



Statewide Aviation Alaska Department of Transportation & Public Facilities 4111 Aviation Avenue • Anchorage, Alaska 99502 www.dot.alaska.gov





Message from: Marc Luiken, Commissioner - DOT&PF



It is my pleasure to submit the Department of Transportation and Public Facilities' *Airports and Aviation Annual Report*. Our department continues its diligent work toward improving the safety and efficiency of Alaska's airports.

Nowhere in the nation is aviation more important than Alaska, since 82% of Alaska's communities are not connected to the national highway system. Many state airports still have not been improved to current FAA standards and some communities are totally reliant on very substandard airports for their only means of all season access. Even airports which have been improved to current standards require major capital investments to keep them operating in a safe and reliable manner. In addition, our

state still has a need for new airports to improve basic access to some remote communities. Through the ongoing Alaska Aviation System Plan update, I am evaluating all aspects of our aviation system including the vision, planning, design and construction, as well as the management and operations of our airports.

The Alaska International Airports System (Anchorage and Fairbanks airports) is a vital gateway for trade and commerce between North America and Asia and both airports are economic engines for their respective communities and the state. A strategic plan is being developed that will identify the international airports' mission, vision and values for the next decade. We are reaching out to our customers to help them understand the economic benefits our system can provide to their companies.

As our rural airports' infrastructure is developed our need to meet maintenance and operation commitments will continue to grow. The evolution of an airport project does not stop with construction. My goal is to identify issues and funding requirements to ensure these airports receive timely maintenance and airport operators/contractors receive adequate training to improve the competence and capability of our airport staff.

I'm committed to the growth and development of our aviation system while enhancing its contribution to Alaska's economy and the quality of life of Alaska's citizens.

Safe Travels,

Marc Luiken Commissioner





Tradeshows, Conferences and Public Communication Efforts

DOT&PF airports' staff can be found throughout the year at numerous trade shows and conferences with the goal of increasing communication, sharing information and providing better customer service. Aviation stakeholders and the general public can find information on airport projects, aviation policy issues, airport activity surveys, contacts, and more at these events.

One of the larger annual events is the Alaska Airmen's Aviation Trade Show and Conference held annually at the FedEx Hangar. Approximately 25,000 people attend this show with DOT&PF well represented with booths from Ted Stevens Anchorage International Airport, Alaska Division of Investments (Capstone Loan Program), ANC Airport Rescue and Firefighting recruiting officers, and Division of Statewide Aviation.

Upcoming events include the Alaska Air Carriers Association 45th Annual Conference and Tradeshow, February 14-18, 2011 and the Alaska State Aviation Trade Show and Conference, April 30—May 1, 2011.



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There are many organizations in Alaska that promote and support the aviation industry. Information on these organizations and other useful aviation links can be found at <u>www.dot.alaska.gov/stwdav/Links.shtml</u>



(L-R) Jessica Semmler, Statewide Aviation Planner; Jeff Roach, Northern Region Aviation Planner and Rich Sewell, Statewide Aviation Policy Planner at the 2010 Alaska Airmen's Conference & Trade Show

Piston Aircraft put on Notice by EPA

The Alaska aviation community received an Advanced Notice of Proposed Rulemaking (ANPRM) this year from the EPA asking for comments for their evaluation of the science available and research about lead contamination from av-gas powered airplanes. Governor Parnell was quick to respond and was the only Governor to provide comments to Air service to Alaskan rural this ANPRM. communities is primarily provided by pistonengine aircraft and without a substitution, this rule would impact thousands of aircraft and would be a disaster for our communities.

As Governor Parnell addressed in his letter to the EPA, piston powered aircraft require high octane fuel that provide reliable performance at high altitude and in extreme temperatures. 100 octane low lead avgas (100 LL) aviation fuel has over 60 years of dependable proven safety. There is no substitute fuel for 100LL, which must be considered as EPA proceeds with their evaluation of this change. The entire letter can be read online:

<u>www.dot.alaska.gov/documents/Gov-Parnell-</u> <u>EPA-letter.pdf</u>



Alaska International Airports System Air Cargo Summit



(L-R) Vice-President of Air China Cargo Dongfeng Gu with Governor Sean Parnell, and DOT&PF Commissioner Marc Luiken.

At the invitation of Governor Sean Parnell, representatives from 18 air carriers from North America, Asia and Europe gathered in Anchorage in August, for an Alaska International Air Cargo Summit. The summit was designed to spotlight the unique airline opportunities for international air cargo transfer in Alaska that have been provided to the state by U.S. Department of Transportation (USDOT) and U.S. Congress.

"Aviation is an economic force in Alaska, contributing \$3.5 billion to the state's economy every year," Governor Parnell said. "Our exclusive air cargo transfer authority reinforces the business-friendly environment that we've built in our state, and keeps Alaska favorably positioned in the global market."

Aviation experts addressed specifics of the special cargo transfer authorities available to international cargo carriers operating at the state-owned and operated international airports. Scheduled speakers included: George Wellington, Chief of the Foreign Air Carrier Licensing Division of USDOT, and Jeff Shane, partner in Hogan & Lovells who previously served as USDOT's chief U.S. aviation negotiator and as an undersecretary for policy.

The Alaska International Airports System (AIAS) is working to increase the air cargo activity at both Anchorage and Fairbanks airports by helping carriers expand markets and increase revenue through the combination of Alaska's strategic location and exclusive cargo transfer rights.

Alaska is equidistant between Tokyo and New York City. Freighters carry maximum cargo payloads and refuel in Alaska, which in turn create lower costs and access to imported goods for American households. 5% of the value of all U.S. international cargo or \$41 billion worth of merchandise passed through ANC in 2008. The largest aircraft in the world can land at these airports.



Aviation Advisory Board

The Governor's Aviation Advisory Board is comprised of 11 board members representing different user groups and geographic areas of Alaska. They meet three to four times annually and advise the DOT&PF Commissioner and Deputy Commissioner regarding aviation issues and concerns about the state's aviation system.

At the August meeting in Unalakleet, the Board heard comments and concerns first-hand from local residents that are totally dependent on Alaska's aviation system. Key issues that the Board is addressing include the impacts of expanding postal hubs in Alaska, maintenance and operations at rural airports, and longterm sustainability of funding rural airport improvements.

Aviation Advisory Board (AAB) members and user groups they represent:

Jim Dodson (Mayors of Fairbanks & North Star Borough) Tom George (Statewide Organizations of Pilots, Aircraft Owners & other Aviation Supporters) Ken Lythgoe (Non-Airline Tenants, Anchorage) Judy McKenzie (All Cargo Air Carrier) Frank Neitz (Unorganized Borough) Tom Nicolos (Public) Al Orot (Alaska Int'l. Airports System Operating Agreement Signatory Airlines) Lee Ryan (2nd Judicial District) Hon. Mike Salazar (Alaska Air Carriers Association) Mike Stedman (Regional Air Carriers) Steve Strait (Mayor of the Municipality of Anchorage)



Aviation Advisory Board in Unalakleet, Alaska.



Statewide Aviation Leasing

Statewide Aviation Leasing's online land use application program allows customers to apply for:

- Lease or Permit
- Building Permit
- Mobile Fuel Dispensing Permit
- Tiedown Permit

Submit reports, pay fees, and rent with a Visa or MasterCard directly online.

More information on the web at: http://www.dot.state.ak.us/stwdav/eLeasing_Welcome.shtml

Alaska Aviation System

The Alaska Aviation System is the largest system in North America. Alaska has 255 state owned airports of which 172 are gravel strips, 46 paved, 36 seaplane bases and 1 heliport. The Alaska International Airports System (Anchorage and Fairbanks) is managed as an enterprise fund of the State of Alaska.

The DOT&PF rural airport system is divided and managed by three regions: Northern, Central, and Southeast.

Each region has the responsibility for the planning, design, construction, maintenance, operations, and management of each airport.

Maintenance and operation challenges at remote village airports include spring floods with river ice, poor soil conditions, access to gravel, land acquisition and overall high costs associated with remote locations such as mobilization and material acquisition.



How Are Airport Projects Identified and Prioritized?

Airport projects are identified and submitted by DOT&PF regional planning sections with significant input from community representatives, the FAA, legislature, and aviation stakeholders.

After the airfield improvement projects have been identified they are evaluated and scored by the Airport Project Evaluation Board (APEB), a six member board that meets annually to score proposed airport projects. Each project goes through a technical scoring process of 16 different detailed quantitative criteria to help objectively prioritize which ones get the limited funding that is available each year. After projects are scored, Statewide Aviation develops the rural airport system capital spending plan and reports.

Key Aviation Planner Contacts:

- Jeff Roach Northern Region (907) 451-2382 Jeff.roach@alaska.gov
- Judy Chapman Central Region (907) 269-0519 Judy.chapman@alaska.gov
- Verne Skagerberg Southeast Region (907) 465-4477 Verne.skagerberg@alaska.gov



Alaska Airlines jet departing from Barrow Airport. Runway and apron paving project completed in 2010.



Stevens Village new runway as seen during spring flooding.

Rural Airport High Spot During Flooding

Stevens Village was one of the villages hit hard by spring flooding on the Yukon River last year '09. The village's new runway is only two years old and was just about the only place above water in the entire village. Many homes were under water and the road to the airport was cutoff as well. Fortunately, aircraft were still able to get in for emergency operations because of the elevation of the runway.

This airport was built on very wet land in stages over about five years. The process includes letting the main runway fill stand and settle for two years. Then going back and adding additional fill to build up the height of the runway above the max anticipated flood levels and as seen in the above photo-that worked!

Total cost of the new airport was \$13.3 million and that included the new runway, snow removal equipment and building, and aeronautical survey for wide area augmentation system (WAAS) approaches. A WAAS approach can guide aircraft to as low as 250 feet above touchdown resulting in safer approaches and better airport access in poor weather.

Aviation Education Needed to Meet Growing Demand

A recent Boeing press release (Sept. 15, 2010) predicted a requirement for more than one million pilots and maintenance personnel over the next 20 years, noting there will be more than 30,000 airplanes that will be delivered by 2029. In Alaska, the aviation industry is the 5th largest employer or 10% of Alaska jobs.

Recognizing the local need and global demand, efforts are underway to develop an aviation outreach program for middle and high school students.

The FAA has been very successful educating youth through Aviation Career Education camps, and supporting projects throughout Alaska including the Build-A-Plane program. This program provides high school students classroom learning with hands-on efforts to build a real airplane. Currently there are four programs in Alaska Hooper Bay, Chevak, Anchorage and Talkeetna.

High school students will be invited to participate in an Aviation Career Day planned for February 17, 2011 from 12:00 p.m.-4:00p.m. at the Alaska Aviation Heritage Museum. For more information please call Statewide Aviation at 269-8654 or the FAA at 271-5228.

Airport Managers & Operators Receive Training

This year, 70 airport managers/operators including 58 from DOT&PF participated in airport operations training specifically designed for Alaskan airports. Five airport employees earned the Certified Member (CM) designation from the American Association of Airport Executives and one completed the Airport Certified Employee (ACE) program for operations personnel.

Training will keep the airports and state in compliance with FAA regulations as well as provide current information on maintaining and operating airports in efficient and effective methods as we keep up with the ever growing needs of an expanding aviation industry.

Within DOT&PF lies the Research, Development and Technology Transfer section (RD&T2) pro viding training, technical assistance, library, research management. and technology local deployment services to ADOT&PF, transportation agencies, and their partners. RD&T2 in partnership with the FAA produced an aviation safety video in 2009, about the challenges of performing construction activity on an active runway and the importance of communication. Landings have occurred on closed sections of runways and this video highlights what role construction can play in preventing aviation accidents. The video, Alaska Aviation Construction Safety - Approach to Communication, has been distributed to contractors and Alaska's flying community.



(L-R) Adam Archibald - Airport Security Coordinator for Ketchikan Airport and Mike Carney - Ketchikan Airport Manager at the August "Airport Operations Practicum".

Airport Safety Inspections

DOT&PF inspected 125 rural public airports this year, or about 1/3 of the total number of public airports in Alaska. This is part of the safety inspection program called the 5010 Airport Master Record inspections funded by the FAA. All of the public airports updated information is listed in the salmon colored *Alaska Supplement*.

The DOT&PF Airport Managers and Regional Safety Officers work with FAA inspectors to accomplish the airport inspections for the Part 139 certificated hub airports. DOT&PF owns and inspects nineteen Part 139 (jet service) airports.





Funding for Airport Improvement Projects

DOT&PF relies on federal Airport Improvement Program (AIP) funding for airport improvement projects. In general, AIP funds can be used on airfield capital improvements, repairs, or planning. Federal AIP grants cover 95% of the eligible costs for all airports except Anchorage International, which is eligible for 93.75% federal AIP funding. The funding match for the rural airport system comes from the general fund. Match funding for International Airport projects is provided through the International Airport Revenue Fund, rather than state general funds.

2010 AIRPORT PROJECTS

Akiachak Airport: Airport Relocation - Stage 2 (\$11,780,074) Akutan Airport: Airport Construction – Stage 2 (\$20,000,000) Barrow Airport: Runway and apron paving/SA Expansion Stage 4 (\$7,200,000) Chefornak Airport: Airport Relocation - Stage 2 (\$21, 692,300) **Dillingham Airport:** Apron and Taxiway Rehabilitation (\$8,555,483) Fairbanks International Airport: Master Plan Update (\$950,000); Access Control Improvements (\$950,000); Aeronautical Survey, GIS & ALP (\$700,000) Huslia Airport: Airport Improvements – Stage 2 (\$800,000) Ketchikan Airport: Runway Overlay and Safety Area Expansion – Stage 3 (\$652,126—Municipal Airport) King Cove Airport: Fencing (\$1,820,936) Kipnuk Airport: Airport Relocation - Stage 2 & 3 (\$17,637,423) Kodiak Airport: Chemical Storage Building (\$2,499,922) Kongiganak Airport: Airport Improvements (\$5,685,750) Kotzebue Airport: Runway Safety Area Improvement - Stage 1 and Rehabilitate Runway 9-27 (\$17,700,000); Certification Compliance (\$2,470,711) Lake Hood Seaplane Base: Property Acquisition- Stage 1 (\$1,355,517); Strip Guidance Signs (\$608,255); Bank Stabilization-Stage 1 (\$1,644,483) Lake Louise Airport: Runway Rehabilitation (\$2,106,833)



2010 Airport Projects (continued)

Nulato Airport: Airport Improvements (\$8,200,000) Sitka Airport: Runway Safety Area Expansion (\$29,957,716) Ted Stevens Anchorage International Airport: Residential Sound Insulation Program (\$1,313,500); South Terminal Seismic & Security Upgrades - Stage 6 and 7 (\$2,573,710); Upgrade Runway 6R/24L (\$17,972,654); Runway 7R/25L Drainage and Embankment (\$10,027,500); Snow Removal Equipment Building (\$991,491); Communications and Badging Center (\$1,016,551); Security and Badging Center Equipment (\$2,130,626); Runway 7R/25L Extension - Phase 1 (\$2,767,912); Part 150 Noise Study (\$750,000)

2011 Airport Projects (Tentative Projections & Cost Estimates Only)

Akutan Airport: Airport Construction – Stage 3 (\$11,000,000) Alakanuk Airport: Airport Relocation – Stage 4 (\$6,000,000); SREB (\$1,100,000) Angoon Airport: Airport Environmental Impact Statement - Stage 3(\$2,500,000) Cold Bay Airport: Runway Safety Area - Stage 1 (\$4,000,000); North Terminal Apron Rehab. - Stage 2 (\$5,000,000) Deadhorse Airport: Runway Rehabilitation and Lighting Replacement - Stage 1 (\$18,100,000) Fairbanks International Airport: Access Control Improvements (\$950,000) Gulkana Airport: Apron and Taxiway Repaying (\$1,900,000) Gustavus Airport: Runway Safety Area (\$10,500,000) Homer Airport: Apron and Taxiway Rehab (\$3,000,000) **Hoonah Airport:** Airport Improvements (\$3,400,000) King Salmon Airport: Lighting System Replacement – Stage 3 (\$6,500,000) Kodiak Airport: Rehab Runway 18/36, Taxiway B, and Parking – Stage 1 (\$12,000,000) Kotzebue Airport: Runway Safety Area Improvements – Stage 2 &3 (\$23,000,000) **Kwigillingok Airport:** Airport Rehabilitation (\$1,100,000) Little Diomede Heliport: Temporary Snow Removal Equipment Building (\$200,000) Manley Airport: Airport Relocation – Stage 1 (\$9,000,000) Nanwalek/Port Graham Airports: Master Plan - Stage 3 (\$800,000) Ouzinkie Airport: Relocation – Stage 2 (\$3,800,000) Talkeetna Airport: Airport Improvements - Stage 2 (\$10,800,000); Runway 18/36 Pavement and Rehabilitation (\$2,100,000); Apron and Taxiway Pavement Rehabilitation (\$3,300,000)

2012 Airport Projects (Tentative Projections & Cost Estimates Only)

Akutan Airport: Airport Construction – Stage 4 (\$5,250,000) Bethel Airport: Parallel Runway and Other Improvements – Stage 6 (ROW acquisition) (\$1,650,000); Runway, Taxiway, Commercial Apron Pavement Rehabilitation (\$13,000,000) Deadhorse Airport: Apron and Taxiway Rehabilitation and Lighting Replacement – Stage 2 (\$13,400,000) Dillingham Airport: Runway Safety Area – Stage 1 (\$25,000,000) Golovin Airport: Runway and Apron Improvements – Stage 1 (\$2,000,000) Haines Airport: Drainage, Taxiway, and Apron Rehabilitation and Fence (\$7,400,000) Kodiak Airport: Runway 7/25 Rehabilitation (\$14,800,000) Manley Airport: Relocation – Stage 2 (\$6,400,000) Point Hope Airport: Pavement Rehabilitation (\$7,000,000) Sitka Airport: Runway 11/29 Overlay (\$5,000,000) Tununak Airport: Airport Relocation – Stage 1 (\$14,400,000) Unalaska Airport: Runway Safety Area and Pavement Rehabilitation (\$24,200,000); Chemical Storage Building (\$2,750,000)

<u>Municipal Airport Projects 2010/2011/2012</u> (Tentative Projections & Cost Estimates Only) The following municipal airport projects have been funded or are being considered by the FAA for AIP funding:

<u>Kenai Airport:</u> Airport Apron and Float Plane Basin Development (\$199,614) - 2010
<u>Merrill Field Airport:</u> Runway Rehabilitation, Snow Removal Equipment Building, VASI/ROW (\$4,515,378) -2010
<u>Soldotna Airport:</u> Apron (\$1,546,891) - 2010
<u>Wasilla Airport:</u> Apron (\$1,139,689) - 2010
<u>Kaktovik Airport:</u> Airport Relocation – Stage 1 (\$4,000,000) - 2011
<u>Kaktovik Airport:</u> Airport Relocation – Stage 2 (\$23,000,000) - 2012



DIGITAL ELEVATION MAPPING CONTRIBUTES TO AVIATION SAFETY

The existing map of Alaska is over 50 years old, is widely regarded as grossly inaccurate and does not support modern requirements. In truth, Mars is more recently, extensively and accurately mapped than Alaska. The Statewide Digital Mapping Initiative (SDMI) is a collaboration of state and federal agencies to create a digital map of Alaska.

There are a multitude of mission critical requirements which rely on accurate elevation data, which are the primary component of the digital map. The benefits of accurate elevation data are significant and support a broad range of disciplines. Here are just a few examples:

Resource development, "Roads to Resources" and infrastructure development all require accurate elevation data. Elevation data are foundational to project planning and permitting, engineering and design and responsible resource management.

Modern public safety and emergency response capabilities supporting first responder situational awareness are largely unrealized in Alaska due to the absence of a digital base map. Disaster preparation, recovery and mitigation efforts are greatly impeded by the lack of accurate elevation data. Disaster response training cannot be adequately addressed without an accurate base map in a digital context. Search and rescue efforts are hindered by inaccurate elevation data; for example: when an F-22 Raptor crashed in November, rescue and recovery efforts were impeded because terrain and slopes could not be calculated to accurately predict the threat of avalanche danger to responders.

Floodplain risk and mitigation analysis, sea wall construction and coastal erosion cannot be adequately addressed without accurate elevation data. Climate change and its effects on Alaska require accurate elevation data. For example, as the tundra becomes permeable, existing safe drinking water supplies may be impacted and sewage lagoons may affect ground water. Elevation data are needed to understand these potential impacts and plan accordingly. Advancements in Next Generation aviation safety utilize elevation data for terrain avoidance purposes, which has the promising capacity to reduce Controlled Flight Into Terrain (CFIT) fatalities from occurring. Navigational devices, survey equipment and tracking applications require accurate elevation data in order to function properly.

State and federal funds were pooled to collect elevation data over approximately ten percent of the state last summer. A cost sharing and federal outreach meeting is planned for early 2011. A public demonstration of elevation data collected in 2010 will be performed at the annual Alaska Surveyors and Mapping Conference, scheduled for February, 2011. Information about this conference is available at <u>www.aksmc.org</u>. Nick Mastrodicasa is Project Manager for the Statewide Digital Mapping Initiative and can be contacted at <u>nick.mastrodicasa@alaska.gov</u>



L-R) Nicholas Mastrodicasa, Project Mgr.; Dr. Vicki Childers / NOAA-National Geodetic Survey (NGS) & Project Manager GRAV-D; Lt. Governor Mead Treadwell; Dr. Mark Myers (previous Director of USGS); Marc Luiken, Commissioner and Phil Thiel, Vice President Dewberry Engineering participate in "Skybreaking Ceremony" highlighting the progress being made in statewide mapping.



Alaska Aviation System Plan

With 82% of the communities in Alaska not connected to a highway or road system, it is important that the state maintain a comprehensive airport system plan that identifies the aviation facilities needed to meet air transportation needs.

The first Alaska Aviation System Plan (AASP) was adopted in 1986, updated in 1996, and currently being updated to meet the needs of today's aviation system. The AASP proposes aviation policy, and documents the existing system with published reports and studies. The AASP also includes the element of continuous planning to keep the plan current and relevant to the everevolving aviation system.

The AASP planning team includes members of the DOT&PF, FAA, professional consultants, airlines, and other aviation stakeholders, working together through various focus work groups to support the total system planning effort.

The AASP team has worked together over the past three years to develop numerous technical reports and studies, including the first economic impact assessment of aviation in Alaska, an economic analysis of runway extensions, and fact sheets covering Maintenance & Operations issues and air mail service in Alaska.

This past year, the AASP developed the following elements of the plan:

- A database inventory of the current aviation system
- Aviation system forecasts
- Goals, objectives, and performance measures to regularly assess the status and health of the system
- Classifications of the state's airports

More information on the AASP can be found online at <u>www.AlaskaASP.com</u>

Aviation contributes to Alaska's economy

- \$3.5 Billion to the State economy
- 47,000 Jobs—represents 10% of all jobs in Alaska
- 1 in 8 Jobs in Anchorage attributable to the Anchorage Airport **AVIATION SYSTEM**

Rural Airport Lighting Program

Occasionally rural airport runway lighting fails, and DOT&PF deploys battery operated emergency runway lights to provide a safety net until M&O staff can repair lights during summer months.

This year Togiak runway lighting failed and DOT&PF shipped a set of emergency runway lights to the village. Night medevac operations require runway lights and our battery powered runway lights are a great back-up system. DOT&PF has 10 full runway sets and 50 six-packs for helicopter operations.



On a clear night lights are visible 5 miles out on approach to the airport. Emergency runway lights are easily stored and installed.



mission

To provide for the safe movement of people & goods and the delivery of State services



STATE of ALASKA DEPARTMENT of TRANSPORTATION & PUBLIC FACILITIES

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