

Winter Storm Efficiency Study (WSES) Summary

Alaska International Airport System (ANC & FAI)

Purpose

The WSES was contracted to evaluate and enhance Alaska International Airport System's (AIAS), comprised of Ted Stevens Anchorage (ANC) and Fairbanks (FAI) International Airports, preparedness and operational performance during severe winter weather events. The study aimed to improve resilience, minimize disruptions, and optimize infrastructure and staffing.

Methodology

Rather than produce prescriptive deliverables, emphasis was on Subject Matter Experts reviewing existing plans and documents and leading direct work with AIAS ops and maintenance teams and airfield stakeholders to discover potentially overlooked vulnerabilities ("unturned stones"). Data-driven analyses and subsequent findings were to drive the deliverable for each of the 9 scopes of work. Onsite visits and benchmarking against peer airports were part of the study.

Key Outcomes

No single solution, but confirmation that AIAS winter storm management is world class. Identified areas for impactful improvements in infrastructure, coordination, and policy:

1. Infrastructure Expansion

- Expand aircraft parking at ANC to reduce airside congestion.
- At ANC, build Lot F parking garage and at FAI, a parking deck.
- At both airports, expand use of snow melt systems to pedestrian areas for safety and efficiency.

2. Technology and Data Systems

- Deploy surface tracking system at ANC like Aerobahn for real-time tracking and data reporting of gate usage, deicing times, surface clearing times, etc.
- At ANC, explore data, processes, or systems that improve the accuracy and visibility of arrival demand and timing to better understand the magnitude of parking space constraints throughout the day.

3. Staffing & Operations

- Create airport equipment operator job class to adequately recruit, compensate, and retain qualified operators.
- Increase staffing flexibility before/during/post-storm. Form cross-functional irregular operations management (IROPS) teams.

4. Policy & Lease Reform

- At ANC, avoid options that require the closure of Runway 7L to lessen the impact of additional ground delays, avoid the adverse operational impact on other airport users, and reduce the safety risks inherent in the periodic closure of the airport and the use of runway surfaces for aircraft parking.
- Promote diversions to FAI to ease pressure on ANC.
- Separate from airfield and enhance landside equipment tracking and cost management at ANC.

6. Systemwide Coordination

- Treat ANC and FAI as a unified system for storm planning and diversions and infuse more formality into planning and preparing. Model capacity/storm scenarios and align emergency protocols.
- Coordinate with carriers and ground handlers to ensure that additional resources are available to service higher volumes of diversions at FAI.
- Continue to improve communications between airports and users.