIES

### Potential and Existing Roadway Projects in Alaska

Roadways are limited in much of Alaska, including the Prince William Sound/Copper River area, where separation of communities by water and rough terrain has favored air and marine transportation. There is generally little incentive for private funding of roads because there is so little opportunity to recoup the money invested. In some cases – the Kasaan to Thorne Bay Road and road improvements in Kake, for example – benefits to private landholders may encourage private contributions in order to move a project up onto Needs List. In such cases,

DOT&PF signs cooperative agreements similar to those for utility relocations. DOT&PF pays for the cooperative project and is reimbursed by the contributing partner. The framework for such agreements is budgetary authority to receive and expend funds. The FY 1998 authority for this purpose includes \$5 million in federal receipts and \$2 million in other receipts. The federal authority is used primarily for the Forest Highways Program.

Two other special projects demonstrate the possibility of using public-private partnerships to help meet federal matching requirements and to get projects off the ground sooner than would otherwise be possible. A recent example of a public-private partnership is the agreement between Sealaska Corporation and the DOT&PF to construct a road from South Thorne Bay to Kasaan on Prince of Wales Island. Sealaska, in concert with Thorne Bay and the Bureau of Indian Affairs, granted the necessary rights-of-way and easements to allow a road to be built across Sealaska's ANCSA land to provide access for residents of Kasaan to Tolstoi Bay. In addition to the rights of way and easements, Sealaska and the cities of Kasaan and Thorne Bay provided funding to DOT&PF for use as federal matching funds. Sealaska's financial support, together with that of the cities of Thorne Bay and Kasaan, advanced this project by several years.

The Goldbelt Native Corporation has proposed a public-private partnership among the federal government, the State, and the City and Borough of Juneau to construct a road on west Douglas Island. The road would serve future development envisioned in the comprehensive land use plan developed jointly by Goldbelt and Juneau. Similar to the Thorne Bay to Kasaan agreement, the purpose of this public-private partnership would be to expedite roadway construction to support planned growth. The road would cross public, private, and BIA land; as such, the arrangement would require the cooperation of all parties. Goldbelt has initiated the process by funding an environmental study and dedicating needed rights of way. Goldbelt would also like to work with local, state, and federal government to develop a marine port – including a ferry terminal and new ferry operations – to serve the area around Echo Cove, where Goldbelt holds about 1,400 currently inaccessible acres of land (Dave Goade, Goldbelt VP, personal communications, 1/13/99).

## Canada's Confederation Bridge

A recent public-private partnership in Canada illustrates another potential partnering opportunity that may be relevant to the Prince William Sound/Copper River area. Under a public-private partnership, a group of private sector investors (Strait Crossing Development, Inc.) in collaboration with the Government of Canada, designed, built, and financed the Confederation Bridge, a toll bridge linking Price Edward Island and the Canadian mainland across the Northumberland Strait. The bridge replaces government-subsidized ferry service. The only public funding for the project is the annual payment by the government equal to the annual avoidable cost of the ferry system.

The project's funding strategy risks no public funds and results in "net cost savings" for the government. Bridge construction costs were fully financed in Canadian capital markets by Strait Crossing Development, Inc., through issuance of real rate bonds fully indexed to inflation with a guaranteed rate of return. Public funding consists of the annual government subsidy required to maintain the ferry system – \$42 million in 1992 dollars – over 35 years. At the end of the 35-year period, the bridge will be transferred to the government. A net costs savings will be realized for 65 years after the developer's operating period by eliminating costs associated with operating, maintaining, and replacing the ferries and docking facilities.

The Canadian Government's annual subsidy payments to the developer were authorized by an act of Parliament in the form of the Northumberland Strait Crossing Act.<sup>14</sup> On the strength of the subsidy agreement, Strait Crossing Financial Inc. was able to issue \$661 million (Canadian) in inflation-indexed, fully amortizing bonds. A similar Canadian effort to replace ferry routes with roads, in order to avert long-term operating subsidies, is underway in New Brunswick.

Alaska Statute 37.15.610-760 authorizes the issuance of State revenue bonds for toll bridges, tunnels, highways, roads, crossings, and causeways. The statute sets a \$500 million ceiling on toll facility bonds. Although toll facility bonds have been authorized in the past,<sup>15</sup> none has been issued to date.

## Aviation

Air transportation services in Alaska, as elsewhere in the nation, are generally provided by private sector firms that operate out of publicly owned airports and use federally funded flight services and navigational aids. While no law precludes the development of private airports in Alaska, most airports used for public transportation purposes are publicly owned. Proposals to lease, charter, or otherwise operate a "State airline" – primarily to carry State employees between Anchorage and Juneau – have not been supported broadly.

The federal funding framework encourages the status quo. Federal airport grants for capital projects are available to public sponsors of airports only (49 U.S.C. Sec 47114). Given that most communities in the Prince William Sound/Copper River area have at least one publicly owned airport (many of which are seaplane bases), development of competing, privately owned facilities is unlikely because the probability of obtaining an acceptable return on one's investment would be so low.

Private contributions to public airports are allowable, but receipt of federal airport grants is contingent upon agreeing to numerous assurances, including promoting competition among service providers and allowing public and commercial use of airport facilities. Revenue from landing fees, leases or other sources associated with federally funded projects may only be used for airport activities. There is little incentive for private contributions to meet matching fund requirements because airport revenue may not be used to provide a return on private investment, nor may it even be used to return the principal invested.

The criteria used to determine which airport projects receive funding may encourage private gifts to an airport sponsor in the sense that project scores increase when local contribution exceed minimum match requirements. Scoring criteria do not differentiate between private contribution and sponsor contributions; ranking would simply increase as the proportion of federal funding for a project decreased. A change in project score due to contributions may be slight; the primary criterion is the documented need for the project, rather than the amount or proportion of federal funding required.

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<sup>14</sup> The Northumberland Strait Crossing Act provides a parliamentary appropriation for the payment of the government subsidy to a Consolidated Revenue Fund for each year in which payments are to be made. This act also gave Strait Crossing Finance, Inc. specific authorization to receive the subsidy.

<sup>15</sup> In 1988 construction of the Copper River Highway was authorized as a toll facility; in 1990 \$27 million was authorized for a road from Portage to Whittier, and \$23 million was authorized for the Bradfield Canal resource road.

## Ports and Harbors

Traditionally, commercial marine traffic in Prince William Sound moves by either private barge line or the Alaska Marine Highway System ferries. Barge transportation resembles aviation in that the government operates no carriers. However, while the government builds airports, barge terminal construction has been largely left to the private sector. Bethel has the only State-owned port in Alaska. Although there is no apparent legal preclusion of public/private partnerships similar to those in effect for aviation, cooperation is unlikely for the following reasons:

- Most Prince William Sound communities already have some level of barge service.
- There is no precedent for State funding of barge terminals.
- The State is unlikely to have sufficient funding with which to build barge terminals in the future given the long, as yet unfunded “Needs List” for other transportation projects, including those for other ports and harbor projects.

The State traditionally has funded harbor projects in Alaska. State statutes relevant to harbors refer to the State’s ability to enter into contracts and leases with communities and the incorporated entities. However, there is no mention of private parties. Although 17 AAC 80.020 encourages use of harbors by commercial fishermen, it also states that the regulation’s intent is to “discourage and prevent the use of State harbor facilities by individuals or firms for the purpose of conducting commercial enterprise.” The intended purpose of these statutes is, in part, safe moorage. On the surface, regulations would appear to provide public access to water for recreational boating and commercial fishing, but not for barges, ferries, or other commercial or transportation purposes. In practice, however, tugs, charter operators, fuel distributors, and even tour operators, use State harbor facilities. AS 30.15 establishes a framework for State participation in port facilities. In the mid-1970s, a good number of ports in Alaska benefited from general obligation bond sales. However, no funds have been authorized since that time.

The law also states that “berthing rental and other charges for use of State harbor facilities shall be paid in advance to the commissioner to be deposited into the State general fund” (17 AAC 80.050). However, this is not the actual practice. Instead, communities retain all receipts. Although AS 35.10.120 states that fees imposed are intended to meet maintenance costs, it fails to mention repair and replacement costs.

It is unlikely that privately financed marinas will be developed as long as they would be in the position of competing with State-owned facilities. However Juneau, at least, has reached the point where State harbor facilities can no longer accommodate demand. As such, a privately developed marina may be viable, since profits could potentially be earned by meeting overflow demand.

## AMHS

The AMHS serves an critical transportation role in Prince William Sound/Copper River area. State-owned and operated vessels and the terminal serving them are funded primarily through grants from the FHWA’s National Highway System Program. Privately owned vessels may also use these federally funded, State-owned ferry terminals (although they must abide by certain regulations and restrictions). Because the AMHS receives federal funding from the FHWA, AMHS prospects for public-private partnerships and other forms of innovative finance are simi-

lar to those available to roadway projects. In fact, it would be feasible under existing law to share reservation systems, terminal, and other facilities with a private operator. However, public-private partnerships for ferry operations would be complicated by factors including union contracts and the particulars of potential private routes, including its impact on AMHS revenues. An issue in public-private partnerships is the deleterious effect of “cherry picking” on public agencies. Cherry picking is said to occur when a private sector partner takes on responsibility for only the most lucrative elements of a service network, causing revenue shortfalls for the public sector partner beyond the cost savings achieved through the partnership.

# IMPLICATIONS FOR THE PRINCE WILLIAM SOUND/COPPER RIVER AREA

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## SURFACE TRANSPORTATION

To understand the proportion of surface transportation funding allocated at the statewide level to projects particular to Prince William Sound/Copper River area, and by extension, its future prospects, Alaska's 1998–2000 Statewide Transportation Improvement Program (STIP) was analyzed, along with financial spreadsheets provided by DOT&PF. The STIP contains a list of hundreds of projects, including AMHS entries, some of which benefit the State as a whole, others of which are particular to a single region or community. An example of a statewide project would be the Department's Annual Internal Review Audit. Since it would be difficult to determine how and whether such projects benefit any particular region, only those projects particular to Prince William Sound/Copper River area were counted toward the PWS/CR area percentage. However, systemwide projects and programs were not subtracted from the total.

DOT&PF uses a number of categories to organize its transportation funding programs. These categories include National Highway System (NHS), Community Transportation Program (CTP), High Priority Projects, the Shakwak Program, and Transportation and Recreational Access for Alaska (TRAAK), High Priority Projects, Ferry Boat Discretionary, Public Lands Discretionary, and Bridge Discretionary. Under the amended 1998–2000 STIP, projects slated for the Prince William Sound/Copper River area fall into the following categories: NHS, CTP, TRAAK, Ferry Boat Discretionary, and Bridge Discretionary.

### NHS

The Prince William Sound/Copper River area is slated to receive \$80,136,000 (approximately 23%) of the statewide NHS total of \$174,919,000 over FY 1999 and 2000. Examples of NHS projects include rehabilitating and widening the Whittier Ferry Access Road from the Whittier Creek Bridge to the ferry dock, and resurfacing the Richardson Highway at multiple locations.

### CTP

Within the CTP, projects particular to the Prince William Sound/Copper River area are programmed for a total of \$4,850,000 over FY 1999 and 2000. CTP statewide is programmed at \$273,842,000; as such, the PWS/CR area share of this amount is 2 percent. Examples of CTP projects in the Prince William Sound/Copper River area include repaving and widening the Copper River Highway at specific locations, improving the recreational access road for the Copper River Trail, and rehabilitating and widening the Dayville Road in Valdez.

### TRAAK

Within TRAAK, projects particular to the Prince William Sound/Copper River area account for \$1,178,000 of the statewide total of \$55,037,300, or 2 percent of the TRAAK total. Examples of TRAAK projects in the Prince William Sound/Copper River area in the 1998–2000 STIP are trail and pathway projects in Valdez, Seward, and Cordova.

## Ferry Boat Discretionary

Within the Ferry Boat Discretionary program, projects particular to the Prince William Sound/Copper River area account for \$7,950,000 of the \$76,660,000 statewide total. This reflects a 10 percent share of the program total. Examples of PWS/CR area projects funded under this program are marine improvements at Valdez and Whittier.

## Bridge Discretionary

Within the Bridge Discretionary program, projects particular to the Prince William Sound/Copper River area account for \$7,100,000 of the statewide total of \$41,450,000, (17 percent of the program total). One project in the Prince William Sound/Copper River area is slated to receive funds in this category: the Million Dollar Bridge along the Copper River Highway. However, this funding has been projected beyond the 1999–2000 period.

Overall, when all categories of funding are combined, including those in which the Prince William Sound/Copper River area has no projects at all programmed (e.g., Shakwak and High Priority Projects), the sum total of projects programmed statewide over the years 1999 and 2000 is \$914,851,200. Of this total, projects in the Prince William Sound/Copper River area account for \$101,214,00, or 11 percent (Table 18).

It is notable that projects recommended as part of regional transportation plans, including this effort, will have more success in the STIP process than “run of the mill” projects. This is because the regional plans are adopted as elements of the Statewide Transportation Plan, which gives them status under federal law, which requires that the STIP conform with the Statewide Transportation Plan.

Table 18  
PWS/CR Area Surface Transportation Funding, 1996–1998 STIP

<b>Program</b>	<b>Funding to PWS/CR Area</b>	<b>Statewide Total</b>	<b>PWS/CR Area Share of Statewide Total</b>
<b>NHS</b>	\$80,136,00	\$250,963,200	23%
<b>CTP</b>	\$4,850,000	\$273,842,000	2%
<b>TRAAK</b>	\$1,178,000	\$55,037,300	2%
<b>Ferry Boat</b>	\$7,950,000	\$76,660,000	10%
<b>Bridge</b>	\$7,100,000	\$41,450,000	17%
<b>All Other</b>	\$0	\$813,637,200	0%
<b>Overall</b>	\$101,214,000	\$914,850,200	11%

## AVIATION

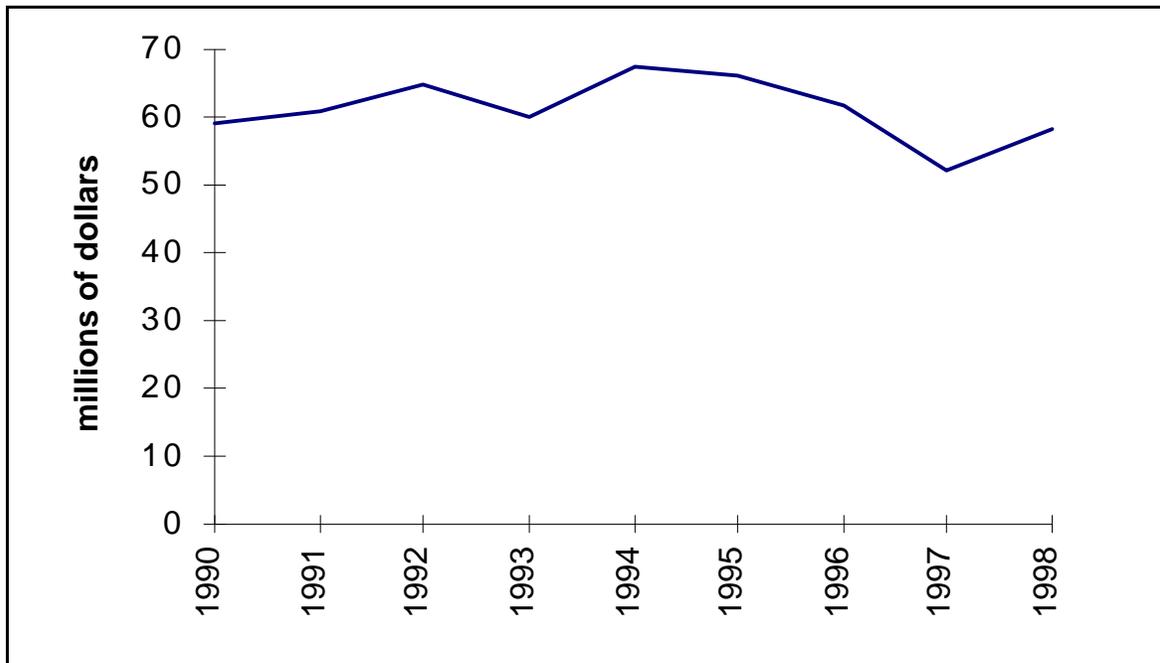
To develop a sense of the Prince William Sound/Copper River area's immediate prospects for aviation funding, all capital improvements in the PWS/CR area were culled from DOT&PF's Five-Year Aviation Spending Plan (1998–2003), and totaled (Table 19). In all, \$437 million worth of airport improvements are planned statewide for this five-year period. Of this total, \$3.4 million, or 1 percent, is programmed for airport improvement projects within the Prince William Sound/Copper River area. The extent to which the State is actually able to fund all of the improvements on this list, within this timeframe, depends on the level of AIP spending established in Congress. Congress authorized FY 99 AIP funding nationwide at the \$1.95 billion level; however, contracting authority was only authorized at \$1.205 billion, which is available for obligation through March 31, 1999. The remainder of the authorized funding must receive additional contract authority by Congress before it can be spent.

The level of aviation funding available over a longer time horizon is very difficult to predict. This is because the driving force, particularly in the case of Alaska, is the amount of funding authorized by Congress each year. Federal funding makes up about 65 percent of the Statewide Aviation Plan funding. (In 1997, for example, the AIP allocation was \$52 million, and the Statewide Aviation Spending Plan included a total of \$79.4 million in funding.) AIP funding levels have been erratic, varying from a low of \$52 million in 1997, up to \$67.6 million, in 1994, a difference of fully 23 percent (Figure 10). Over this period, Alaska AIP funding has averaged \$61.6 million annually.

Table 19  
Aviation Spending Plan Data

Project	FFY '98	FFY '99	FFY '00	FFY '01	FFY '02	APEB Score
<b>Primary Airports</b>						
<b>Primary Airfield</b>						
Cordova Runway Rehabilitation	\$2,848,443					110
Valdez Airport Rehabilitation						86
<b>Primary Airport Buildings</b>						
Cordova (M. Smith) SRE Bld. Const				\$850,000		53
Valdez Const. ARFF Bldg.		\$1,230,000				51
<b>Primary Airport Equipment</b>						
Cordova ARFF Vehicle Replacement						13
Cordova SRE (Deicing Equipment)	\$93,750					56
Valdez SRE (Grader)				\$180,000		27
<b>Primary Airport Planning</b>						
Cordova Master Plan Update	\$300,000					N/A
Valdez Airport Master Plan Update		\$375,000				N/A
<b>Non-Primary Airports</b>						
<b>Non-Primary Airfield</b>						
Chenega Bay Airport Lighting Install.						83
Seward Airport Lighting Replacement						76
<b>Non-Primary Buildings</b>						
Cordova (Eyak Lk) SRE Bld Upgrade						11
<b>Non-Primary Equipment</b>						
Tatitlek SRE (Loader)		\$120,000				64
<b>Non-Primary Planning</b>						
<b>Non-Primary Local Sponsor</b>						
Airfield Improvements						
Wasilla Airport Paving Design (L S) Equipment	\$140,900					78
<b>Regional Sum by FY</b>	<b>\$3,383,093</b>	<b>\$1,725,000</b>	<b>\$0</b>	<b>\$1,030,000</b>	<b>\$0</b>	
<b>Grand Total PWS/CR Projects</b>	<b>\$6,138,093</b>					
<b>Grand Total All Alaska Projects</b>	<b>\$437,156,885</b>					
<b>Percentage of 5-Year Plan Programmed for PWS/CR</b>	<b>1%</b>					

Figure 10  
Variance in AIP Funding to Alaska Statewide



## PORTS AND HARBORS

The marine fuel tax generates an average of over \$8 million dollars annually. These tax revenues are deposited into the State's General Fund. Historically, the marine fuel tax has generated much more than what the State has spent on port and harbor improvements. This discrepancy is attributable to the fact that these revenues – like all other revenue sources in Alaska – are not dedicated. However, in 1999, State funding for ports and harbors spiked to an all-time high with a \$28.2 million appropriation from the Legislature. This funding was appropriated primarily for deferred maintenance. One project, which constitutes about 11% of this funding, is earmarked in the Prince William Sound/Copper River area. This is the \$3.14 million for the maintenance, repair, and replacement project for Seward Harbor, the ownership and operation of which were recently turned over to the City of Seward.

It is difficult to predict what the future will hold for port and harbor funding, as legislative annual appropriations have ranged from a low of \$1,669,500 million to the high in FY 1999. Similar to State aviation funding practices, funding for ports and harbor is directly linked to federal funding mechanisms.

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