

**State of Alaska**  
**FY2013 Governor's Operating Budget**

**Department of Transportation/Public Facilities**  
**Highways and Aviation**  
**Results Delivery Unit Budget Summary**

**Highways and Aviation Results Delivery Unit**

**Contribution to Department's Mission**

Operate, maintain, safeguard, and control the state's infrastructure system of highways, airports and harbors.

**Core Services**

- Winter snow and ice control, including snow plowing, snow removal, sanding, anti-icing, de-icing, avalanche control, snow fencing and culvert thawing.
- Summer maintenance including: pavement preservation, grading, pothole patching, crack sealing, leveling of heaves and dips, brush clearing, sweeping, dust control, drainage cleaning and repair, pavement marking, fence and guardrail repair, bridge painting and repair, and sign maintenance.
- Road and airport lighting systems maintenance, including traffic signals, intersection and road illumination, harbor electrical service and lighting, and runway and taxiway lights.
- Roadside litter control and trash removal at rest areas, turnouts and campgrounds.
- Access control to state rights of way for driveways, access roads, signs and utilities.
- Security at state airports in compliance with the Homeland Security and the Transportation Security Administration (TSA).
- Operation of certificated airports in compliance with 14 CFR Part 139.
- Operation and maintenance of rural non-certificated airports.
- Maintenance of federally mandated security at state airports, including access controls, criminal history checks and badging, security fencing, communications, and law enforcement.
- Emergency response to impacts on State highways and airports from natural disasters.
- Active avalanche prevention program. Provide winter road and weather reporting on the Internet via the Alaskan "511/CARS" (road condition reporting) system, and/or through e-mails and faxes to state troopers, trucking firms, and others.

<b>Major Activities to Advance Strategies</b>	
<ul style="list-style-type: none"> <li>• Use maintenance management system to monitor efficient and effective use of state resources</li> <li>• Develop, implement, and utilize a comprehensive, systematic Transportation Asset Management (TAM) system</li> <li>• Increase scheduled preventative maintenance</li> <li>• Implement technologies and use of anti-icing chemicals for effective anti-icing program</li> <li>• Provide safety training and compliance monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Develop policies and procedures for accident/incident review, tracking and prevention</li> <li>• Provide equipment operator training and certification</li> <li>• Deploy land mobile radios and receivers</li> <li>• Employ the use of trackless snow removal equipment to keep sidewalks clear for pedestrians</li> <li>• Utilize comprehensive highway and airport pavement management systems to assist in directing state resources</li> </ul>

**Key RDU Challenges**

- Winter maintenance on Alaska's highways and airports has always been a big challenge for the department's winter maintenance crews. Alaska's transportation system lies within one of the most extreme and challenging environments on the planet. Alaska is a land of extremes with temperatures ranging from 100F to -80F, snowfalls as high as 974 inches of snow at Thompson Pass, and 80% of the State is under laid by ice-rich permafrost. Maintenance activities are conducted in a geographically diverse climate ranging from maritime to arctic. Alaska's extreme geography and weather conditions create maintenance challenges faced by no other State Department of Transportation. Motorists and the snowplow operators face everything from frost and black ice on the roads to severe winter storms that can drop several feet of snow in just a few hours. To meet the challenges of maintaining Alaska's highways and airports in the winter, Highways and Aviation (H&A) must stay abreast of the latest snow and ice control technologies and equipment. The escalating cost of winter maintenance chemicals such as magnesium chloride has forced the department to look for alternative anti and deicing chemicals in order to keep our highways and airports safe.
- Warming climate trends are having major impacts on the transportation infrastructure. Thawing of ice-rich

discontinuous permafrost has already damaged roads, airports, and buildings and has resulted in increased maintenance costs. Thawing and melting are likely to continue to bring widespread changes in ecosystems, increased erosion, and damage to buildings, roads, airports and other infrastructure increasing the State's financial burden. In addition, coastal storms threaten transportation infrastructure critical for community viability by eroding sea walls and other shoreline protection and exposing infrastructure to erosion, flooding and storm surge. State transportation infrastructure in coastal communities are vulnerable to accelerated coastal erosion due to storm activity and wave action eroding shorelines once protected by shore-fast sea ice.

- Airport security continues to be a major issue. Maintenance and Operations staff are constantly working with the Transportation Security Administration to meet the new and continually changing certified airport security requirements.
- The escalating cost of replacing heavy equipment is having a negative impact on the department's ability to maintain services.
- Protecting Alaska's investment in its transportation infrastructure continues to be a key concern. Increased traffic volumes and truck weights, coupled with a warming climate, are accelerating deterioration and driving up maintenance costs. As the transportation infrastructure continues to age, deferred maintenance needs also increase.
- Increased costs have been offset slightly through increased productivity and other efficiencies. They are offset largely by increased reliance on capital funds. Highways and Aviation has made maximum use of federal highway funding to achieve improvements in road surfaces (chip sealing and other pavement preservation activities), which decreases maintenance costs for the short term. These funds are limited to specific maintenance activities such as asphalt and bridge repair and are not available for routine activities such as guardrail repair or snow and ice control. Operating costs however, have continued to increase and still outweigh the sum of our cost reducing efforts, the infusion of capital funds, and our operating revenues.
- The H&A workforce is aging and nearing retirement. There are not sufficient skilled employees within our ranks to fill these vacancies. The state must be proactive in planning for the departure of this skilled workforce so the level of service on our transportation system is not adversely impacted.
- Continuing increases in environmental regulatory requirements and mandates are placing additional burdens on the H&A budget. Environmental permits are required for even basic maintenance work; storm water pollution and spill prevention plans need to be developed and implemented; and additional street sweeping is needed in Anchorage to meet Environmental Protection Agency (EPA) requirements.
- Mandate from the Federal Highway Administration (FHWA) for increased maintenance and repairs of pedestrian facilities (sidewalks and bike paths) in accordance with Americans with Disabilities Act (ADA) standards diverts maintenance efforts from the mainline highway system.

### **Significant Changes in Results to be Delivered in FY2013**

Expanded sidewalk and wheel chair ramp repair program that will increase and redirect resources toward compliance with a mandate from the Federal Highway Administration (FHWA) for more maintenance and repairs of pedestrian facilities in accordance with Americans with Disabilities Act (ADA) standards.

Expanded anti-icing programs will be implemented in Soldotna, Fairbanks, and on Prince of Wales Island. Highways & Aviation will also expand its wildlife management control efforts at various airports to improve air traveler safety.

### **Major RDU Accomplishments in 2011**

- Provided surface maintenance of either gravel or paved runways for 32 airports.
- Performed repairs on 58 bridges.
- Applied chip seal, hot mix, or high float asphalt to 224 lane miles of roads (all regions).
- Performed 1,763,047 lineal feet of surface crack seal treatment on our paved highways.
- Cut approximately 8,400 lane miles of brush and trees along our highway, side road and bike path rights-of-way throughout the state.
- Installed, replaced or raised 53,204 lineal feet of existing guardrail as a safety enhancement for the traveling public.
- Replaced 97 failing culverts.
- Overlaid or patched deteriorated sections of roads in the Anchorage, Mat-Su, and Kenai Peninsula Districts with asphalt pavement based on recommendations from the department's pavement management system.

Increased funding in FY10 and in deferred maintenance in FY11 (FY10 supplemental) allowed significant repairs throughout the region. Noteworthy repairs with this funding in 2011 included Kenai Peninsula roadways: Bridge Access, Poppy Ridge, Cannery Road, Sterling Highway (spot repairs- Anchor Point to Homer), Skyline West (Homer); Anchorage roadways: Seward Highway (36<sup>th</sup> Ave to 76<sup>th</sup> Ave), Birchwood Airport Access, Rabbit Creek Road, Old Seward Hwy (Dimond Blvd to Omalley), East 36<sup>th</sup> Ave., Klatt Rd, De Armoun Rd, Birchwood Loop, International Airport Rd.; MatSu Roadways: Lucas Rd, Pittman Rd, Palmer-Wasilla Extension, Wolverine Rd, Bodenbug Loop.

- Responded to numerous natural disasters across the State. Responded to the major storm that hit Northwestern Alaska this November. Still assessing damage. Responded to a significant emergency event on the Kuskokwim River at Crooked Creek. The event was declared a federal emergency. Also responded to numerous avalanches across the State. The Northern Region alone responded to and cleaned up 14 avalanches in the Thompson Pass area on the Richardson Highway as well as 20 avalanches in the Atigun Pass area impacting traffic on the Dalton Highway.
- Implemented an enhanced salt brine anti-icing system in Soldotna. Also installed the needed infrastructure in Fairbanks and Klawock to begin anti-icing in 2012.
- Completed a comprehensive traffic sign inventory in the Northern Region and began collecting sign inventory data in Southeast Region.
- Applied dust palliative products to the runways, taxiways, and aprons of eight rural airports: Buckland, Hughes, Kantishna, Kotzebue, Noatak, Russian Mission, Noorvik, and White Mountain. Aided local residents with a special dust control project for village roads at four Western sites: Buckland, Ambler, Noatak and St. Marys. This project not only provided immediate dust control benefits to the community but it also built capacity within the various communities to provide ongoing dust control activities.

Contact Information
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**Highways and Aviation  
RDU Financial Summary by Component**

*All dollars shown in thousands*

	FY2011 Actuals				FY2012 Management Plan				FY2013 Governor			
	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds
<b>Formula Expenditures</b> None.												
<b>Non-Formula Expenditures</b>												
Central Highways and Aviation	48,116.7	4,031.8	565.1	52,713.6	51,928.7	5,094.9	539.2	57,562.8	51,798.2	5,104.6	539.2	57,442.0
Northern Highways & Aviation	64,224.5	4,234.4	202.1	68,661.0	67,420.5	6,606.6	348.2	74,375.3	66,434.7	6,615.6	348.2	73,398.5
Southeast Highways & Aviation	14,161.7	1,445.5	54.3	15,661.5	15,206.6	1,808.3	215.0	17,229.9	15,040.5	1,812.6	215.0	17,068.1
Whittier Access and Tunnel	1,013.8	3,514.9	0.0	4,528.7	713.8	3,773.4	0.0	4,487.2	1,001.4	3,753.4	0.0	4,754.8
<b>Totals</b>	<b>127,516.7</b>	<b>13,226.6</b>	<b>821.5</b>	<b>141,564.8</b>	<b>135,269.6</b>	<b>17,283.2</b>	<b>1,102.4</b>	<b>153,655.2</b>	<b>134,274.8</b>	<b>17,286.2</b>	<b>1,102.4</b>	<b>152,663.4</b>

**Highways and Aviation  
Summary of RDU Budget Changes by Component  
From FY2012 Management Plan to FY2013 Governor**

*All dollars shown in thousands*

	<u>Unrestricted Gen (UGF)</u>	<u>Designated Gen (DGF)</u>	<u>Other Funds</u>	<u>Federal Funds</u>	<u>Total Funds</u>
<b>FY2012 Management Plan</b>	<b>128,827.9</b>	<b>6,441.7</b>	<b>17,283.2</b>	<b>1,102.4</b>	<b>153,655.2</b>
<b>Adjustments which will continue current level of service:</b>					
-Central Highways and Aviation	-487.0	0.2	9.7	0.0	-477.1
-Northern Highways & Aviation	-1,411.8	2.4	9.0	0.0	-1,400.4
-Southeast Highways & Aviation	-466.1	0.0	4.3	0.0	-461.8
-Whittier Access and Tunnel	3.3	0.0	0.0	0.0	3.3
<b>Proposed budget decreases:</b>					
-Whittier Access and Tunnel	0.0	0.0	-20.0	0.0	-20.0
<b>Proposed budget increases:</b>					
-Central Highways and Aviation	356.3	0.0	0.0	0.0	356.3
-Northern Highways & Aviation	423.6	0.0	0.0	0.0	423.6
-Southeast Highways & Aviation	300.0	0.0	0.0	0.0	300.0
-Whittier Access and Tunnel	284.3	0.0	0.0	0.0	284.3
<b>FY2013 Governor</b>	<b>127,830.5</b>	<b>6,444.3</b>	<b>17,286.2</b>	<b>1,102.4</b>	<b>152,663.4</b>