



Federal Aviation
Administration

FAASI FY23 Roadmap



February 17, 2023

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Executive Summary

The FAA Alaska Aviation Safety Initiative (FAASI) Tiger Team will continue to take positive action on the remaining eight safety recommendations through FY23. Plans to address each of the recommendations FY23 are covered in detail in the FAASI FY23 roadmap. These eight recommendations fall into 3 categories:

1. Critical aviation infrastructure

- **1.1: Automated Weather Observing System (AWOS)**
- **1.2: Visual Weather Observation System (VWOS)**
- **2.3: GPS resiliency**
- **4.2: ADS-B Services**

2. Agency policy and regulatory guidance

- **2.1: Evaluate operator authorization requirements**
- **2.2: Establish and chart communications gaps on published routes**

3. External stakeholder outreach

- **4.1: Education and outreach of ADS-B Out equipage**
- **5.1: Safety outreach collaboration**

FAASI will likely see closure on three of these recommendations in 2023. Those three are:

- **2.1: Evaluate operator authorization requirements**
- **2.2: Establish and chart communications gaps on published routes**
- **2.3: GPS resiliency**

The FAASI team will continue to address the remaining recommendations beyond FY23 and evaluate the need to add new safety recommendations. Whereas stakeholder engagement and public outreach is a cornerstone of FAASI, those actions will continue both within FAASI and beyond.

1.0 Introduction

The FAA Alaska Aviation Safety Initiative (FAASI) will continue to address the FAASI recommendations through fiscal year 2023 and beyond. The FAASI Tiger Team will also continue to engage with external stakeholders and document FAASI progress with a year-end report and roadmap to be released early in calendar year 2024. The 2022 FAASI Roadmap provided guidance through FY22; this roadmap provides a seamless transition and path forward through FY23. All of the previous FAASI documents can be found on the FAASI webpage. (<https://www.faa.gov/alaska>).

The 11 original FAASI recommendations can also be found in Appendix A.

2.0 FY23 FAASI Roadmap

1.1: Automated Weather Observing System (AWOS)

Recommendation: Enhance weather reporting capability utilizing the Automated Weather Observing System (AWOS) including:

Who: A collaboration between the Airports Division (ARP) and (ATO).

1. Installation of AWOS: ARP and ATO Operations Support are the co-leads for this portion. ARP will lead the process with respect to funding and identification of AIP eligible locations. ATO Operations Support will lead and complete the review of the request, siting, security, inspection, and acceptance.
2. Service A Outages: ATO Technical Operations and Mission Support Services will lead this portion with support from the ATO Program Management Organization.
3. Review of FAA Order 7930.2 NOTAM: ATO Mission Support Services Aeronautical Information Services will lead this portion with support from ATO Operations Support.

What: ARP and ATO will implement three changes to enhance weather reporting capability.

1. Installation of AWOS: ARP will collaborate with Alaska Department of Transportation & Public Facilities (ADOT&PF) to finalize the installation of the eight AIP-funded AWOS systems at airports. ARP will continue their collaboration with ATO to facilitate the transfer process from airport sponsor ownership to the FAA. The FAA will utilize FAA Directive Advisory Circular 170-9A: *Criteria for Assumption of Ownership of Non-Federal Systems* and other guidance as appropriate to complete the installation and transfer.
2. Service A Outages: Air Traffic Organization (ATO) Technical Operations, Anchorage District (Tech Ops) will continue to monitor the status of all Automated Surface Observing System (ASOS) and AWOS Service A capabilities in Alaska. Tech Ops is working directly with the management entities of the telecommunication provider companies to assure their understanding of the impacts and the priority needed for restoration activities.
3. Review of FAA Order 7930.2 NOTAM: The ATO US NOTAM Governance Team will meet with subject matter experts (SMEs) to determine a final action plan. Any changes will be incorporated to Order 7930.2 with change 3, scheduled for April of 2023.

How: ARP and ATO will use a variety of options to implement these changes, including:

1. Installation of AWOS: The FAA and ADOT&PF will continue to collaborate on the installation and FAA takeover of the AIP-funded AWOS locations at Kotlik, Tok Junction, Coldfoot, Nulato, Perryville, Crooked Creek, Tununak, and Akiachak.

2. Service A Outages: Tech Ops has prioritized AWOS and ASOS telecommunications for conversion to the FAA Telecommunications Infrastructure (FTI). The FTI conversion will modernize some aspects of the circuits and adds real-time monitoring at the circuit level for these sites, which should translate into improved Service A performance.
3. Review of FAA Order 7930.2 NOTAM: The ATO US NOTAM Governance Team will meet with subject matter experts (SMEs) to determine a final action plan.

When: The changes will be implemented starting in calendar year 2022 with specific milestones listed below.

1. Installation of AWOS: The eight AWOS installations and transfer of ownership to FAA will be complete by September 30, 2023.
2. Service A Outages: Conversion of AWOS and ASOS telecommunications to the FAA Telecommunications Infrastructure (FTI) will be a multi-year endeavor and will extend beyond FY23.
3. Review of FAA Order 7930.2 NOTAM: The follow-up meeting with SMEs is planned for February 2023. The workgroup will determine the final action plan by February 28, 2023. Any changes will be incorporated to Order 7930.2 with change 3, scheduled for April of 2023.

1.2: Visual Weather Observation System (VWOS)

Recommendation: Enhance weather reporting capability utilizing the Visual Weather Observation System (VWOS) including:

1. Develop Standards for Analyzed Weather Information: Standards for operator use will be developed following current research that is being performed.
2. Seek Funding for Additional VWOS: The FAA will use its acquisition management system processes to conduct an investment analysis to determine whether a business case exists for the FAA to deploy VWOS. Funding for VWOS is dependent on the approval of the business case.
3. Modify Operations Specifications: AFS will work with aircraft operators to update their authorizations as appropriate. Performance Based Weather Standards (PBWS) are being worked with industry and the ASTM F-38 working group.

Who: Flight Standards (AFS) and the Air Traffic Organization (ATO)

What: Flight Standards (AFS) and the Air Traffic Organization (ATO) will collaborate both internally and externally to pursue deployment of VWOS. This will include the ASTM F-38 working group and the FAA AMS process.

How: The FAA will use its acquisition management system processes to conduct an investment analysis. The investment analysis will determine whether a business case exists for the FAA to deploy VWOS. Funding for VWOS is dependent on the approval of the business case.

When: AFS will work with the ASTM F-38 working group through FY23. The FAA AMS process is multi-year in nature and will likely continue through FY25. Operations specification standards will continue being developed following current research that is being performed. Estimate to finalize these standards is early 2023.

2.1: Evaluate Operator Authorization Requirements

Recommendation: Evaluate and clarify aircraft operator authorization and eligibility requirements for commercial aircraft operations under IFR. Update the policy and guidance related to equipment requirements for commercial operators when using GPS for navigation.

Who: Flight Technologies and Procedures Division, the Air Carrier Division (AFS), and FAA legal counsel (AGC) will collaborate to evaluate operator authorization requirements.

What: AFS will continue its review and evaluation of current GPS navigation policy to include regulatory requirements, equipment requirements, guidance, and the associated authorization framework. Based on the review and evaluation, AFS will consider potential for new and amended policy which would clarify and align operational and equipment requirements for commercial operators using GPS for navigation.

How: AFS will continue its work, focusing on inconsistencies, areas requiring clarification, and opportunities for improving navigation policy and the associated authorization framework.

Proposed updates identified by the FAA review team will be coordinated across LOBs to provide additional clarity and transparency. Identified updates will be published in applicable FAA documents.

When: AFS will continue its review of the navigation policy and associated requirements and plan revisions to policy documents by September 30, 2023. Members of the Flight Standards Leadership Team will provide routine updates to the FAASI team.

2.2: Establish and Chart Communications Gaps on Published Routes

Recommendation: Evaluate potential policy change permitting communication gaps on routes where communication capability is the determining factor for the minimum enroute altitude.

Who: AFS (Flight Technologies and Procedures Division) and ATO (Western Flight Procedures Team and Anchorage En Route Center (ZAN) Airspace and Procedures Office).

What: The FAA will collaborate with internal and external stakeholders to determine the viability and usability of potential route segments that were identified.

Additionally, FAA will continue internal discussions to assess and confirm regulatory requirements of Part 91, 121 and 135 pertaining to IFR ATC communication requirements along routes.

How: FAA will consider mitigations that could be implemented to ensure an equivalent level of safety for flight in areas where acceptable ATC communications gaps are proposed.

AFS and ATO personnel have identified potential route segments for consideration. The Flight Procedures Team has conducted a feasibility study of the route segments to verify potential candidates for lower altitudes. The AFS and ATO team will collaborate with internal and external stakeholders on the identified potential route segments and proposed altitudes for each segment.

When: The AFS and ATO team will begin collaboration with internal and external stakeholders by September 30, 2023 on potential route segments.

2.3: GPS Backup Resiliency

Recommendation: Develop strategies to address GPS backup resiliency in Alaska.

Who: ATO Program Management Organization, Enterprise Services, and Navigation Programs with input from AVS.

What: Finalize a GPS resiliency plan for Alaska navigation accounting for potential loss or interference of GPS or WAAS signals.

How: Finalize strategies for mitigating the loss of integrity of GPS navigation across the various geographic areas of Alaska. Factors that will be considered in the strategies include:

- Plans for retention and long-term support for conventional navigation aids (NAVAIDs)
- Threat to GPS signal
- Availability of safe landing sites
- Use of various ground-based NAVAIDs
- Assess accident locations and causes related to navigation
- Current and planned ground-based and satellite-based NAVAIDs and infrastructure.

The GPS resiliency concept will be coordinated with military and civil users and revised as appropriate. Alaska-located conventional NAVAIDs will be included in the appropriate navigation programs for funding, implementation, and long-term support.

When: The final plan will be submitted by September 30, 2023.

2.4: T-Route Development

Recommendation: Continue the development of T-routes as a replacement for Low Frequency/Medium Frequency (LF/MF) and other conventional airways.

All planned T-Route replacement airways have completed the design, environmental and development phases. In FY22, 13 T-Routes were published, with the remaining 41 T-Routes scheduled for publication in FY23.

Moving forward through FY23, The T-Routes working group has accomplished their work for Alaska and will be publishing those new routes utilizing the established agency charting cycles. There is no FAASI plan in FY23 to design or develop more T-Routes in Alaska than have already been done. The FAA will continue to evaluate the demand for and benefits of T-Routes in Alaska and will collaborate with the FAA Alaskan Region and the FAASI team regarding any future development of additional T-Routes.

This fulfills the intent of this recommendation and recommendation 2.4 will be closed in FAASI.

3.1: Mountain Pass Working Group Initiative

Recommendation: Continue the Mountain Pass Working Group initiative and partnership with the Aircraft Owners and Pilots Association (AOPA) aimed at verifying existing mountain pass information and adding additional mountain passes to the Alaska Visual Flight Rules (VFR) sectional charts.

The Alaskan Mountain Pass Working Group has accomplished their work for Alaska and their efforts have been published. There is no plan in FY23 to address specific mountain passes. The FAA will continue to evaluate the needs of stakeholders in the Alaskan region regarding mountain pass flying and will collaborate with the FAA Alaskan Region and the FAASI team regarding any future plans to address those needs.

This fulfills the intent of this recommendation and recommendation 3.1 will be closed in FAASI.

3.2: Aeronautical Charting Meetings

Recommendation: Aeronautical Charting Meetings (ACM) will ensure adequate focus is placed on Alaska specific charting needs that may be different than the contiguous United States.

Goals for aeronautical charting within FAASI have been accomplished and the results have been published. The agenda for the aeronautical charting meetings (ACM) has been permanently modified to be conducive for consistent participation by Alaskan participants. The next scheduled ACM is April 24 – 27, 2023 and they will continue outside of FAASI. Meeting minutes for all ACMs are posted on the ACM website:

[Aeronautical Charting Meeting – \(Charting Group\) \(faa.gov\)](#)

This fulfills the intent of this recommendation and recommendation 3.2 will be closed in FAASI.

4.1: Education and Outreach of ADS-B Out Equipage

Recommendation: Continue education and outreach related to the benefits of ADS-B Out equipage within certain airspace in Alaska. Outreach will focus on the safety enhancing benefits of aircraft position notification and display for users within all airspace.

Who: Flight Standards will lead the efforts with an emphasis on utilizing the FAA Safety Team (FAASTeam) in Alaska.

What: Outreach will consist of a multifaceted information campaign utilizing posters, presentations, brochures, e-mails, and accident case studies that promote and educate operators on the use and benefits of ADS-B.

How: Flight Standards will maintain an outreach plan, in harmony with the FAASTeam National Performance Plan, which identifies opportunities for the FAA to collaborate with the stakeholders on ADS-B Out equipage. The FAASTeam in Alaska will partner with stakeholders to conduct the outreach meetings. Flight Standards will review the outreach plan and add new events as identified. The outreach plan includes the following events:

- Spring Air Safety Meeting
- Great Alaskan Aviation Gathering
- Quarterly Safety Meetings
- Individual outreach with the public, including complaint investigation
- Runway Safety Action Team (RSAT) meetings
- Bethel Stakeholders Group meetings
- Pre- and Post-season Air Tour meetings
- Air Carrier briefings as requested

When: Flight Standards will meet quarterly to review and update the outreach plan. The FAASTeam will attend meetings and conduct outreach on ADS-B equipage as meetings occur.

4.2: ADS-B Services

Recommendation: Continue to deploy ADS-B services for non-implemented service volumes in a manner that will provide coverage along major air routes in Alaska.

Who: ATO Program Management Organization and Surveillance Services

What: The ADS-B Service Expansion Project will increase the number of Service Volumes (SVs) in Alaska from nine to fourteen.

How: Initial FAA Joint Resources Council (JRC) approval of the Alaska ADS-B Service Expansion Project was obtained in September 2021. Final approval of the Alaska ADS-B Service Expansion Project, including the larger ADS-B Enhancements Package was received in summer 2022. This approval provides incremental funding for the ADS-B Service Expansion Project and enables a preliminary service expansion and site coverage assessment. After completion of the preliminary service expansion and site coverage assessment, five additional ADS-B ground-based transceivers (GBT) will be installed.

When: Construction of the GBT installations will begin in FY23 along with delivering the first completed service volume.

5.1: Safety Outreach Collaboration

Recommendation: Continue safety programs already underway and seek to maximize opportunities for program integration.

Who: The Alaskan Regional Administrator (RA) will lead the process to increase safety collaboration across FAA LOBs in the Alaskan region.

What: The RA will implement two changes within the Alaskan Region to further increase safety outreach collaboration.

1. **Expanded Participation in Existing Programs:** The RA will continue to encourage expanded FAA participation in Alaska focused safety programs. The FAA currently sponsors or participates in numerous programs such as RSAT meetings, the Aviation Safety Action Program (ASAP), the Bethel Stakeholders Group, Aeronautical Charting Meetings (ACM), Mountain Pass Working Group, FAA Alaska Industry Council, and Alaska Aviation Safety Foundation Seminars. The RA will work with the RMT to ensure these existing programs are supported. In FY23 the RA will be adding collaboration with Security and Hazardous Materials (ASH) regarding the requirements for the safe transport of hazardous materials throughout Alaska. These collaborations will include education and outreach efforts to both operators and the flying public.
2. **Increase External Stakeholder Collaboration:** The RA will evaluate the opportunity to increase safety outreach collaboration by combining existing safety efforts currently in place by AVS, ATO, and ARP to make the programs more efficient and meaningful for stakeholders.

How: The RA will use a variety of options to implement these changes, including:

1. Expanded Participation in Existing Programs: The RA will advocate for increased LOB participation in all FAA safety meetings. The RA will attend RSATs, air tour operator safety meetings, and other meetings as appropriate. RMT members will communicate upcoming events at the regularly scheduled RMT meetings and will include the events on the Alaskan Region aviation events list. The RA will ensure that information regarding the transport of hazardous materials throughout Alaska will be available to the public on the FAASI webpage. The ASH hazardous materials outreach website can be found at this address: [ASH website](#)
2. Increase External Stakeholder Collaboration: The RA will encourage stakeholder participation in existing FAA safety programs by increasing communication of upcoming events at the FAA Alaska Industry Council and Alaska Aviation Coordination Council meetings. The Alaskan Region aviation event list is a publicly available document and is updated monthly on the FAASI website at this address: [FAASI website](#)

The RA will use the Alaskan Region aviation event list to identify opportunities to combine existing safety efforts to make them more efficient and meaningful for stakeholders.

The Soldotna CTAF Working Group is an example of expanded stakeholder outreach developed under FAASI. It is focused on addressing complicated and confusing CTAF boundaries in the Kenai and Soldotna area, which contributed to at least one fatal midair collision. This working group will likely propose updating CTAF boundaries and likely conclude their work in 2024.

When: The RA will continue to implement the two changes starting in calendar year 2023. The changes will continue beyond 2023.

1. Expanded Participation in Existing Programs: The RA will address the RMT on a monthly basis to identify upcoming events and encourage wider participation across the LOBs. The RA will ensure that information regarding the transport of hazardous materials in Alaska is linked to the FAASI website in January 2023.
2. Increase External Stakeholder Collaboration: The RA will use the bimonthly FAA Alaska Industry Council meetings hosted by the FAA and the bimonthly Alaska Aviation Coordination Council meetings hosted by the stakeholders as an opportunity to communicate upcoming events. The RA will continue to post the Alaskan Region aviation event list to the FAASI website and will update the list on a monthly basis.

The RA will continually consider opportunities to combine safety efforts for efficiency and to make them more meaningful. An update on the opportunities identified in FY23 will be included in the year end FY23 FAASI Report.

3.0 FY23 FAASI Stakeholder Communication

In FY23 and subsequent years, the FAASI Tiger Team will host stakeholder feedback sessions similar to those previously conducted to support FAASI and the FAASI process. The stakeholder feedback gathered from these sessions will be compiled and evaluated for prioritization of future FAASI efforts. It will continue to be included in FAASI reports for FY23 and subsequent years. FAASI roadmaps for FY23 and beyond will incorporate the priorities identified through stakeholder feedback to the greatest extent possible. Combined annual progress reports and roadmaps will continue to be released early in the calendar year.

FAASI remains an initiative intended to bring attention to and improve aviation safety in Alaska. The work on existing FAA programs will continue, both within and outside of the FAASI process.

Appendix A: The original 2021 FAASI Recommendations

Recommendation 1.1: Automated Weather Observing System (AWOS)

Continue FAA focus on new-installation AWOS units at airports for which the airport sponsor requests unit acquisition, installation, and FAA certification with funding under the Airport Improvement Program. Consistent with Section 147 of the FAA Reauthorization Act of 2018, complete each of the initial eight AWOS unit transfers at Alaskan airports (Kotlik, Tok Junction, Coldfoot, Nulato, Perryville, Crooked Creek, Tununak, and Akiachak) to the FAA by October 2022. Optimize the process to transfer AWOS units from airport sponsor ownership to the FAA, enabling seamless completion of the same in a timelier manner.

Stakeholder feedback also expressed concern about the FAA’s timely acknowledgment and repair of existing FAA-owned AWOS/ASOS units which experience frequent service outages, including associated surface communication outages. FAA should conduct a study to examine the root cause of “Service A” outages and associated impacts and identify alternative mitigations which could include infrastructure improvement recommendations, alternate notification procedures, and/or the issuance of NOTAMs advising of outages. FAA should consider any necessary changes to FAA Joint Order 7900.5 Surface Weather Observing and FAA Order 7930.2 Notices to Air Missions (NOTAM).

Recommendation 1.2: Visual Weather Observation System (VWOS)

Continue testing and evaluating VWOS systems at four Alaskan airports (Palmer, Healy River, Tatitlek, and Eek) with the goal of completion by August 2022. FAA has developed standards for air carrier use during testing and validation of the VWOS units and will develop standards for non-sensor visual-based weather information to support gridded weather analysis information currently available from the National Weather Service.

Upon successful completion of the evaluation, the FAA seek funding for VWOS unit acquisition and installation at airports throughout the state of Alaska where AWOS and/or ASOS units do not exist. Aircraft operators intending to utilize VWOS technology to support IFR operations are required to submit a program for acceptance to their FAA Principal Operations Inspector to grant modification of FAA-issued Operations Specifications.

Recommendation 2: Navigation Strategy Development

Collaboration with Stakeholders prompted a significant amount of discussion related to development of an Alaska airspace navigation strategy, associated policy for lower-altitude operations, and plans for GPS resiliency. Specific points of reference centered on equipment requirements when using GPS for navigation and optimizing/enabling lower-altitude direct flight paths.

Recommendation 2.1: Evaluate Operator Authorization Requirements

The FAA should evaluate and clarify aircraft operator authorization and eligibility requirements for commercial aircraft operations under Instrument Flight Rules. Specifically, FAA should update the policy and guidance related to equipment requirements for commercial operators when using GPS for navigation.

Recommendation 2.2: Establish and Chart Communications Gaps on Published Routes

The FAA should evaluate a potential policy change permitting communication gaps on routes where communication capability is the determining factor for the minimum enroute altitude. This would allow flexibility for aircraft operators with performance limitations or icing concerns while still maintaining acceptable terrain and obstacle clearance.

Recommendation 2.3: GPS Backup Resiliency

The FAA should develop strategies to address GPS backup resiliency in Alaska. These strategies may include plans for retention and long-term support for conventional navigation aids.

Recommendation 2.4: T-Route Development

The FAA should continue the development of T-routes as a replacement for Low Frequency/Medium Frequency (LF/MF) and other conventional airways by 2025.

Recommendation 3: Aeronautical Charting

The importance of accurate and relevant aeronautical charting, given the extent of topographical and geographical challenges in Alaska, was discussed intently during the FAASI process.

Recommendation 3.1: Mountain Pass Working Group Initiative

The FAA should continue the Mountain Pass Working Group initiative and partnership with the Aircraft Owners and Pilots Association aimed at verifying existing mountain pass information and adding additional mountain passes to the Alaska VFR sectional charts as coordinated through the Service Center and as information becomes available.

Recommendation 3.2: Aeronautical Charting Meetings

Aeronautical Charting Meetings (ACM) are held bi-annually to identify issues concerning safety and usefulness of aeronautical charts and flight information products/services. To ensure adequate focus is placed on this initiative, FAA should ensure time is reserved at every future meeting to specifically address Alaska-specific charting needs that may be different than the continental United States.

Recommendation 4: Surveillance

Stakeholder discussions and FAASI internal conversations often revolved around the need for additional air traffic surveillance capability, particularly given the number of recent aircraft incidents, accidents, and near mid-air collisions in Alaska. ADS-B equipage and coverage was a frequent topic.

Recommendation 4.1: Education and Outreach of ADS-B Out Equipage

The FAA should continue education and outreach with Stakeholders related to the requirement for equipage of ADS-B Out within certain airspace in Alaska, with a focus on the safety-enhancing benefits of aircraft position notification/display for users within all airspace. Indeed, a large number of Alaska operators have independently equipped with ADS-B Out and In or were participants in the FAA Capstone upgrade program which replaced first-generation equipment on approximately 400 aircraft with rule-compliant equipment. And, the extensive usage of it demonstrates the positive safety impact not only in airspace for which ADS-B is required, but also where the system is not required.

Recommendation 4.2: ADS-B Services

The FAA should continue its efforts to deploy ADS-B services for the five non-implemented service volumes in a manner that will provide coverage along major air routes in Alaska.

Recommendation 5: Safety Outreach

The FAASI team and Stakeholders both repeatedly recognized the value of safety programs and, importantly, the opportunity to conduct them jointly while realizing the resultant synergistic value.

Recommendation 5.1: Safety Outreach Collaboration

The FAA should continue the various safety programs already underway and seek to maximize adjacent opportunities for program integration. For example, FAA sponsors and/or participates in numerous programs such as Runway Safety Action Team meetings, the Aviation Safety Action Program, and Alaska-specific working groups including the Bethel Work Group and the AOPA-sponsored Mountain Pass Working Group. There are opportunities for FAA LOBs to conduct safety outreach efforts jointly among each other and via these program initiatives to address an entire realm of operational and environmental safety requirements and best practices. One such opportunity may exist at the Bethel Airport (BET). The FAA should explore combining efforts between AVS, ATO, and ARP utilizing the BET as a pilot program that addresses runway safety, local air traffic and traffic pattern safety, Class D airspace requirements, and accident/incident analysis and discussion utilizing a shared set of safety data. FAA-derived data and subject matter expert presentation material would become even more meaningful and would be more apt to be cohesively delivered in prospective multi-meeting settings.