

ALASKA STATE LEGISLATURE
SENATE TRANSPORTATION STANDING COMMITTEE

February 1, 2024

1:33 p.m.

MEMBERS PRESENT

Senator James Kaufman, Chair
Senator David Wilson, Vice Chair
Senator Löki Tobin
Senator Jesse Kiehl
Senator Robert Myers

MEMBERS ABSENT

All members present.

COMMITTEE CALENDAR

PRESENTATION(S): DOTPF WINTER WEATHER OPERATIONS

PREVIOUS COMMITTEE ACTION

No previous action to record.

WITNESS REGISTER

RYAN ANDERSON, Commissioner
Department of Transportation and Public Facilities (DOTPF)
Juneau, Alaska

POSITION STATEMENT: Co-presented a presentation on DOTPF Winter Weather Operations.

ANDY MILLS, Special Assistant
Department of Transportation and Public Facilities (DOTPF)
Juneau, Alaska

POSITION STATEMENT: Co-presented a presentation on DOTPF Winter Weather Operations.

JASON SAKALASKAS, Chief of Maintenance & Operations,
Northern Region
Department of Transportation and Public Facilities (DOTPF)
Fairbanks, Alaska

POSITION STATEMENT: Co-presented a presentation on DOTPF Winter Weather Operations.

BRAD BYLSMA, Fleet Manager
State Equipment Fleet
Department of Transportation and Public Facilities (DOTPF)
Anchorage, Alaska

POSITION STATEMENT: Co-presented a presentation on DOTPF Winter Weather Operations.

SEAN HOLLAND, Regional Director
Central Region
Department of Transportation and Public Facilities (DOTPF)
Anchorage, Alaska

POSITION STATEMENT: Co-presented a presentation on DOTPF Winter Weather Operations.

TIMOTHY GLASSETT, Manager
Avalanche and Artillery Program
Department of Transportation and Public Facilities (DOTPF)
Girdwood, Alaska

POSITION STATEMENT: Co-presented a presentation on DOTPF Winter Weather Operations.

ACTION NARRATIVE

[1:33:32 PM](#)

CHAIR JAMES KAUFMAN called the Senate Transportation Standing Committee meeting to order at 1:33 p.m. Present at the call to order were Senators Kiehl, Myers, Tobin, Wilson and Chair Kaufman.

PRESENTATION ON DOTPF WINTER WEATHER OPERATIONS

[1:34:45 PM](#)

CHAIR KAUFMAN announced that the agenda would consist of a presentation from the Department of Transportation and Public Facilities (DOTPF) on the department's winter weather operations.

[1:36:11 PM](#)

RYAN ANDERSON, Commissioner, Department of Transportation and Public Facilities (DOT&PF), Fairbanks, Alaska, introduced the presentation and indicated that the representatives from the department would delve into the strategies for handling winter weather incidents statewide. He said the presentation aims to offer an overview of the department's operations, detailing its setup, response mechanisms, equipment deployment, and strategies for addressing diverse challenges. Additionally, the presentation would touch on the significant winter storm

Anchorage experienced the previous winter, as well as the avalanche program, highlighting the heightened avalanche activity during the past year.

[1:38:13 PM](#)

SENATOR WILSON noted that while the heavy snowfall in Anchorage was acknowledged, significant snowfall was also experienced by the community of Mat-Su just north of Anchorage, as well as the Southeast region of Alaska. He encouraged DOTPF to think about what it can do for the Mat-Su.

[1:39:01 PM](#)

ANDY MILLS, Special Assistant, Department of Transportation and Public Facilities (DOT&PF), Juneau, Alaska, moved to slide 2, "October 10, 2023 - Snow Summit":

[Original punctuation provided.]

October 10, 2023 - Snow Summit

"Gathering of state and local stakeholders to discuss winter operations, challenges, and innovations."

- Keeping Winter Roads Clear (M&O*)
- Winter Maintenance Priorities for Sidewalks Paths (FAST Planning)
- Designing for Complete Streets in Northern Climates (Pedestrian and Bike Planning)
- 511 Innovations and RWIS*** (DMIO**)
- Winter Snow Removal Operations (M&O*)
- Extreme Events: How DOT&PF Prepares (Commissioner)
- Avalanche Program and Innovations (Avalanche/Drone Teams)
- Seasonal and Ice Roads (UAF Arctic Infrastructure Development Center)
- Snowtrails: Snowmachine Grants (DOT&PF Resiliency Coordinator)
- Innovations: Winter Operations Dashboard and Mobile RWIS*** (DMIO**)

* Maintenance and Operations (M&O)

** Data Modernization and Innovation Office (DMIO)

***Road Weather Information System (RWIS)

MR. MILLS mentioned that the inaugural summit aimed to bring together stakeholders and policymakers to address a range of issues and identify collaborative opportunities to address operational challenges. Discussions included prioritizing sidewalk maintenance, recognizing the importance of non-motorized users, an area where the department acknowledges the need for improvement, and expanding ice roads and snow trails. He noted that the summit saw a strong turnout, with over 80 attendees from Anchorage, and was also streamed online.

[1:41:55 PM](#)

MR. MILLS moved to slide 3, "Snow Summit Follow-Up: New Tools," depicting a map of Alaska detailing winter maintenance priority by district. He mentioned the establishment of a recently created office within the department, known as the Division of Modernization and Innovation, which has been a developing initiative. He noted Commissioner Anderson's emphasis on the significance of innovation, highlighting the utilization of data and novel tools to enhance decision-making within the department. Additionally, he stated that these efforts aim to increase transparency regarding departmental activities for the public.

MR. MILLS invited members and attendees to use their smartphones to scan the Quick Response (QR) code on the slide, granting access to the interactive Geographic Information System (GIS) map accessible through the department's website. He mentioned the existing Winter Maintenance Priority map, acknowledging its limitations as a constrained GIS map that solely displayed set priorities without additional details. The aim is to enhance this map by incorporating lane miles data, enabling the tracking of infrastructure additions in relation to maintenance priorities and facilitating periodic reassessment as required. This initiative is intended to serve as a tool for future innovation.

[1:43:59 PM](#)

SENATOR TOBIN said that the interactive map was helpful and that she shared it with a few constituents. She sought clarification on the significance of using the color white on the map for certain roads.

[1:44:21 PM](#)

MR. MILLS responded that roads marked in white on the map are not under the jurisdiction of the Department of Transportation (DOT). In cases where a road lacks any designated color, it

indicates that maintenance responsibility for that area falls under a different jurisdiction.

[1:44:45 PM](#)

MR. MILLS continued discussing slide 3. He highlighted the Winter Operations Dashboard, which is intended to provide service notifications to the public of when and where snow maintenance has been completed, without burdening other agencies. The goal of the dashboard is to provide useful and timely information to the public by including data from jurisdictions outside of the department's scope. He emphasized the public is concerned with the condition of the roads; not who is operating on that specific road.

[1:46:35 PM](#)

SENATOR TOBIN revisited the interactive map, seeking clarification that roads marked in white, such as in the case of Gambell and Ingra, are in fact roads that do not receive winter maintenance services from DOT.

[1:47:00 PM](#)

MR. MILLS explained that such situations typically arise from transfer-of-responsibility agreements (TORA) for those roads. These cases involve DOT roads being maintained by another entity, such as the Municipality of Anchorage. This arrangement aims to optimize route efficiency, with the other entity maintaining the DOTPF road in exchange for the DOTPF performing maintenance on their infrastructure. The department is constantly engaged in reviewing the list and making necessary adjustments.

[1:47:54 PM](#)

SENATOR TOBIN asked if that also includes pedestrian assets in those areas. She highlighted prioritizing sidewalks in heavy pedestrian cities like Ingra and Gambell. She inquired as to whether they need to work with municipal partners on prioritizing sidewalks.

[1:48:15 PM](#)

MR. MILLS referred to a project highlighted during the snow summit in which Fairbanks created a separate priority system for their pedestrian and unmotorized facilities. He explained that DOTPF has prioritization on its roads and that coupling with the road and pedestrian facilities is the same. To decouple those allows pedestrians and non-motorized users to consider some facilities that may be lower from a road perspective but higher from a pedestrian perspective, such as routes to schools and

transit facilities. Some of those could modify the prioritization of some of those pedestrian facilities. Currently the roads and sidewalks are coupled together, and the department would work with local jurisdictions to establish separate priorities that could modify how roads and sidewalks are maintained.

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SENATOR WILSON conveyed gratitude for the joint effort in maintaining snow piles that extend across multiple districts. He referenced Senator Tobin's question regarding sidewalk maintenance. He sought verification that because Egan Drive in Juneau is a state road DOTPF would maintain the road and coinciding sidewalk.

[1:50:07 PM](#)

MR. MILLS answered that is correct. He said the department maintains pedestrian facilities associated with priority roads.

[1:50:24 PM](#)

COMMISSIONER ANDERSON shifted the conversation to address the overarching perspective of winter operations at the statewide level and how the department is structured across maintenance districts to serve the public. He turned the presentation over to Mr. Sakalaskas, who leads the maintenance facilities in the northern region.

[1:51:10 PM](#)

JASON SAKALASKAS, Chief of Maintenance & Operations, Northern Region, Alaska Department of Transportation and Public Facilities (DOT&PF), Fairbanks, Alaska, moved to slide 4, "Winter Operations and Budgets", depicting a map of Alaska showing the square mileage of each Alaskan district. He addressed maintenance operation from a statewide perspective. He explained that the map displayed regional and district breakout and noted that some districts are larger than the entire state of Florida, emphasizing that the department tackles a great expanse across the state.

[1:51:52 PM](#)

MR. SAKALASKAS explained that he wanted to acknowledge the number of districts within each region. He pointed out the districts across the map. The Northern region has nine districts, the Central region has five districts and the Southcoast region has two districts. There is a vast diversity of needs both within region and district. He pointed out that the Western district has a lot of airports and a reduced

responsibility geared toward roads. Fairbanks, for example, has a lot of roads and limited airports. The budgeting process establishes budget by region down to a district level, due to widely varied needs, to provide flexibility to meet all needs, and to allow resources to be moved within each district so services are delivered.

[1:54:11 PM](#)

SENATOR KIEHL mentioned the concept of consolidating highways and airports within districts and reallocating assets accordingly. He also expanded on the idea of utilizing the same assets for regular streets. He inquired whether the department has explored the feasibility of implementing such measures.

[1:54:30 PM](#)

MR. SAKALASKAS replied that in some cases the department has used airport assets on highways and that it depends on how the funding stream is invested in the original piece of equipment. He said if the department has state funded assets at airports, airports and state highways may use the assets. In emergency situations, highways have used assets funded through the Airport Improvement Program (AIP). DOTPF has worked with the Federal Aviation Administration (FAA) to obtain coinciding approvals and establish processes.

[1:55:12 PM](#)

SENATOR KIEHL stated he was hopeful that DOTPF had found an efficient solution, but funding streams appear to hinder efficiency.

[1:55:31 PM](#)

MR. SAKALASKAS moved to slide 5:

[Original punctuation provided.]

**Winter Operations and Budgets
Snow Removal Priority System**

Category A:

Condition: Good Winter Driving Conditions

Description: Bare pavement, good visibility, snow removed from lanes and centerline, acceptable path widths.

Category B:

Condition: Fair to Good Winter Driving Conditions

Description: Some lane blockage, icy patches, snow cleared from the traveled way, generally good traction.

Category C:

Condition: Fair to Difficult Winter Driving Conditions

Description: Passable roads, standing water or loose snow, patches may cover some lane markings, slow traffic movement

Category D:

Condition: Difficult to Very Difficult Driving Conditions

Description: Challenging travel, moderate snow accumulation, substantial traffic delays.

Category E:

Condition: Hazardous Winter Driving Conditions

Description: Travel not advised, considerable snow accumulation, roads may be icy, poor traction, extremely poor conditions.

MR. SAKALASKAS stated that the categories in snow removal priority systems create target expectation parameters for management and operators internally and advise the public as to the conditions of the roads. He said road priority levels range 1-5. Level 1 is the highest priority and Level 5 is for roads that are not maintained during the winter. The target for Level 1 roads is Category A. He continued describing how priority levels correspond to performance target categories for both DOTPF and the public.

[1:58:31 PM](#)

CHAIR KAUFMAN asked if the categories were displayed on the dashboard in the previous slide.

[1:58:43 PM](#)

MR. SAKALASKAS answered that is correct. The department's priorities aim for categories A, B, and C within its serviced routes.

[1:58:59 PM](#)

COMMISSIONER ANDERSON said the 511-traveler information website color coordinates with the snow removal priority system

categories, and these are the performance targets for the maintenance and operations staff and used to report the condition of the roadways. Over the course of a winter event, as time progresses through evolution of a cycle, the conditions on the 511 websites match the categories. So, at times, a priority 1 roadway could be at a C level, but the department will work to get it back to an A.

[2:00:05 PM](#)

MR. SAKALASKAS moved to slide 6, depicting a map of airports in Alaska and said the slide shows the range of diversity of airport operations across the state. Roughly 82 percent of communities in Alaska rely on aviation as their primary means of access. He said that of 235 rural airports, 26 are Part 139 Certified.

[Original punctuation provided.]

"Winter Operations and Budgets":

Depicting a map of airports in Alaska.

235 Rural Airports
26 are Part 139 Certified

Rural Airport Contracting
Average \$50k-\$100k per Airport

~82% of communities in Alaska rely on aviation as their only means of access.

Alaska has both staffed airports, which are primarily large hub airports which are Part 139 certified and have DOT staff present and providing these services, and rural airports. The rural airports are serviced by Rural Airport Maintenance (RAM) contractors hired from the community to perform basic maintenance and operations: snow removal during winter months, general aviation system lighting repairs, and, most important, runway condition reporting.

MR. SAKALASKAS said communicating the conditions of the runway is done through a Notice to Air Mission (NOTAM) process. Each morning contractors or airport personnel are required to inspect runways and provide an accurate (runway condition) report which is then distributed in cooperation with flight service and NOTAM to aircraft, ensuring that aircraft are aware of the condition and potential hazards at any given time at the airports. The average annual contract amount at rural airports is \$50,000 -

\$100,000 per airport. The annual cost associated with running the contracts is \$3-4 million. There are about 128 contractors across the region, and they are vitally important to delivering goods and services to remote communities.

[2:03:26 PM](#)

SENATOR WILSON addressed the operational aspects of the budget, noting concerns raised by a few department operators regarding timely payments. He suggested that addressing personnel issues related to maintaining work morale could be crucial for retention.

[2:03:59 PM](#)

COMMISSIONER ANDERSON responded that payroll is a focus for the department. He said DOTPF recognizes the importance of crew member retention, and if someone isn't paid or has a serious payroll problem, there is an employee in the commissioner's office who has been tasked with contacting the worker and resolving the issue as quickly as possible. Additionally, the department is working with all its divisions to stay on top of payroll issues. The department has taken proactive steps, for instance it has taken back payroll for the Alaska Marine Highway System.

[2:05:31 PM](#)

CHAIR KAUFMAN asked if there was more information on the subject that the department could provide to the committee.

[2:05:35 PM](#)

COMMISSIONER ANDERSON answered yes.

[2:05:37 PM](#)

SENATOR WILSON asked if the commissioner took over payroll for the entire department or just the Alaska Marine Highway system.

[2:05:48 PM](#)

COMMISSIONER ANDERSON responded that DOTPF assumed control of payroll exclusively for the Alaska Marine Highway system, particularly for the maritime unions.

[2:05:59 PM](#)

SENATOR TOBIN noted that she was born and raised in Nome and many community members in her father's social circle were DOTPF employees who serviced the airport runways. She asked how the 128 contracts today compared to contracts 10-20 years ago. She contended that in rural Alaska DOTPF positions are coveted and asked if there was an increase in contract positions, because

the state has been unable to recruit and retain DOTPF employees in rural areas. She asked if the rural airports were to have DOTPF employees, what would it cost the state to run the airports on average.

[2:06:56 PM](#)

COMMISSIONER ANDERSON responded that the workforce is experiencing stress all around; there are areas where it has been tough to find contractors. The department is trying more programs to stimulate interest in DOTPF jobs. He said it is tough to compare contracting to in-house costs, but the department would provide the information to the committee.

[2:08:33 PM](#)

COMMISSIONER ANDERSON moved to slide 7, "Winter Operations Staffing". He explained that the table shows the maintenance districts in the state with their corresponding Equipment Operator Positions and vacancy rates for those positions, based on a report from January 29, 2024.

He stated the following:

- The average vacancy rate is 22.3 percent.
- Some camps within the districts have 50 percent vacancy rates.
- Pre-pandemic DOTPF vacancy rates were 8-12 percent.

He quoted statistics from a report from the Alaska Ombudsman Office (OMB) for the six-month period: July 15, 2023 to December 15, 2023, as follows:

- 378 DOTPF positions were vacated.
 - 225, (sixty percent) left state service.
 - 153 (40 percent) moved to other state positions.
 - 103 of the 225 who left state service were equipment operators with an average of 2.5 years of service, compared with an overall average of 3.5 years of service.

He emphasized:

- Equipment operators at DOTPF are not sticking around.
- DOTPF is paying attention to these statistics and considering possibilities (for the future).
- In contrast, during this period, DOTPF hired 358 people.
 - 22 of the DOTPF new hires came from other state service.
 - 152 were new to state service.
 - The remainder were internal promotions.

[2:11:29 PM](#)

CHAIR KAUFMAN remarked on the statistics and asked if the department would have the appropriate equipment ready if the positions were fully staffed.

[2:11:59 PM](#)

COMMISSIONER ANDERSON answered, there is enough equipment. He said what would change is overtime usage. Equipment use is connected to scheduling and the availability of operators to work the extra shifts. People are going above and beyond a lot to complete the work.

[2:12:33 PM](#)

SENATOR TOBIN emphasized the importance of retaining current employees and inquired about strategies in place for employee retention.

[2:12:45 PM](#)

COMMISSIONER ANDERSON said the department has taken different approaches to retention. The department recognizes that there are ongoing union negotiations and therefore won't comment. He said the department implemented a two-day on, two-day off work schedule in a remote area that staff found appealing. The department also did an exercise on the west coast with mission critical incentive pay. He mentioned that the department could not have maintained airport operations if significant numbers of staff were lost. He acknowledged the challenge of finding specialized workers.

[2:14:08 PM](#)

SENATOR WILSON asked whether DOTPF is managing their own hiring and recruitment.

[2:14:21 PM](#)

COMMISSIONER ANDERSON answered yes. The department has a group focused on the recruitment process with a communications team focused on outreach through social media and strategizing to change the tone and language of recruitment notices. He said effort is made to "sell Alaska right" and emphasize to non-residents that DOTPF jobs are prevalent across the state.

[2:15:12 PM](#)

SENATOR WILSON said the Department of Family and Community Services (DFCS) shortened the time from the interview to the date of hire from 30 to 10 days. He relayed that a diesel

mechanic who applied to DOTPF waited 45 days to start following his interview. He asked if DOTPF is monitoring this timeframe.

[2:15:51 PM](#)

COMMISSIONER ANDERSON answered that the department tracks that information and would provide it to the committee.

[2:16:26 PM](#)

BRAD BYLSMA, Manager State Equipment Fleet (SEF), Department of Transportation and Public Facilities (DOT&PF), Anchorage, Alaska moved to slide 8 and shared the following information and said the map shows every station that is manned with a mechanic:

[Original punctuation provided.]

**Supporting Divisions: Statewide Equipment Fleet and
Division of Facility Services**

51 Maintenance Shops Statewide

Over 8,500 pieces of state equipment and vehicles for:

- Executive branch
- University of Alaska
- Other state agencies

827 public facilities

- 731 DOT&PF owned.

[2:18:35 PM](#)

MR. BYLSMA moved to slide 9, "Statewide Equipment Fleet and Division of Facility Services Staffing", consisting of a table organized by Maintenance Districts detailing how many mechanic and facilities positions are available and their corresponding vacancy rates. He emphasized the challenge of keeping up with worker retention in wintertime. The Statewide Equipment Fleet and Division of Facility Services provides maintenance support to the state troopers, the Alaska Department of Fish and Game (ADF&G), and every agency under the executive branch so their energy is spent maintaining vehicles and roads for many areas. He gave an example from the slide highlighting maintenance challenges for Anchorage. Winter snow and ice removal causes wear and damage to the vehicles and creates more work for underfilled mechanic positions.

[2:21:23 PM](#)

SENATOR KIEHL asked whether the department had 700 non-DOT vehicles in total. He commented that the number seemed low and asked about the true dividing line between DOT and non-DOT vehicles.

[2:21:45 PM](#)

MR. BYLSMA responded that the previous slide showed 8500 pieces of equipment and that 800 of those belong to the University of Alaska and other quasi-state agencies. He said that there are 7700 pieces across all departments and about 4500 are DOTPF assets.

[2:22:14 PM](#)

MR. BYLSMA continued reviewing slide 9, speaking of vacancy rates for facilities. He said that there is one technician for every ten facilities to maintain. Maintaining a consistent team of technicians and maintenance staff presents a notable challenge in ensuring the upkeep of facilities.

[2:23:00 PM](#)

SENATOR KIEHL expressed his approval of running a lean operation and noted that in smaller areas a lot of vehicle mechanics are fixing buildings. He asked about the adequacy of these teams in smaller communities.

[2:23:36 PM](#)

MR. BYLSMA responded that is correct; there is overlap in skillset, toolset, and abilities to maintain both facilities and equipment, therefore overlap occurs in some of the work. There are lots of things that do not cross over, for example, heavy duty diesel mechanics are not electricians. Although there is a need for both, he emphasized the challenges posed by the department's high vacancy rates for needed positions.

[2:24:58 PM](#)

SENATOR KIEHL said he applauds the department employees for their work. He pointed out that sometimes heavy equipment mechanics are doing the work of electricians. He asked whether the department, if staffed with the number of workers allocated in their budget, would be able to maintain its buildings.

[2:25:20 PM](#)

MR. BYLSMA said that, from the perspective of fleet equipment, if the department were fully staffed, it would significantly enhance efficiency in managing equipment and facilities, resulting in reduced downtime and better maintenance of operations.

[2:26:12 PM](#)

SEAN HOLLAND, Director, Central Region, Department of Transportation and Public Facilities (DOT&PF), Anchorage, Alaska, moved to slide 10:

[Original punctuation provided.]

**Winter Events Response:
Anchorage November 8-12, 2023**

- **Nov. 8** Snowstorm starts. National Weather Service issues storm, high wind and flood warnings throughout Southcentral (Valdez, Thompson Pass, Anchorage, Turnagain Arm, Turnagain Pass, South & West Copper River Basin, Susitna and Matanuska Valleys, and Western Kenai Peninsula (over 50K sq. miles = New York). Temperatures around 30-31F.
- **Nov. 8** Breaks daily snow record with 9" of heavy wet snow.
- **Nov. 9** Continues of up to 30" total snow fall, of high moisture content snow.
- **Nov. 12** Another round of snow of over 7.5"

Relevant Factors

- Equipment down-time
- Moisture content of snow
- High-traffic volumes
- Winter shift changeovers just started
- Single snow haul site

MR. HOLLAND shared that he is new to the department but spent 18 years prior with a three-year interim in the private sector. His first day was November 7, 2023, and this massive snowstorm event started on November 8. He shared his eye-opening experience witnessing how response to the event was orchestrated, involving constant communication from the commissioner down to the maintenance superintendent and impressive strategic operations.

MR. HOLLAND drew attention to a recent newspaper report that Anchorage has received 104 inches of snowfall this year. The city is on track to break the record of 135 inches set in 2011/12, with the snowiest months of February, March, and April still ahead. The average annual snowfall is 76 inches. This November set a record with over 39 inches in one week. The snow

had high moisture content, adding up to 30 inches in just a few days. Water content is significant because traffic compacts it, creating snowpack. Removal of snowpack requires much slower grader operation. Anecdotally, the crew said clearing the November 2023 snow took twice as long to remove than a typical snowstorm. Winter crew shifts are 24/7. On paper it appears there are three hours when stations aren't manned, however crews are alert and available 24/7. He said the crews are still recovering from the recent snow event.

MR. HOLLAND pointed out the urban snow removal is challenging because crews need to pick up and haul snow to snow dumps. Anchorage currently has one snow dump. He said it is difficult to predict new norms and unnecessary to gear operations based on record seasons. The department can always do better in providing our crews with fail safes to handle extraordinary events.

[2:30:49 PM](#)

MR. HOLLAND reviewed slide 11.

[Original punctuation provided.]

**Winter Event Response:
Anchorage November 2023**

**Anchorage District In-house Resources, Emergency
Contracts, Memorandum of Agreement**

DOT&PF

- 48 equipment operators
- 13 plow trucks
- 9 graders
- 4 loaders
- 4 highway snowblowers
- 4 sidewalk snowblowers

Event-only Emergency Contracts

- Executed 3 emergency contracts due to November event
 - Provide 2 winter-equipped graders
 - Priority 3 and 4 roadways
 - Sidewalks

Slide 11 includes insets:

\$1.17M supplemental request pending for this event

Memorandum of Agreement between DOT&PF and
Municipality of Anchorage for event response.

MR. HOLLAND noted that the items listed are high maintenance equipment. He reported that during the November snowstorm, the sidewalk blowers went through more shear pins than are normally spent in an entire season. He emphasized that replacing the pins is not a simple process and greatly slows production.

MR. HOLLAND stressed that plowing is hard on trucks, graders and infrastructure. He emphasized that operating plows is a skilled trade, requiring about 3 years of training.

[2:32:36 PM](#)

CHAIR KAUFMAN asked whether there is mobile maintenance capability for the equipment or does the equipment have to go to a shop for repair.

[2:32:56 PM](#)

MR. HOLLAND replied DOTPF can replace shear pins in the field.

[2:32:58 PM](#)

CHAIR KAUFMAN anecdotally described damage to a plow truck caused by colliding with a protruding manway rim. He asked whether the department sees that kind of damage often and are there ways to prevent it.

[2:34:02 PM](#)

MR. HOLLAND answered that modifications to manhole specifications have reduced collisions. Manhole frames and covers are now recessed.

[2:34:41 PM](#)

SENATOR WILSON asked whether there is a minimum standard depth that is maintained for manholes as some seem to get deeper over time.

[2:35:10 PM](#)

MR. HOLLAND replied that the standard is one quarter inch recessed. DOTPF adjusts the depth of manholes when resurfacing pavement.

[2:35:34 PM](#)

SENATOR TOBIN described stop signs in her community that were plowed through and not re-erected; so, traffic does not stop in

those places. She asked whether DOTPF will fix the damage and who the community should alert.

[2:36:20 PM](#)

MR. HOLLAND advised that DOTPF's website provides contacts for reporting asset damage. He mentioned the pothole hotline to email or call. He stated that safety equipment, stop signs and guardrails are repaired when damaged.

[2:36:57 PM](#)

MR. HOLLAND continued discussing slide 11 and said to give the committee a snapshot of what it takes to keep a fleet operational, he would share yesterday's operational data for the Anchorage district.

- There are 48 operator positions, 39 of which are filled; 5 of those are seasonal. He pointed out that the average full-time equipment operator cost to the state, not including paycheck, is \$140k to \$150k each per year. That cost varies based on regional adjustments.
- There are 13 plow trucks, 6 operational.
- There are 9 graders, 5 operational. There are 4 loaders, all operational.
- There are 4 highway snowblowers, 2 operational.
- There are 4 sidewalk blowers, 1 operational.

He noted that starting this year DOTPF has on-call contracts for sidewalk blowers in addition to DOTPF operators. He said by the end of the November event, DOTPF was plowing sidewalks with trucks because all their blowers were broken down. He explained that DOTPF also has on-call contracts for graders to plow Priorities 3 and 4 roadways, and snow haul. He said the State pays \$180 per hour for side dumps and \$195-250 per hour for graders and \$175 per hour for sidewalk snowblowers.

[2:39:36 PM](#)

MR. HOLLAND acknowledged that change management to on-call contracts was poor. He expressed strong conviction of the need to maintain a core of expert crew in Anchorage. He clearly stated it is not the goal of DOT to 100 percent replace crew with contractors. He stated that the primary use of contractors is to level the resources; plan for average years and in higher-than-average years rely on contractors to fill the gap. He noted that, in response to the November 2023 event, DOT worked with the Northern Region to provide an additional highway blower and the Mat-Su District to plow further down both the Glenn and the

Parks highways. This allowed the Central Region to focus on urban areas.

[2:40:44 PM](#)

CHAIR KAUFMAN asked about the timing of contracts to ensure readiness when needed.

[2:41:30 PM](#)

MR. HOLLAND acknowledged that setting up of the on-call contracts happened a little late, about seven days after the storm began. He stated that the goal is to have the contracts in place by October.

[2:42:05 PM](#)

SENATOR MYERS expressed surprise that Anchorage only has one snow dump, whereas Fairbanks has 6-8. He offered that a common spot for snow dumps is between overpasses and highway interchanges and wondered if DOT considered these locations for Anchorage.

[2:42:30 PM](#)

MR. HOLLAND agreed that more snow dump areas are needed in Anchorage and said he would add the suggestions to the list of possible locations.

[2:42:57 PM](#)

SENATOR TOBIN recalled testimony from Department of Health personnel who explained that a significant factor in the SNAP program backlog was the inability of SNAP personnel to get to their office during the snow event. She noted the supplemental request and wondered if any of the additional funds would address the unintended consequences caused by state employees not being able to get to work.

[2:44:18 PM](#)

MR. HOLLAND affirmed the \$1.17 million supplemental request is for cost over normal operations. It covers the contractor payments; overtime premium and equipment use that DOTPF would not normally incur. He acknowledged and concurred that there was significant economic impact from kids not going to school and people not getting to their jobs.

[2:44:56 PM](#)

SENATOR KIEHL wondered whether the team is big enough and if the department has the assets needed to address reasonably expected weather events.

[2:45:50 PM](#)

MR. HOLLAND replied that the question is subjective in his view and the department is geared up for an average snow year, provided the operator positions are filled. He affirmed that DOT has adequate resources at hand for an average winter with 73 inches of snowfall.

[2:46:34 PM](#)

SENATOR KIEHL responded that according to the chart [slide 10], Anchorage has experienced four years with 30 inches of snowfall in November, leading him to question whether 73 inches of snow for an entire winter is the right target.

[2:46:55 PM](#)

CHAIR KAUFMAN suggested that the question may be, what is the trend. He said it is the difference between looking at the average and the trends.

[2:47:02 PM](#)

SENATOR WILSON followed up on Senator Myers' inquiry regarding snow dumps. He inquired if is a way to get a waiver from the Department of Environmental Conservation (DEC) to allow snow to be plowed directly into an inlet in an emergency there.

[2:47:48 PM](#)

COMMISSIONER ANDERSON replied that the department has permits for emergency events in other areas, but not Anchorage. He said he appreciates the suggestion, and the department will consider it.

[2:48:38 PM](#)

MR. HOLLAND moved to slide 12 and explained the Transfer of Responsibility Agreement (TORA) between DOTPF and the City of Anchorage. The agreement allows DOT to plow high speed roadways and the municipality can handle neighborhoods and smaller streets to improve efficiency. Region is also a factor affecting which roads are swapped by essentially determining how to use time and equipment to efficiently plow roads. He opined that the cost of gaining assistance from the City of Anchorage through 3 emergency contracts was not significant.

[Original punctuation provided.]

Winter Event Response: Moving Forward

Transfer of Responsibility Agreement
(TORA) between DOT&PF and the

Municipality of Anchorage

Long-Term Contracts in Place

- Non-Motorized Paths: Old Glenn; Eagle River Loop; North Birchwood; O'Malley; Jewel Lake
- Roads: Potter; Sand Lake; International; West Dimond; Kincaid
- Roads: O'Malley; Elmore; Abbot; Hillside; Rabbit Creek; DeArmoun; Huffman; Birch
- Roads: Post; Old Glenn; Eagle River Road; Eklutna Lake; Birchwood Loop

MR. Holland observed that the November event provided an opportunity to identify deficiencies and make improvements.

MR. HOLLAND stated that he takes responsibility for sidewalks and pathways not being cleared. He emphasized that this is not a reflection on the crews. Crews need to be properly equipped to carry out the work, including when the demand is extraordinary.

[2:51:48 PM](#)

MR. HOLLAND explained that equipping summer seasonal equipment with attachments that allow equipment to adapt to winter use will lower equipment ownership costs. He described several possible examples, especially for equipment that is usually parked during the winter months.

MR. HOLLAND reported that the department intends to dedicate two operators to start clearing sidewalks at the onset of a heavy snow event and transition to more {sidewalk} support as soon as roads are cleared.

MR. HOLLAND noted that the response has failed to meet expectations on Priorities 3 and 4 roads, and the department will continue to investigate the "triggers" for calls for more equipment and operators and how best to meet the performance goals.

[2:53:31 PM](#)

MR. HOLLAND said that the department would also investigate installing gates on graders which will allow passage through an intersection while carrying most of the snow to avoid creating berms.

The department will also revisit the TORA with the city.

[2:53:59 PM](#)

MR. HOLLAND moved to slide 13.

[Original punctuation provided.]

Winter Event Response: Moving Forward

Priority System in Anchorage: Non-motorized

- Significant pedestrian facilities to clear
- Limited snow storage
- "Complete Streets" policy pending

Sidewalk Priority

1)66.1 miles

2)35.3 miles

3)46.7 miles

Total 148.1 miles

MR. HOLLAND noted the significant pedestrian assets and the challenges to clearing them, including limited snow storage and the timing and coordination for snow handling between the sidewalks and streets. The department will continue to assess these methods and practices with the goal of improving outcomes and efficiency. He noted that coupling the priority for the roadways with the priority for the sidewalks will further help with planning and efficiency.

MR. Holland explained that the "complete streets" policy will include modernizing some of the roads in Anchorage to provide extra snow storage. He acknowledged that policy includes some road design safety features, such as "roundabouts" and "porkchop islands", that create snow removal challenges.

[2:55:31 PM](#)

CHAIR KAUFMAN wondered if the snow handling strategy might change from pushing it aside to lifting and removing.

[2:56:02 PM](#)

MR. HOLLAND replied that it is much faster to put snow in a pile than to put it in a truck. The process now is to pile it up and come back later to pick it up and haul it away in a truck. Identifying snow dumps in different areas of the city will be important to improve efficiency.

[2:56:56 PM](#)

SENATOR KIEHL commended DOT for the vast improvement clearing snow from non-motorized roads, compared with his past

experience, especially for people going to school and to work on foot and by bike.

[2:58:28 PM](#)

TIMOTHY GLASSETT, Manager, Statewide Avalanche and Artillery Program, Department of Transportation and Public Facilities (DOTPF), Girdwood, Alaska moved to slide 14 to discuss Avalanche Highway Closures and the Avalanche Mitigation Program. The slide consists of several photos and two tables. Table 1 is titled "AHI Hazard Levels and Typical Mitigation", while Table 2 is titled "AHI and CBE Levels for Moderate and Higher AMZs". He stated the seventh duty of DOT is to develop and implement an avalanche control plan to protect persons who use public highways. This is accomplished through short-term and long-term measures. Long term measures are engineering design. He drew attention to an aerial photo of a section of the Seward Highway with its old road alignment. The section of road was considered "the most dangerous highway in North America with regard to avalanche risk" by a preeminent avalanche engineer at that time. With the change of road alignment, this is no longer the case. Permanent measures are the long-term solution, but they are capital intensive.

MR. GLASSETT described the Sterling and Seward interchange project as an example of implementing long-term measures that would have great effect towards reducing risk and eliminating the need for short-term measures. He explained that short-term measures include avalanche mitigation for preventive closures.

[3:00:54 PM](#)

MR. GLASSETT explained the tables and said DOT's primary means to mitigate avalanches is artillery. He reported that the army says DOT must "move away from artillery" and in 5-15 years artillery will no longer be an option. DOT is considering long-term solutions, including remote avalanche control systems (RACS) and discussed new technology to mitigate avalanches.

[3:02:16 PM](#)

MR. GLASSETT moved to slide 15:

[Original punctuation provided.]

**Winter Event Response:
New Technology in Avalanche Mitigation**

Pioneering Drone Dock Testing: First in the nation to test drone docks for automated imagery collection.

Purpose: Enhances snow depth modeling and weather observation.

Digital Transformation with GIS: Leading in digitizing avalanche paths for improved asset management.

Avalanche Hazard Reduction: Nationwide first to receive approval for using explosives with drones for avalanche control.

Bridging the Gap: Utilizing UAS (Unmanned Aircraft Systems) as a step towards long-term hazard mitigation.

Future Focus: Implementing RACs (Remote Avalanche Control Systems) for enhanced safety.

MR. GLASSETT reported that DOT currently has two initiatives in the research phase:

- Remote drone UAS (Unmanned Aircraft Systems) docks are programmed to map avalanche paths, providing more information to decide more accurately where mitigation should be done. That will also provide data to inform the build-out of Remote Avalanche Control Systems (RACS).
- Testing UAS (Unmanned Aircraft Systems) to determine whether they could be used to safely, accurately, reliably deploy mitigation explosives.

MR. GLASSETT explained that artillery as an option for mitigating avalanche risk will go away and there is no one system that can replace it. He asserts that UAS systems will fill the gap for locations where RACS are not cost-effective.

[3:04:34 PM](#)

SENATOR WILSON asked why artillery would no longer be an option and if it would be possible to observe demonstrations of artillery and drone systems deployed to mitigate avalanche risk.

[3:05:21 PM](#)

MR. GLASSETT explained that there are multiple reasons that artillery will no longer be an option:

- Alaska DOT currently has a Memorandum of Agreement (MOA) with the US Army to use artillery which will go away as commercial options become available.
- Alaska has gone through four types of artillery to date.

MR. GLASSETT explained that opportunities to observe demonstrations are limited due to safety and manufacture concerns.

[3:07:00 PM](#)

SENATOR WILSON inquired as to the timeline for discontinuing the use of artillery.

[3:07:08 PM](#)

MR. GLASSETT replied that the timeline is indefinite. The US Army can discontinue allowing the use of artillery at any time.

[3:08:28 PM](#)

COMMISSIONER ANDERSON noted that there is a lot more to discuss and that DOTPF is happy to do so on any topic whenever the committee wishes to do so. He expressed his hope that what they were able to share today conveyed the breadth of DOT's work from equipment operators to mechanics to facilities and how they all work together. He emphasized that DOT does share resources to provide service to the public and that having a strong team to work toward common goals of plowing the roads and keeping highways safe amongst the challenges is the direction they intend to continue.

[3:10:29 PM](#)

There being no further business to come before the committee, Chair Kaufman adjourned the Senate Transportation Standing Committee meeting at 3:10 p.m.