February 2021

AASP
Alaska Aviation System Plan

Homer Airport

TRANSPORTATION & PUBLIC FACILITIES · STATE OF ALASKA ·

Phase III
Prior Phase Evaluation

Alaska Aviation System Plan

Project No. CFAPT00484 | AIP 3-02-0000-024-2018

Commonly Used Acronyms:

AASP	Alaska Aviation System Plan
AC	Advisory Circular
A/C	Aircraft
ACIP	Airport Capital Improvement Plan
ACRP	Airport Cooperative Research Program
AIP	Airport Improvement Plan
ALP	Airport Layout Plan
ARFF	Airport Rescue and Fire Fighting
ATCT	Air Traffic Control Tower
DOT&PF	Alaska Department of Transportation & Public Facilities
CIMP	Capital Improvement and Maintenance Program
CIP	Capital Improvement Plan
EAS	Essential Air Service
eDocs	State of Alaska Electronic Document Repository
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FBO	Fixed Base Operator
FOD	Foreign Object Debris
FSDO	Flight Standards District Office
FSS	Flight Service Station
GA	General Aviation
GF	General Fund
GIS	Geographic Information System
ICAO	International Civil Aviation Organization
M&O	Maintenance and Operations
NPIAS	National Plan of Integrated Airport Systems
PCI	Pavement Classification Number
SEF	State Equipment Fleet
SPB	Seaplane Base
SOAR	System of Airport Reporting
UAS	Unmanned Aerial System
USDOT	United States Department of Transportation
USPS	United States Postal Service
Y-K Delta	Yukon-Kuskokwim Delta

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I. Overview: Aviation System Planning

The Alaska Aviation System Plan (AASP) is a continuous planning effort, as recommended by the Federal Aviation Administration (FAA) Advisory Circular (AC) 150-5070-7, Change 1, The Airport System Planning Process, for states such as Alaska that play an active role in airport sponsorship, budgets, policy issues, and transportation infrastructure preservation and development.

The Alaska aviation system encompasses more airports and more land mass than many small countries and equates to approximately one-fifth the size of the contiguous 48 states. Furthermore, most of Alaska is not connected to the national transportation system by other modes such as highway or rail. Combine these facts with the challenges of terrain, extreme weather, and logistics, and it is easy to see why the State of Alaska requires a rigorous aviation planning process.

The AASP is a dynamic process that involves continually monitoring the aviation system, updating inventory, conducting forecast studies, assessing new issues, researching technological advances, recommending policy revisions, and setting new statewide processes, such as the digital Aviation Project Evaluation Board (APEB). With the growing cost of development, changing airlines and aircraft types, aging infrastructure, skyrocketing maintenance costs, and ever-shrinking budgets, having up-to-date tools, technical analysis, and data available

Each phase builds on prior phase work to continually improve and update tools and information

Phase I
2008 - 2013

- Developed mission & goals
- Public involvement plan
- Performance measures
- Classifications
- Inventory
- Forecasts
- Built website platform
- Economic impacts
- Special studies

Phase II
2013 - 2019

- Revised performance measures
- Updated public involvement plan
- Digitized CIMP program
- Automated airport needs book
- Website expansion
- Expanded data
- New data connections
- New reports
- CIMP inspections on iPad platform

Phase III
2020 - 2025

Ongoing
- Prior phase evaluation
- Identify issues
- Update public involvement plan
- Implement Adopt-an-Airport

Planned Phase III Tasks
- Update inventory
- Review performance measures
- Conduct fleet analysis
- Review runway length standards
- Initiate special studies

to decision-makers is crucial. The AASP accomplishes these tasks through ongoing collaboration with stakeholders and flexible planning to accommodate evolving needs.

The first AASP was completed in 1986 and updated in 1995. In 2008, the State of Alaska adopted a continuous system planning model, and subsequent updates are referred to as phases to reflect the ongoing, dynamic nature of the process. AASP Phase I covered the years 2008–2013; Phase II kicked off in 2013, and the Phase II final report was issued in the summer of 2019. At the beginning of each phase (roughly every 5 years), the planning team reviews the products produced in the previous phase and issues a Prior Phase Evaluation.

The benefit of phasing the planning process and evaluating prior phases is that this process enables the Alaska Department of Transportation & Public Facilities (DOT&PF), in coordination with the FAA, to distinguish areas where information is sufficient from those components needing updates.

The evaluation compares existing work to FAA guidance, industry best practices, and stakeholder reviews to identify and document gaps. This collaborative process maximizes funding and effort while keeping the planning documents up to date and relevant.

The AASP conforms to the standards set by the FAA for Airport System Planning (AC 150/5070-7) and the FAA Airport Improvement Program (AIP) Handbook (FAA Order 5300-38D, Change 1). The system planning process:

▶ Identifies systemwide issues
▶ Proposes and tracks standards/performance measures
▶ Implements processes
▶ Conducts inventory
▶ Updates forecasts
▶ Develops classifications to clarify airport roles within the study system
▶ Implements special studies to help define the state of the system
▶ Makes recommendations for improvements and sustainability
▶ Makes policy recommendations to maximize airport investment
▶ Aligns federal priorities with state and local needs
▶ Provides a system overview and tools to assist planners in prioritizing projects
▶ Provides information to the National Plan of Integrated Airport Systems (NPIAS)
▶ Documents how the individual airports fit within the broader, multimodal transportation system to serve the public need for safe, reliable transportation
▶ Imparts vital aviation system information to inform and integrate into long-range state transportation plans, regional plans, and airport master plans

The AASP is not a replacement for individual airport master plans or community planning efforts and does not dictate individual airport development. Individual airport master plans and Airport Layout Plans (ALPs) are the guiding documents for specific airport projects.

Together, these plans comprise the statewide transportation planning process through which federal and state laws are addressed, funding is prioritized, and recommendations are made to the NPIAS.

National Plan of Integrated Airport Systems
(NPIAS)

Alaska Statewide Long-Range Transportation Plan
Sets overall guiding policy for Alaska

Modal Plans

Highway Corridor Plans

Metropolitan Plans

Alaska Aviation System Plan

Other modal system plans such as Bike & Pedestrian, Highway Safety, Rail, Ports, Transit...

Regional Area Plans

Airport Master Plans & ALPs

Figure 1 – Interrelated Planning Processes

II. Process of Evaluation

The Alaska Aviation System Plan Phase II conducted the last formal evaluation of prior work in 2014. The report is accessible on the AASP public website, Phase II Prior Phase Evaluation.

This Phase III evaluation follows FAA and industry best practices to evaluate the effectiveness/usefulness and relevance of work products from AASP Phases I and II. Criteria used to evaluate previous work products include AASP Phase III survey results, interviews, and internal analysis of how products were utilized in making planning decisions, whether other entities used the products in their decision-making, and whether special studies resulted in new policies, programs, or projects. The planning team, in collaboration with stakeholders, evaluates current issues and recommends updating or initiating special studies to inform policy and decision makers. Finally, the team identifies elements, datasets, and other products that are not currently being used and determines whether this disuse is related to something we can remedy with updates or if these items are simply not as helpful to users as anticipated.

AASP Phase I focused on mission, goals, inventory, forecasts, economic impacts, performance measures, and special studies. The phase built the platform for the AASP website in use today.

Phase II completed several tasks and extensive updates to the web-based data repository, https://internal.alaskaasp.com/. Notable tasks included:

- ▶ Expanded the website, including adding data, incorporating new data connections, and developing new reporting capabilities
- ▶ Revised AASP performance measures and provided automated scorecards
- ▶ Improved tracking and prioritization of airport needs through the Capital Improvement and Maintenance Program (CIMP) as well as program expansion to the Apple platform
- ▶ Prioritized airports needing improved instrument approaches
- ▶ Established a priority of locations needing weather reporting equipment and published an informative white paper on the issue that has been used by other agencies and interested stakeholders
- ▶ Prepared a rural aviation rates and fees study
- ▶ Digitized DOT & PF's airport capital improvement program evaluation process
- ▶ Updated the 2011 Economic Impact Study
- ▶ Established a Backcountry Airport workgroup and published an informative brochure on their utilization and relevance to the system

One recommended method of evaluating prior work uses the FAA Airport System Planning AC checklist. The checklist from Appendix D is recreated on the next page in Table 1 and lists which products related to the checklist items were developed in Phases I and II. Internal evaluation of this checklist provides a preliminary assessment of tasks for Phase III.

Table 1 – FAA Airport System Planning Checklist for Prior AASP Work

Status	Checklist Item	Relevant Reports or Documents
√	Executive Summary	AASP 2019 Executive Summary AASP 2017 Executive Summary AASP 2016 Executive Summary Additional executive summaries are available on the AASP website
√	Study Design	AASP Overview 2010
√	State & Local Airport Issues	2017 Alaska Weather Equipment Needs Summary 2013 Impacts of Landing Fees at DOT&PF Part 139 Airports 2019 Economic Contribution of the Aviation Industry to Alaska's Economy Report: Rural System Numerous additional studies and reports are available on the AASP website
✈	Inventory of System Condition & Performance	Evolution of the Alaska Aviation System: Classifications and Performance Measures (2015) Part I & Part II
✈	System Goals & Performance Measures	AASP 2011 Mission, Goal, Measures, & Classifications Seaplane Facilities Plan: Classifications and Performance Measures (2016)

✈	Activity Forecasts	AASP 2011 Forecast Report
		
		Regional Aviation Forecasts:
		
		    Northwest Alaska Transportation Plan (ongoing)
		
		    2018 Y-K Delta Transportation Plan
		
		    2016 Southwest Alaska Transportation Plan

✈	System Requirements	AASP 2011 Mission, Goal, Measures, & Classifications
√	Environmental Considerations	
√	Analysis of System Alternatives	2013 Y-K Region Air Versus Roads Access Construction and Maintenance Baseline Cost Comparison
√	Identification of System of Airports	2019 Alaska Airport System Map (Updated annually)
√	Intermodal Integration and Airport Access	
√	Public Consultation	AASP 2014 Public Involvement Plan AASP 2008 Public Involvement Plan Numerous work groups and public events: Backcountry Airstrip Working Group, Weather Work Group, Improving Approaches Working Group.
√	Airport Development Priorities & Justification	DOT&PF's AIP project prioritization process, called the APEB, was converted into a digital process within the AASP website beginning in 2018.
√	Policy & Investigation Recommendations	2010 Economic Analysis of Runway Extensions 2013 Impacts of Landing Fees at DOT&PF Part 139 Airports (2
✈	Recommended NPIAS Changes	During Phase II the NPIAS was updated to include Akutan

√ *indicates item to be updated in Phase III*   ✈ *indicates item is under discussion for inclusion in Phase III*

In addition to using the FAA checklist, the consultant team performed a holistic review of all AASP website information, reports, and tools. The team conducted a thorough assessment of current inventory data, performance measures, and classifications. They also explored how accurate and usable the existing data are to reviewers, other consultants, local-sponsor airports, and agencies. Field testing of the CIMP inspection process and participation in the digital aviation project priority and programming process (APEB) provided further analysis to the identify process gaps and improvements needed.

Additional research included:

- ▶ Stakeholder surveys
- ▶ Individual interviews
- ▶ Examination of other system plans
- ▶ Review of industry guidance and published works on aviation system planning
- ▶ Assessment of website report functions and training modules

III. Identification of Gaps

Environmental Issues

As shown in Table 1, **FAA Airport System Planning AC Checklist for the AASP,** Phase I & II of the system plan have done little to address environmental considerations, intermodal integration, and airport access. The survey of stakeholders and individual interviews conducted at the beginning of Phase III (Appendix 1) indicated a need to study how environmental changes are impacting airports across the system. Respondents were particularly interested in the apparent increase in climate change impacts to airport infrastructure. Coastal erosion and subsidence of thawing permafrost were cited as the most notable issues.

The system planning guidance from the FAA specifically states support for the FAA's strategic goal of environmental compatibility. Phase I & II did not specifically address environmental issues. In addition to considering special studies for infrastructure degradation caused by climate change, Phase III should also document known environmental issues both on and near airports to alert planners of potential environmental compatibility issues or the need to coordinate with other agencies conducting this work. Recent state aviation system plans have incorporated environmental considerations including the 2020 Idaho Aviation System Plan and the 2020 Colorado Aviation System Plan. Both plans identified airports within their systems that had air quality, hazardous material, solid waste, historical, archaeological, wildlife, and other environmental concerns. Identification of issues assists planners in formulating future project cost and compatibility.

Although not specifically called out in the FAA checklist, tribal entities and local government units, particularly in the Native communities, have very specific environmental knowledge and concerns—as the FAA recognizes by requiring consultation with these groups during planning and project development. At a minimum, the AASP database should list tribal and local government contacts for each airport. A summary of common issues and environmental topics to be considered and an inventory of traditional subsistence-gathering areas, local landfills, cemeteries, and cultural and archaeological sites on and near the airport would aid planners during the initial consideration of projects.

Intermodal Integration and Airport Access

Intermodal integration is a topic that has more applicability in mature systems with multiple modes of transportation. The current AASP inventory and database documents road system access and ferry access, but no in-depth assessment of these connections exists. Through collaboration with the FAA and stakeholders, the Phase III planning team will explore opportunities for assessing intermodal integration.

Local-Sponsor Airports

Phase I of the AASP provided useful data to participating local sponsors in the form of meetings and economic assessments. Phase II included several local sponsor airports in the CIMP inspection process and made the tools available to them. It is unclear if local sponsors are engaging with these tools. The AASP has developed a wide range of database tools and airport inspection tools that could benefit local-sponsor airports. The CIMP inspection process and application on the Apple platform is just one of many tools that the AASP makes available to local sponsors. Conducting a training inspection to engage local sponsors, while tailoring an inspection to their specific airport, is one of the ways the team foresees improving progressing outreach. Phase III will re-engage with local sponsors and determine if current tools are applicable but require more training or if the local sponsors need different tools.

Training Opportunities

The most commonly heard comments from users of the AASP are "I didn't know that was on the website" or "I didn't know we could run that report." In addition to adding training tips on the website and publishing a column in the newsletter, consideration of video and in-house training should be factored into the next phase. It isn't good enough just to have the data; people must be able to access the data. DOT&PF is a large organization that experiences turnover at a normal rate. There is a need for on-line AASP 101 classes for new aviation employees at state and local sponsor airports and the addition of recurring training for all employees.

Digital Process Review

A huge amount of data are on the AASP internal website, but much of those data are out of date, and interviews with DOT&PF planners indicate a severe lack of resources to keep information up to date. Review of digital data revealed several areas considered to be visible data gaps, including:

- ▶ Local-sponsor airport information is not updated.
- ▶ Pavement Condition Index (PCI) inspections are not linked to individual facility performance measure scorecards.
- ▶ The airport needs list often cites "does not meet AASP performance standards" as the reason for listing a need. Discussion is ongoing how the needs list is defined, whether definitions are interpreted differently in various areas or regions, and whether performance measures as currently defined are realistic or if they need updating. These topics will be the focus of workgroups formed in Phase III.
- ▶ The Facility Documents tab provides access to important documents related to individual airports. While the current process to load new documents requires a date field, existing facility documents often do not have dates attached, which forces the user to open multiple documents to determine the most recent. Phase III will add dates to information where practicable and explore adding filters to assist users in sorting data. In many sections, DOT&PF staff must manually enter updates to data.
- ▶ Most updates are done by Statewide Aviation (SWA), Program Development, or other DOT&PF employees. Inconsistencies were noted in the timeliness of some update elements. Additional work needs to be done in Phase III to automate updates where possible and to define responsibility and expectations for updates that cannot be updated automatically from other sources.
- ▶ Operators' data are updated manually and only through SWA from information submitted annually on the Air Carrier Insurance Certificates of Compliance. Review of the database revealed several omissions and a good deal of outdated information. Phase III should review and clean up data, automate updates where possible, provide links to individual air carrier websites, and explore ways to access route structure.
- ▶ The projects tab has some issues with data links and uploading. The process and auto populate functions need additional work.

Note that to use the database effectively, the operator needs a reasonably clear idea of what they are looking for and a sound understanding of airport or aviation terminology. The user interface could be improved by adding resources such as:

- ▶ Data dictionary
- ▶ Tool tips
- ▶ User manuals
- ▶ Video tutorials
- ▶ Help/search button
- ▶ Cheat sheets
- ▶ Frequently asked questions page
- ▶ Tips for users
- ▶ Data connection information

Airport Leasing

Very little information is available on leasing. Lease lot availability, along with availability of fuel and transient tiedowns, is a common performance measure in system planning. A review of the database noted gaps, although some facilities do have current, usable information. A full inventory is required to identify all gaps and determine what data points are important and which data points aren't being utilized. Other considerations include what data are valuable to public users who don't access the internal site and what data could be pulled from or linked to the existing leasing website under SWA.

Many airports need more lease lots, which would contribute to revenue generation. In addition to establishing a common performance measure, some data should be gathered on what is available and what the demand is. A lot of anecdotal information indicates a need for more lease lots, but no definitive systemwide data are available. General data on the need would inform future planning and airport development, which also relates to researching what programs other systems might be using to encourage lease lot development and fixed-base operators (FBOs). An FBO at a smaller airport could address many current staffing issues, fuel availability, and possibly maintenance.

There appears to be a data gap between the system plan and DOT&PF Airport Leasing. The recommended first step is to engage with the leasing staff to determine what their needs are, what information they are already tracking, and how the information that they have might be integrated into the database. Travel restrictions because of COVID-19 are likely contributing to the lack of data gathering, but good communication and outreach could result in a proactive approach moving forward. A separate leasing disconnect is related to the CIMP inspections. Additional conversations or a workgroup to address what is working well and what improvements are needed in the leasing section of the CIMP inspections will lead to better data gathering and data sharing.

The review team recommends breaking the leasing inspection out from the standard CIMP inspection to facilitate use by leasing staff. Development of a simplified lease section for M&O staff completion increases the likelihood of participation and if developed with leasing input will provide the critical information needed.

Data Management

Linked Data: The digital process review identified data links currently in use:

- ▶ Community Statistics: Linked from State of Alaska Department of Commerce, Community and Economic Development (DCCED)
- ▶ Services/Navcom: Data link from National Flight Data Center (NFDC)
- ▶ Runways/Helipads: 5010 data link
- ▶ Enplanement Statistics: Passengers, freight, mail (in process of updating FAA T-100 link)
- ▶ Needs List: Linked to CIMP inspections

Data Manually Updated: Many data elements are currently updated manually. The elements updated by SWA are reasonably up to date and accurate. Elements updated by other sections vary from extremely accurate to useless. A gap exists in communication regarding who is responsible for some manual updates, training/direction on what and how to update, and accountability. The following is a partial list of manual update points:

- ▶ Statistics Annual Revenue/Operational Expenses: Updated by Alaska DOT&PF staff (state rural airports only – other airports could be linked from CATS)
- ▶ CIMP Inspections

- ▶ Pavement Condition Index (PCI)
- ▶ Needs: Linked from inspections and updated by Alaska DOT&PF staff
- ▶ Photographs: Not linked/updated by Alaska DOT&PF staff
- ▶ 5010 Inspections (all public airports on a 3-year cycle)
- ▶ Performance Measures: Not linked/updated by Alaska DOT&PF staff
- ▶ Contacts: Not linked/updated by Alaska DOT&PF staff

Staffing resources to manually update data are severely constrained, and the fiscal outlook indicates more budget reductions are likely. The Phase III process should include a closer look at what data are not linked (automatically updated from other sources) that could be and what data are manually updated that might not be providing the intended value and could be cut.

CIMP Inspections and Needs List

The CIMP inspections generate a great deal of information, including a needs list to inform project development. Review of the CIMP process and the data generated produced the following observations:

- ▶ The detailed leasing inspection should be split out. The information results in a comprehensive lease lot inspection, but the inspection is extremely time-consuming and often not done. If this inspection split into a separate inspection within the app, then leasing staff will be able to complete a leasing inspection even if they aren't trained on all the operational sections, or M&O could still complete a leasing inspection if time allows.
- ▶ A separate category for the required photographs would make more sense and ensure the required photographs are taken.
- ▶ Users need to be able to move photographs around the inspection app during the review step and retain the geodata. It is unreasonable to think that every photograph taken during the inspection will be saved in the right place. Each inspector appears to handle photographs differently.
- ▶ "Needs" are not always needed, feasible, or fundable. Better training and guidance would provide more consistent information. We recommend separating needs, deficiencies, and maintenance items. A "designation of need" to obtain ultimate configuration would clarify the needs that are current deficiencies versus items that would need to be addressed to meet a higher standard.
- ▶ Within the CIMP process, the methods for resolving small issues (broken light) versus bigger issues (soft spot in runway) or capital issues (pavement cracked and useful life exceeded) could be separated and streamlined. If an M&O Specialist review is already required, then why not have a button that automatically sends a routine maintenance need (e.g., grass cutting, broken light) to a work order form and at the same time eliminates it from the needs list? Work order forms could generate a deferred maintenance list until resolved. Then needs and deferred maintenance would be tracked separately.
- ▶ Phase III should consider how the inspection process could tie into an airport GIS system in the future.

Notices to Airmen (NOTAMS)

Currently, NOTAMs are not linked to specific facilities. During the survey and interview process, numerous comments were received requesting a way to search the NOTAM database for specific historical facilities information. Research for this task will be part of the Phase III work and will assist planners as they develop future capital projects.

Gravel Rating System

The Pavement Condition Index (PCI) and the Pavement Classification Number (PCN) are standardized industry approaches for rating pavement strength or condition. While the AASP provides ratings for paved surfaces using PCI, there is no standard rating system for gravel surfaces. This becomes problematic in Alaska, since many of the state's runway, taxiway, and ramp surfaces are comprised of gravel. In the absence of a standardized approach, the AASP CIMP inspection process and the 5010 inspections have used a subjective assessment of gravel surfaces based on written descriptions and sample photographs. Interviews conducted during the AASP prior phase evaluation revealed some concerns with the consistency of this process. Since AIP funding for preservation is directly related to these assessments, a consistent method for rating gravel surfaces is essential to utilizing limited funding in the most fiscally responsible manner.

The recommendation for Phase III is to develop a simple rating system for gravel surfaces that can be used by CIMP inspectors and the 5010 inspection program to improve the consistency of gravel ratings across the system. This will support assessment uniformity and funding optimization across all programs.

Mapping and GIS

Interactive mapping applications and data visualization using Geographic Information Systems (GIS) are quickly becoming the industry-standard for delivering information to the public. The Alaska Division of Community and Regional Affairs (DCRA) website is a great example of map-based data delivery. Expanding DOT&PF's GIS capabilities to include airport data from the AASP and planning, design, operations, and construction project data would streamline the database's interface and usability.

Classifications

The current classifications are reasonable and meet the AC recommendations. The website lists both the AASP classification and NPIAS (but not ASSET, which is addressed in the following paragraphs) and allows reports to be run by either AASP or NPIAS classification. Any confusion on how airports are classified or how the AASP classifications relate to the NPIAS appears to be a training issue, not a database or system plan issue. We recommend updating information in the database to include a short tutorial on why the FAA recognizes the need for state classifications and how the AASP classifications relate to the NPIAS classification system. The following chart outlines the correlation.

Wasilla Airport

The FAA National Plan of Integrated Airport Systems (NPIAS) identifies air-ports, the roles they serve, and eligibility for federal funding under the Airport Improvement Program (AIP). The AASP classifications take into account the unique characteristics of Alaska to further clarify the specific role an airport fulfills in the state transportation system.

NPIAS Airport Categories	NPIAS Criteria	Commonly known as: Numbers shown are taken from the 2021-2025 report	AASP Airport Classifications
Commercial Service	Public-owned airports with more than 2,500 annual enplanements and scheduled air carrier service		AASP classifications are taken from the 2015 AASP document: Evolution of the AASP Classifications and Performance Measures
◆ Large Hub	Receives 1% or more of the annual U.S. commercial enplanements	Primary	
◆ Medium Hub	Receives 0.25 to 1.0% of the annual U.S. commercial enplanements	Primary 1	International—1 ANC
◆ Small Hub	Receives 0.05 to 0.25% of the annual U.S. commercial enplanements	Primary 1	International—2 FAI & JNU
◆ Nonhub	Receives less than 0.05% but more than 10,000 of the annual U.S. commercial enplanements	Primary 26	Regional Class 28 Community Class Off-road = 146 On Road = 18
◆ Nonprimary Commercial Service	Also referred to as nonhub nonprimary, these airports have scheduled passenger service and be-tween 2,500 and 10,000 annual enplanements	Nonprimary 59	
Reliever	Relieves congestion at a commercial service airport	Nonprimary 0	0
General Aviation	A public-use airport that does not have scheduled service or has scheduled service with less than 2,500 passenger boardings each year.	Nonprimary 169	Local NPIAS High—11 NPIAS Low—56
Not in NPIAS	These are airports registered and tracked by FAA but not included in the NPIAS and not eligible for AIP funding	Non-NPIAS	Local Non-NPIAS—469

Table 2 – Airport Classifications

Phase II of the AASP reviewed and verified the existing classifications. In May 2012, the FAA published *General Aviation Airports: A National Asset* documenting a study of general aviation airports and their role in the NPIAS. In March 2014, a second report, *ASSET 2: In-Depth Review of 497 Unclassified Airports,* documented further review and placed an additional 212 general aviation airports into one of four sub-areas of general aviation within the NPIAS. Note that these subcategories are not documented in the AASP database. A simple dropdown menu under General Aviation would resolve this. The inventory update should include updating the NPIAS classifications to include these general aviation subcategories. FAA AC 150-5070-7 clearly expects the system plan to address the ASSET role.

> Each airport that the airport system plan recommends for inclusion in the NPIAS should have a service level and ASSET role based on the definitions defined by the FAA in that document. The NPIAS defines airport roles as primary commercial service (large, medium, small, and non-hubs), non-primary (commercial service, relievers, general aviation (national, regional, local, basic, unclassified) and non-NPIAS. The role of the airport influences the type of aircraft that it can accommodate, or in the case of commercial service, the routes and markets they can serve. The role assignment assumes that appropriate facility requirements will be met. <u>If the state</u> or metropolitan agency <u>is using role definitions for an airport that are different from those defined in the NPIAS or ASSET (e.g., primary, reliever, general aviation), then the current NPIAS/ASSET role should also be provided in the inventory and implementation elements of the plan.</u> This will establish a standard for uniformity in airport role definition that will help maximize the system benefits of airport investments, as well as ensure the rationalization of Federal priorities across airport categories. (FAA AC 150-5070, Change 1, §510b)

The unclassified airports face additional challenges because of FAA policy regarding AIP funding.

> By FAA policy, airports that are not classified as National, Regional, Local, or Basic airports in the latest edition of the FAA Asset report are only eligible for a project to rehabilitate the airport's primary runway at a frequency not to exceed 10 years, a one-time project to remove obstructions from each end of the primary runway, and runway maintenance projects allowed per 49 USC § 47102(3)(H). In cases where there is extraordinary justification and APP 500 has concurred with that justification, other projects may be considered.

To ensure that funding opportunities are maximized throughout the system, inventory updates should include review of airport roles, particularly of unclassified airports, to ensure conformity with national guidance.

Performance Measures

FAA Advisory Circular 150-5070-7 The Airport System Planning Process contains information on performance measures and their importance to the ongoing aviation planning process. The AC also recognizes that performance measures change over time because they may not supply useful information or they may be too difficult to measure. Feedback from AASP survey and interviews indicates that users of the data do not find the performance measures and report cards particularly useful and note that the data are not consistently updated.

The FAA, industry best practices, and planners agree that tracking performance measures over time gives us:

- ▶ A visual report card of how the system is doing
- ▶ A consistent measurement (correlation) of needs to meet system goals
- ▶ Useful trend data

Below is an example of a regional report card currently available in the AASP database. Tracking data over time is important to document system performance, but survey results indicate that the current report cards aren't being used by planners.
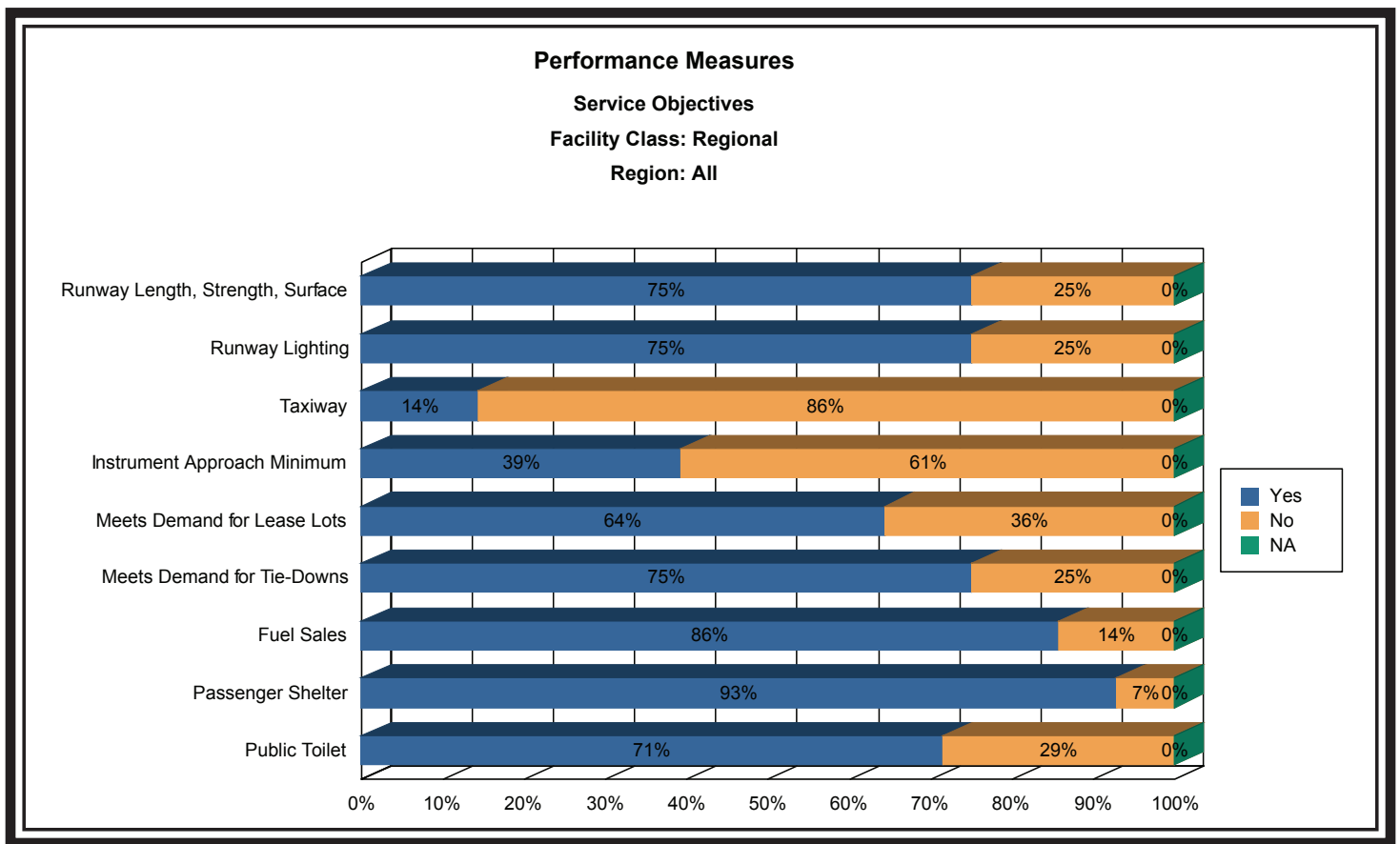

Performance Measures

Service Objectives
Facility Class: Regional
Region: All

	Yes	No	NA
Runway Length, Strength, Surface	75%	25%	0%
Runway Lighting	75%	25%	0%
Taxiway	14%	86%	0%
Instrument Approach Minimum	39%	61%	0%
Meets Demand for Lease Lots	64%	36%	0%
Meets Demand for Tie-Downs	75%	25%	0%
Fuel Sales	86%	14%	0%
Passenger Shelter	93%	7%	0%
Public Toilet	71%	29%	0%

Figure 2 – Sample of Current AASP Performance Measures Report Card

Survey results and follow-up interviews reveal several reasons the current performance measures and reports are not seen as valuable:

- ▶ Questions on why we are tracking deficiencies that are not eligible for remediation under current funding guidelines
- ▶ Questions on who needs or will use the data, now and in the future
- ▶ Questions about whether we should track a performance measure that doesn't help score a project for funding priority
- ▶ Questions on how the data are or will be updated, given current time and budget restrictions

Performance measures are important tools in assessing a system. The current metrics are not providing the value anticipated and require review. The evaluation should consider the practicality of keeping information current. Recommended tasks include:

- ▶ Update performance measures and set a standard for frequency of data updates. Non-critical data can be updated with inventory, with other data updates required at completion of a project or annually.
  - ▶ Critical infrastructure (runway length meeting design aircraft requirements, safety areas)
  - ▶ FAA-funded infrastructure (parallel taxiway, crosswind runway)
  - ▶ Quality of life (items that do not qualify for FAA funding, such as passenger shelters, restroom facilities, tie-downs, or fuel availability)

- ▶ Collaborate with stakeholders to determine a limited number of items that shall be updated by DOT&PF or local sponsors:
  - ▶ New ALP
  - ▶ New inventory at the end of the construction project (runway length, navaids, lighting)

- ▶ Update FAA-funded infrastructure data at the end of any project (construction, ALP, or Master Plan) and/or every 3 years.
- ▶ Update quality of life data with inventory every 5 years.
- ▶ Revise report card output to clarify how often information is updated.
- ▶ Develop policy for project completion updates.
- ▶ Develop a tracking report and select critical performance measures to document system performance annually.
- ▶ Clean up existing need lists performance measures.

Minto Airport

IV. AASP Mission and Goals

The original mission and goals were developed in Phase I of the planning process and modified in Phase II. They were reevaluated by the planning agency at the beginning of Phase III and determined to be consistent with the current environment. The following mission and goals will continue to guide the efforts in Phase III.

> The mission of the AASP is to plan and provide for
> the safe and efficient movement of people and goods
> and the delivery of services,
> through the development, maintenance, operation,
> and management of Alaska's airport system.

Goals Supporting the AASP Mission

▶ **Safety and Service:** Develop, operate, and maintain an airport system that contributes to aviation safety and meets user needs.

▶ **Fiscal Responsibility:** Develop, operate, and maintain airport facilities and services in a cost-effective and sustainable way.

▶ **Communication:** Provide opportunities for public involvement to ensure effective communications.

▶ **Management:** Effectively implement plan policies and guidance for management, planning, design, maintenance, and operation of aviation facilities.

V. Review Previous Plan With Stakeholders

The final report for AASP Phase II listed two main sets of recommendations for future phases. The recommendations focused on two areas: improving the system plan itself and using data derived from the plan for the betterment of Alaska's aviation system. Specific recommendations were developed under these two categories and are depicted in the following chart.
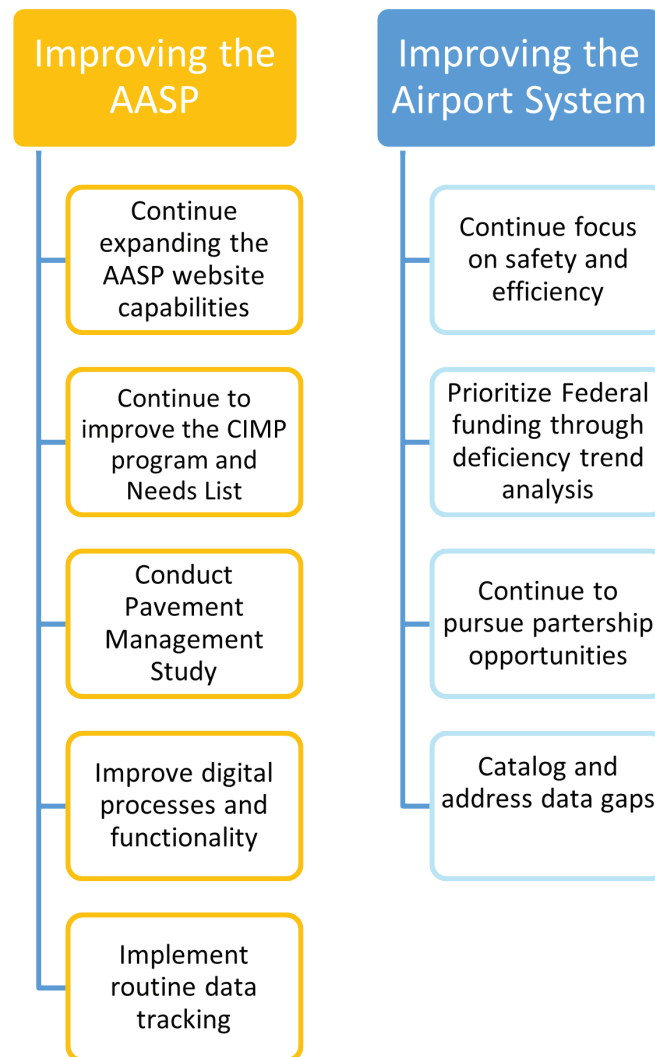
Improving the AASP

- Continue expanding the AASP website capabilities
- Continue to improve the CIMP program and Needs List
- Conduct Pavement Management Study
- Improve digital processes and functionality
- Implement routine data tracking

Improving the Airport System

- Continue focus on safety and efficiency
- Prioritize Federal funding through deficiency trend analysis
- Continue to pursue partership opportunities
- Catalog and address data gaps

Figure 3 – Recommendations for Improving the AASP and the Alaska Airport System

Source: AASP Phase II Final Report published July 2019

Are these recommendations still applicable for Phase III? How have they changed? What new developments have changed the priorities? To answer these questions, surveys, interviews, and group meetings were held to prioritize tasks for Phase III.

The AASP team reached out to stakeholders initially through targeted surveys. The primary groups contacted were:

- ▶ DOT&PF planners, M&O, design, construction, management, leasing, and Statewide Aviation
- ▶ FAA
- ▶ Aviation Advisory Board
- ▶ Aviation consultants
- ▶ Local airport sponsors
- ▶ Aviation interest groups and Alaska Air Carriers Association
- ▶ Private pilots
- ▶ Tribal governments and native organizations

Roughly 250 emails were sent to invite participation in targeted surveys. Participants were encouraged to forward the invitation on to their contacts who might be interested. The survey link was also posted on the AASP public website for 30 days. Survey questions included evaluation of past AASP efforts, ranking of new issues, and usefulness of current web-based tools. A total of 102 responses were received. The complete survey results are summarized in Appendix 1 of this report.

Consultants often work with other aviation systems and projects and are a valuable source of and ideas for improvements. The results of the survey verified the value of this group and the extent to which previous work has benefited aviation projects and planning across the system.

Note that the planning team added a new group of stakeholders to the outreach efforts in Phase III. Other than DOT&PF staff, aviation consultants working on projects in Alaska are possibly the largest group of users of the data and reports generated in the system planning process. Consultants represent various professional disciplines, experience, and regional and national aviation expertise and are knowledgeable sources on the usefulness of the data. Consultants often work with other aviation systems and projects and are a valuable source of ideas for improvements. The results of the survey verified the value of this group and the extent to which previous work has benefited aviation projects and planning across the system.

Survey questions were tailored to three broad groups to increase relevance for the stakeholders and results. The groups were divided as follows:

▶ DOT&PF: All disciplines
▶ FAA, Aviation Advisory Board, Aviation Consultants, and Aviation Interest Groups
▶ Users: Pilots, Local Airport Sponsors, Airport-Related Businesses, Airport Tenants, Tribal Governments, General Public

The graph in Figure 4 breaks out how many people in each category responded to the survey.

Breakdown of Survey Participants

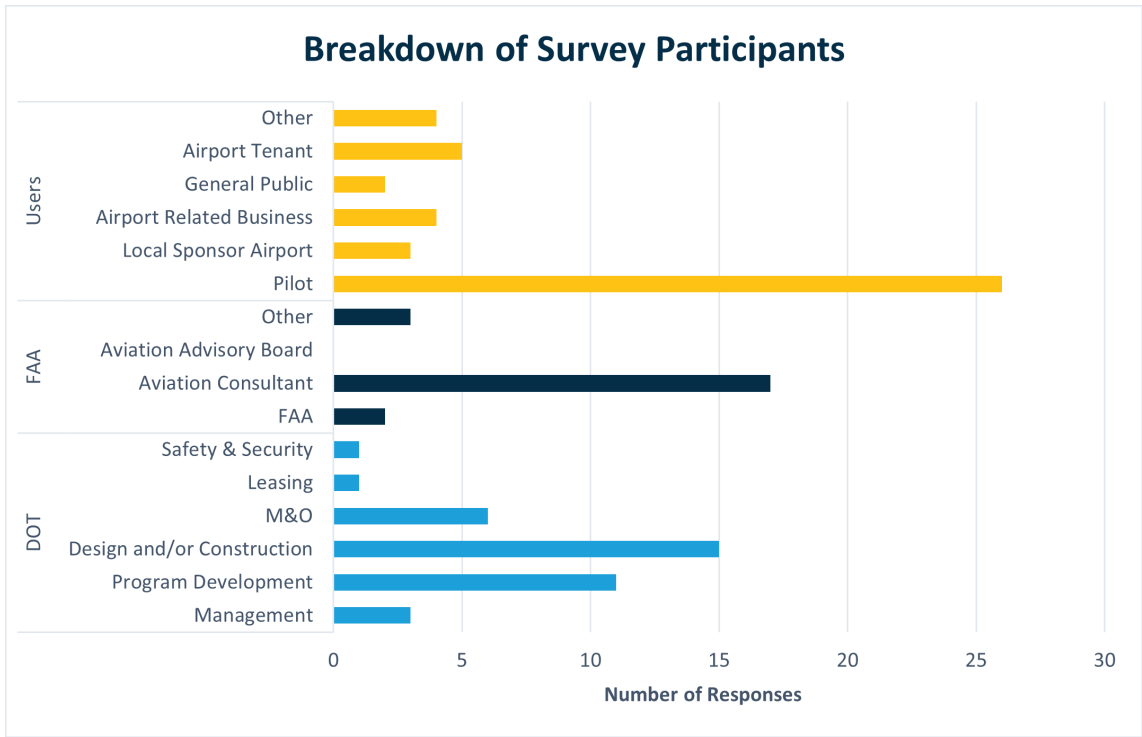| Category		Number of Responses
Users	Other	4
	Airport Tenant	5
	General Public	2
	Airport Related Business	4
	Local Sponsor Airport	3
	Pilot	26
FAA	Other	3
	Aviation Advisory Board	0
	Aviation Consultant	17
	FAA	2
DOT	Safety & Security	1
	Leasing	1
	M&O	6
	Design and/or Construction	15
	Program Development	11
	Management	3

Figure 4 – Breakdown of Survey Participants

The survey included various questions to help determine what elements of the prior phase provided the most value, which datasets require updating, what challenges occur with accessing the data, and what new issues Phase III should address. In addition to the survey, the team conducted individual interviews and group meetings to further explore these questions. Results of this outreach are detailed in Appendices 2 and 3.

Results of the survey question on useful features or reports developed in prior phases validate the desirability of breaking the survey into user groups. The responses are shown in Figure 4. This graph shows how the breakout allows the planning team to understand the top priorities of each group of stakeholders, regardless of overall numbers. The AASP is intended to serve a wide variety of users, and this categorization of information contributes to fulfilling that intention.

The survey results revealed that many successful products from Phases I and II that the different types of respondents found useful.
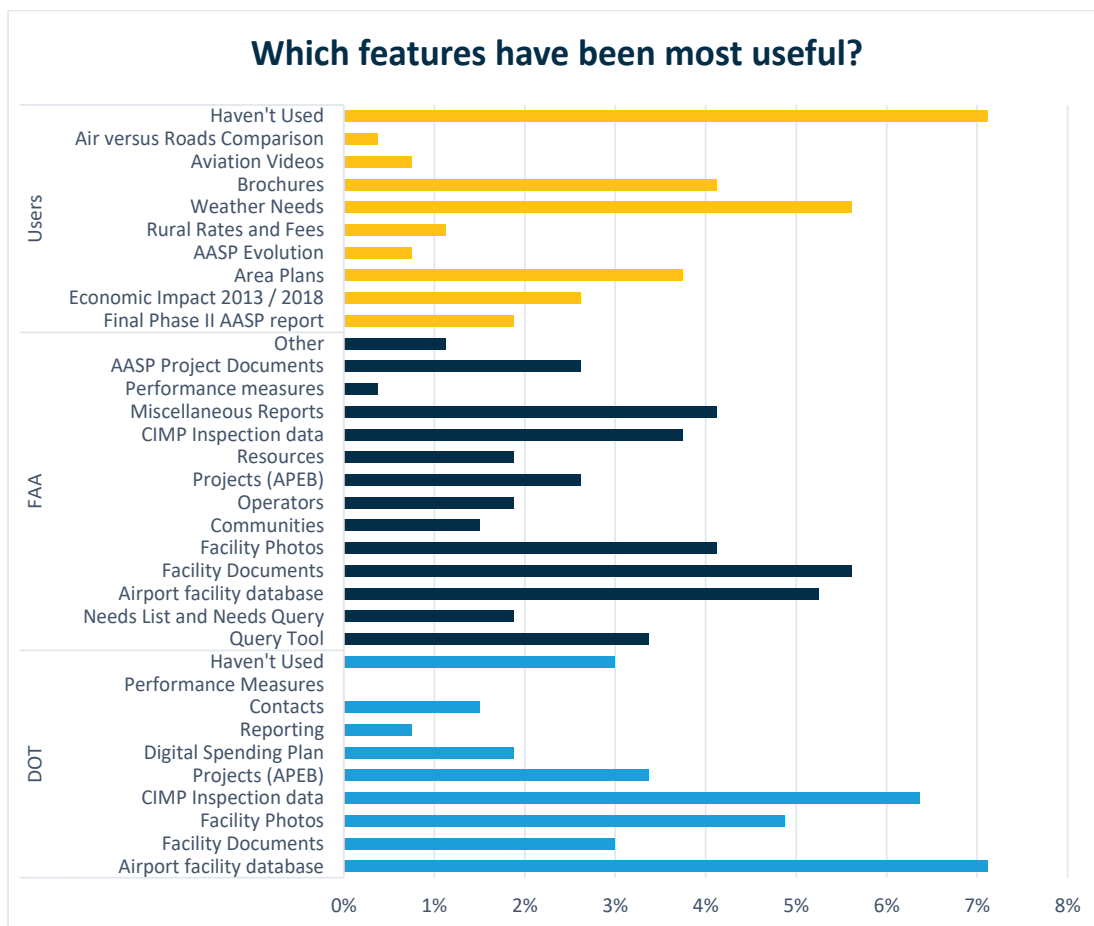
Which features have been most useful?

Figure 5 – Most Useful Features of AASP Phases I and II

Additional questions helped identify new issues and threats to the system. The next graph depicts the results of the survey question: what are the three most pressing issues facing the Alaska aviation system today? The complete list of responses is listed in Appendix 1. The responses were categorized by topic in Figure 5. It is no surprise that funding-related issues top the list by a wide margin.
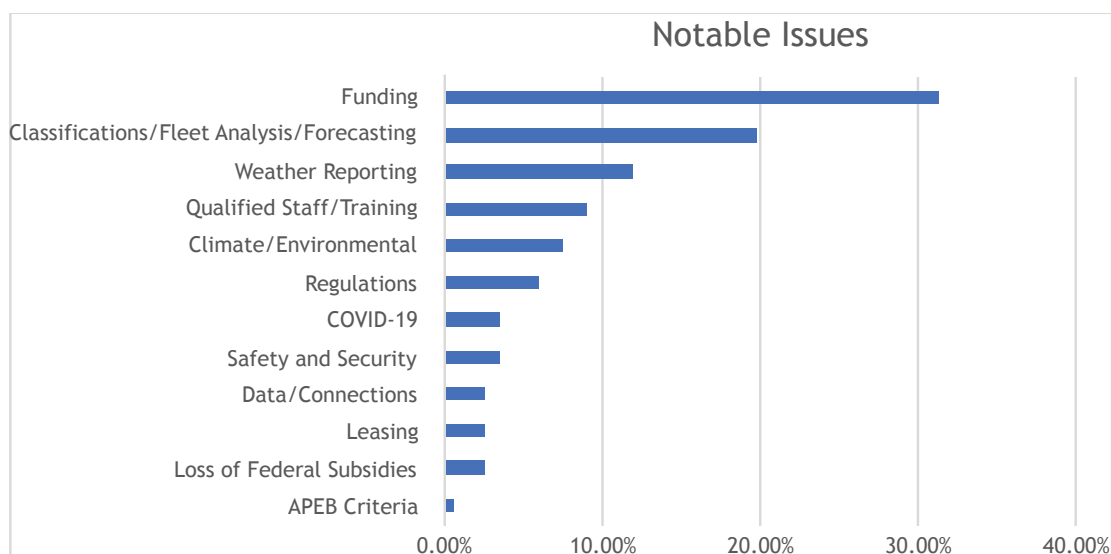

Figure 6 – Notable Issues Facing the Alaska Aviation System

The Phase II evaluation published a ranking of the most important topics from Phases I and II. In Table 2, that list is updated with topics and issues gathered from the 2020 interviews, planner meeting, and survey. The important topics list differs from the notable issues list in Figure 6 because of two factors:

▶ System planning (AASP) topics listed (in Figure 7) are areas the planning process can affect. Funding and qualified staff are beyond the scope of system planning, other than noting a reported deficiency; resolving these issues is the purview of state and local governments or individual airport sponsors.

▶ The most important AASP topics list in Figure 7 is not only based on surveys (as above) but also includes information gathered in the fall planner meeting and individual stakeholder interviews.

Ranking of Most Important AASP Topics and Issues*		
Phase I 2008 – 2013**	Phase II 2012 – 2019**	Phase III 2020 – 2025***
1. Mission, Goals, Performance Measures	1. Rural Airport Strategic Plan	1. Update Fleet Analysis / Runway Length Standards
2. Airport Needs Inspection Pilot Program	2. Airport Needs Inspection Pilot Program	2. Update Inventory, Classification & Performance Measures
3. AASP Website	3. Mission, Goals, Performance Measures	3. Weather Reporting
4. Inventory and Database	4. AASP Website	4. Update Needs List / Needs Book
5. Economic Impact Studies	5. Airport Land Use Compliance Workgroup	5. CIMP Work Group & Updates
6. Aeronautical Surveys/ Approaches Work Group	6. Inventory & Database	6. Climate /Environmental Issues
7. Bypass Mail & EAS Work Group Studies	7. Aeronautical Surveys/ Approaches Workgroup	7. EAS & Bypass Mail Regulation Changes
8. Aviation Videos – Lifeline and Cost of Aviation	8. Unmanned Aerial Systems Workgroup	8. Study COVID-19 Impacts / Update Forecasts
9. APEB Work Group	9. Public Involvement	9. Expand Data Reporting Capabilities/ Connections
10. Airport M&O Workgroup	10. Backcountry Airports Workgroup	10. Training****
11. Economic Analysis of Runway Extensions		11. APEB Criteria
12. Aviation Functions within DOT&PF		

Figure 7 – Ranking of AASP Topics and Issues

* Funding & adequate qualified staff are issues that always rank high but do not meet the criteria for planning topics.
**From Evaluation of the Prior AASP June 2014.
www.alaskaasp.com/media/1278/d61408.01.evalofprioraasps.tmm.lrh.062014.tjc.pdf
*** From surveys, interviews, and group planner meetings.
****Training for CIMP, APEB or other planning related tasks.

Survey participants were asked: Of the following initial tasks slated for Phase III of the AASP, which would provide the most value to YOU? The results, depicted in Figure 6, provide excellent guidance as the system plan team prioritizes tasks in Phase III.
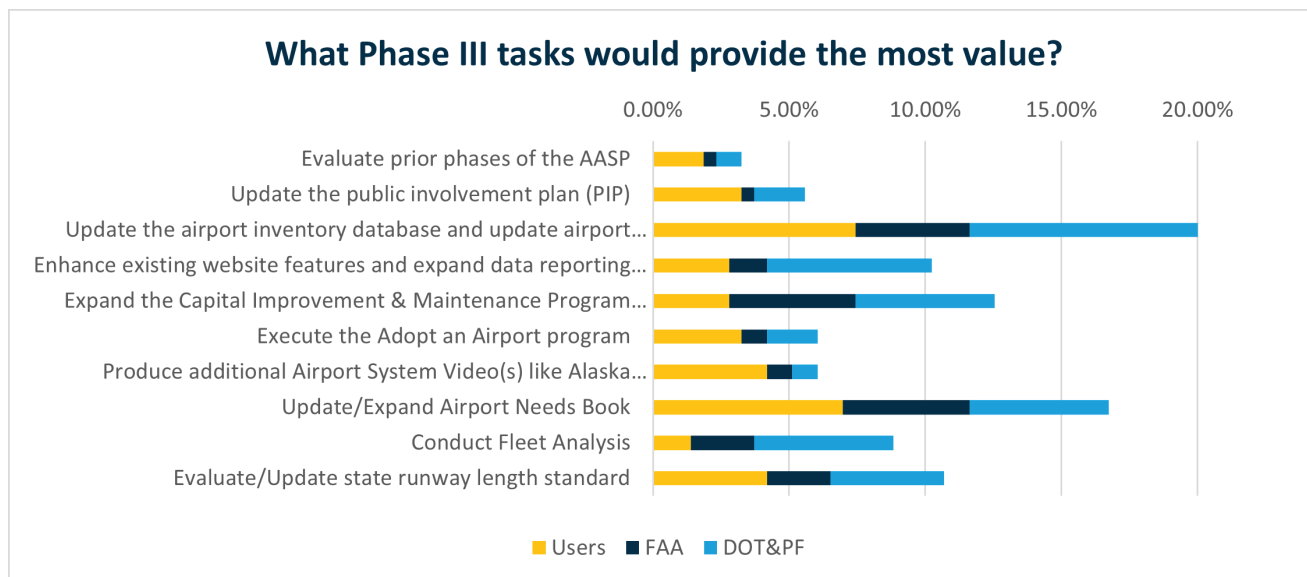
What Phase III tasks would provide the most value?

| | 0.00% | 5.00% | 10.00% | 15.00% | 20.00% |

Evaluate prior phases of the AASP
Update the public involvement plan (PIP)
Update the airport inventory database and update airport…
Enhance existing website features and expand data reporting…
Expand the Capital Improvement & Maintenance Program…
Execute the Adopt an Airport program
Produce additional Airport System Video(s) like Alaska…
Update/Expand Airport Needs Book
Conduct Fleet Analysis
Evaluate/Update state runway length standard

■ Users ■ FAA ■ DOT&PF

Figure 8 – Phase III Tasks Providing the Most Value to Survey Respondents

In addition to the survey, individual interviews and group meetings explored the following topics:

▶ Identify gaps or need for further study
▶ Determine if changes have occurred that require updating elements of the plan
▶ List elements that are still valid (not needing further work at this time)
▶ Recognize new issues that have arisen
▶ Research new technologies and procedures that might benefit the system
▶ Examine how others have used past plans and what might be done to make future elements more useful to the entire system
▶ Review digital processes and interview users to determine if updates, redesign, or even deletion are warranted
▶ Identify special studies needed
▶ Prioritize work for Phase III

The results of individual interviews are detailed in Appendix 2.

Quartz Creek Airport

VI. Preliminary Phase III Work Plan

The final step of the evaluation is to create a preliminary list of priorities and a work plan for Phase III. Sharing these preliminary data with stakeholders facilitates continuing collaboration and discussion. The AASP is a dynamic process, designed to provide flexibility and ongoing responsiveness to current needs.

The final task list and timing will be dependent on numerous factors, including available funding, COVID-19 travel restrictions, timing of new FAA guidance, and, as always, the unknown. As the past year has demonstrated, we need to be open to unforeseen circumstances and events that may change our course.
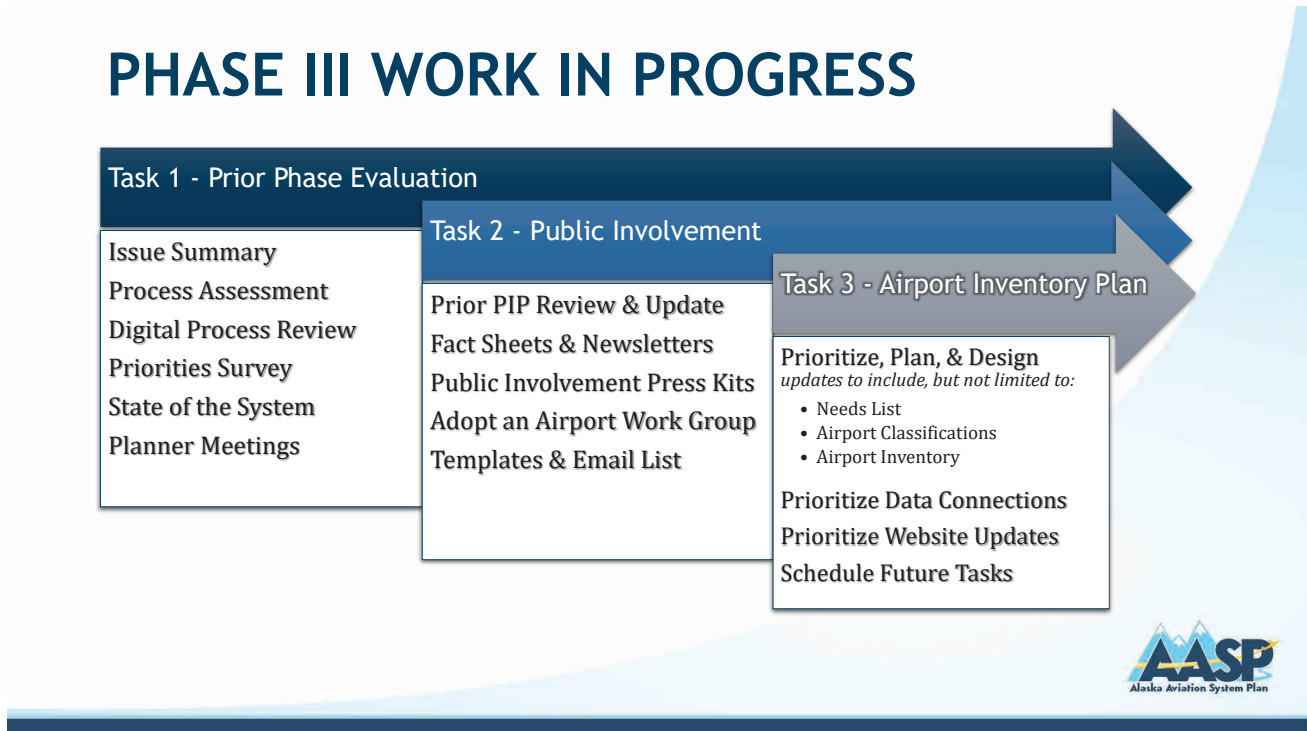

Figure 9 – Phase III Work in Progress

Kodiak Airport
Photo by Mike Brown

As priorities and funding availability are finalized, a more detailed plan for completing scheduled tasks will be developed.

Planned elements of Phase III are depicted in Figure 10. The planning team will continue to reach out to stakeholders and collaborate with users to prioritize tasks and special studies throughout AASP Phase III.
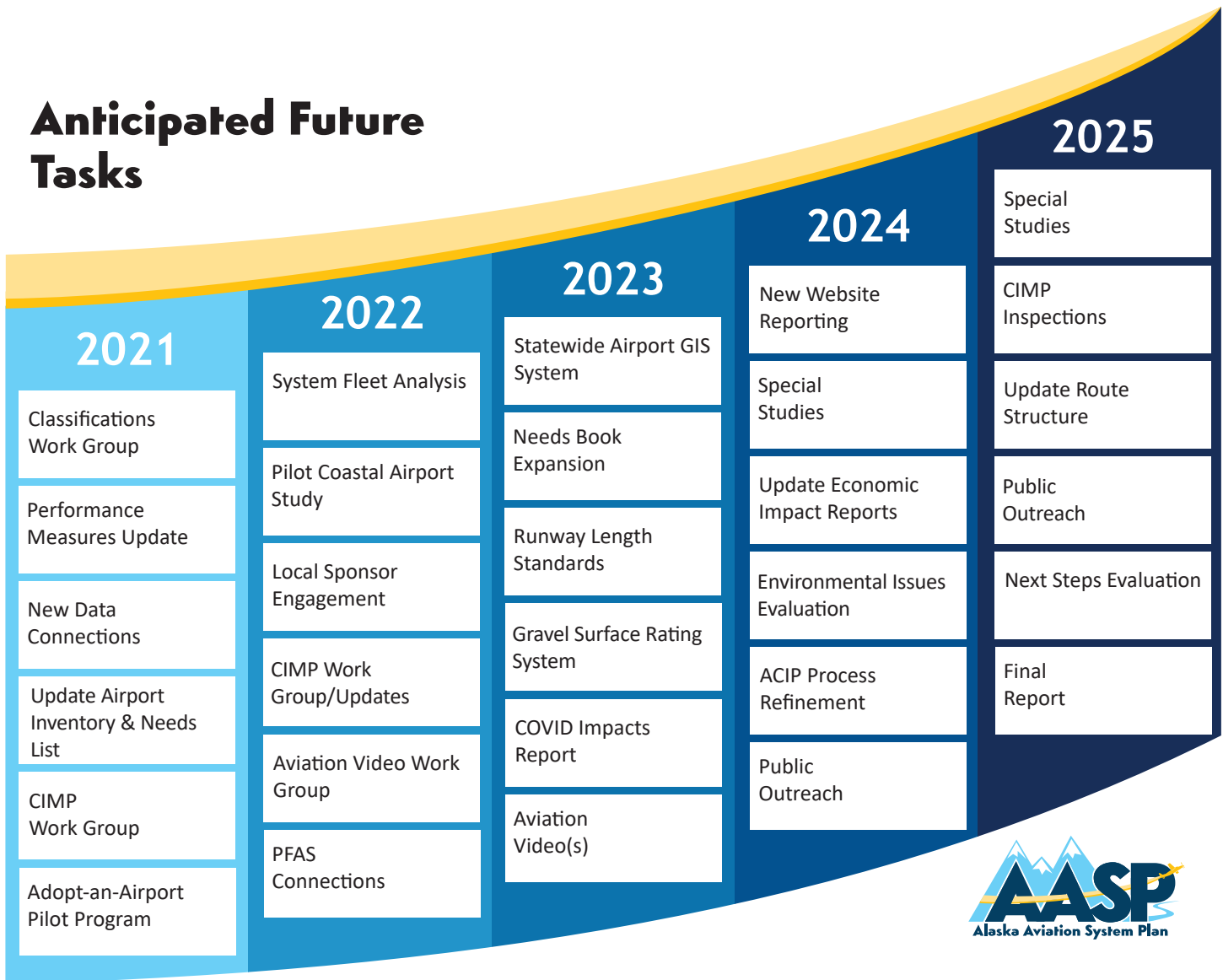
Anticipated Future Tasks

2021
- Classifications Work Group
- Performance Measures Update
- New Data Connections
- Update Airport Inventory & Needs List
- CIMP Work Group
- Adopt-an-Airport Pilot Program

2022
- System Fleet Analysis
- Pilot Coastal Airport Study
- Local Sponsor Engagement
- CIMP Work Group/Updates
- Aviation Video Work Group
- PFAS Connections

2023
- Statewide Airport GIS System
- Needs Book Expansion
- Runway Length Standards
- Gravel Surface Rating System
- COVID Impacts Report
- Aviation Video(s)

2024
- New Website Reporting
- Special Studies
- Update Economic Impact Reports
- Environmental Issues Evaluation
- ACIP Process Refinement
- Public Outreach

2025
- Special Studies
- CIMP Inspections
- Update Route Structure
- Public Outreach
- Next Steps Evaluation
- Final Report

Figure 10 – Anticipated Future Tasks

Alaska Aviation System Plan

Prepared for:

With a grant from:

Prepared for:
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Department of Transportation and Public Facilities
Division of Statewide Aviation
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