Alaska Department of
Transportation & Public Facilities

Alaska Marine Highway System

2045 LONG-RANGE PLAN

ACKNOWLEDGEMENTS

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Your time and attention to this project have been greatly appreciated. These partnerships have informed the Plan with a great amount of historical knowledge, professional expertise, and valuable insight into a system that is important to so many.

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EXECUTIVE SUMMARY

INTRODUCTION

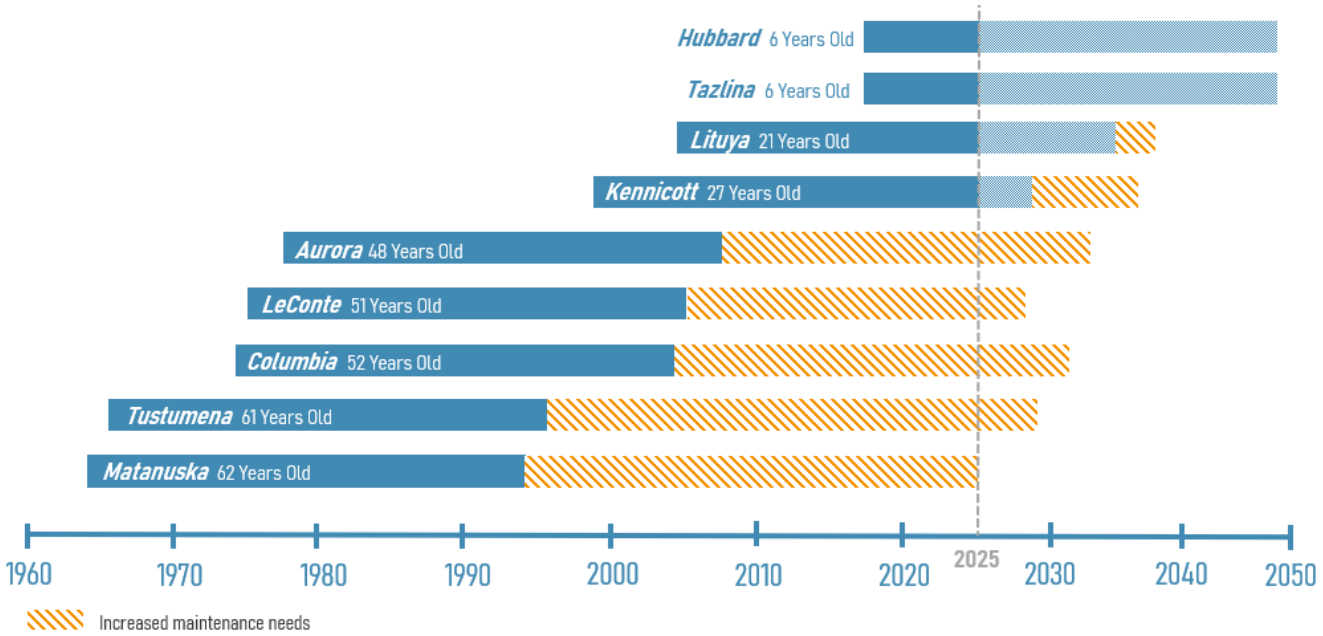
The Alaska Marine Highway System (AMHS) is a crucial component of Alaska's transportation network, spanning 3,500 miles of coastline and serving communities from Bellingham, WA, to Dutch Harbor (Unalaska), AK. For many coastal residents, AMHS is the primary means of transportation between communities due to a lack of road connections to the rest of the state and limited access to alternative travel options. By linking these remote areas, AMHS plays a vital role in ensuring access to essential services, supporting economic activity, and fostering community connectivity.

Like many transportation agencies in Alaska and across the United States, AMHS, a division of the Alaska Department of Transportation and Public Facilities (DOT&PF), is facing substantial challenges. Workforce shortages, an aging fleet with extended overhaul periods, rising infrastructure costs, and supply chain disruptions have all contributed to a decline in service levels in recent years.

Alaska's unique geography compounds these challenges. The sailing times of AMHS routes vary widely from 45 minutes to multiple days. There is a lack of fleet standardization, so vessel interchangeability has been and remains a challenge. Long sailings also require higher crewing levels, with trips over 12 hours requiring additional crew that is already in short supply.

The region's climate also poses challenges to maintaining schedules, notably in the winter months (October to March). Trips can be cancelled due to extreme weather, and the cold and saltwater environment exacerbates the deterioration of vessel and terminal assets, necessitating annual preventative maintenance and frequent discovery of unplanned maintenance needs during overhaul periods for older vessels in the fleet.

Compounding these challenges is an aging AMHS fleet. The figure below shows the ages of each vessel relative to a 30-year service life, illustrated by the blue bars, with years of operation beyond 30 years of operation highlighted in orange as periods of increased maintenance needs.



Vessel Age Relative to 30-year Service Life

As a result of these challenges in operating conditions, workforce, and fleet age, AMHS is currently operating at a significantly reduced service schedule relative to historical levels.

At the same time, AMHS is presented with opportunities to modernize and strengthen its operations. Innovations such as hybrid-electric and alternative fuel technologies offer potential operational cost-savings and environmental benefits. New vessel design and construction projects offer opportunities to introduce new technologies, standardization, and design elements that provide efficiencies for crew and offer an attractive working environment. They also present an opportunity to reduce United States Coast Guard stipulated safe crewing levels. Simultaneously, workforce development efforts, including training programs, apprenticeships, and collaborations with maritime institutions, local communities, and unions, can help build a strong maritime workforce in Alaska to ensure a skilled, sustainable AMHS labor force for the future.

PURPOSE

The AMHS 2045 Long-Range Plan (the Plan) serves as a roadmap for the next 20 years of service, defining a long-term vision for the system through 2045. The requirements of the Plan are set forth in Alaska Statute (AS) 19.65.011. The Plan provides a strategic framework to guide decision-making on service, fleet renewal, terminal infrastructure investment, workforce development, and financial sustainability. At its core, the Plan is built on the fundamental consideration of how Alaska's coastal communities and businesses rely on AMHS and the level and type of service they need to thrive. This foundation is informed by extensive and ongoing outreach to Alaskan residents, tribal and civic leaders, economic development organizations, and the business community. These insights shape the target service levels for 2045 that

form the basis for the Plan's recommendations on how investments in today's system will build the reliable and increased service of the future.

To determine the most effective strategy to meet the 2045 target service levels, a study of various alternatives was conducted. The analysis evaluated different vessel combinations and terminal upgrades and culminated in the selection of the fleet and terminal scenario that most effectively delivers the target levels of service. The analysis included assessments and comparisons of operating costs, capital costs, ridership, revenue projections, required crewing levels, farebox recovery, fleet interoperability and redundancy (meaning in this context the degree to which vessels in the scenario can fill in for another that is out of service). This analysis drives all recommended capital investments in fleet and terminal infrastructure, service, and workforce development initiatives.

By grounding Plan recommendations in community needs and rigorous analysis, AMHS has ensured that its service will remain safe, reliable, financially sustainable, and aligned with the needs of Alaska's coastal communities—both now and in the decades ahead. The Plan identifies investments that are necessary for system stability and long-term success in achieving the 2045 service vision. To ensure the Plan remains a stable, actionable roadmap rather than a reflection of shifting policy discussions, the availability of specific funding opportunities does not dictate the Plan's priorities; instead, it identifies data-driven investments essential for system stability and long-term success.

While the Plan is a visionary document that reflects current and anticipated future needs based on the system's current operating configuration, it does not preclude consideration of future system expansions or modifications, new terminal locations, or service to new communities. Rather, it is a living document that, by statute, is to be updated at least every five years. It is intended to be adaptable to evolving demands and informed and updated by separate planning efforts, including area-specific transportation plans within DOT&PF, feasibility studies, and other commissioned analyses. By integrating recommendations from these efforts and developing complementary plans for implementing the AMHS 2045 Long-Range Plan recommendations, AMHS and DOT&PF will make sure the Plan remains dynamic, relevant, and aligned with broader transportation strategies.

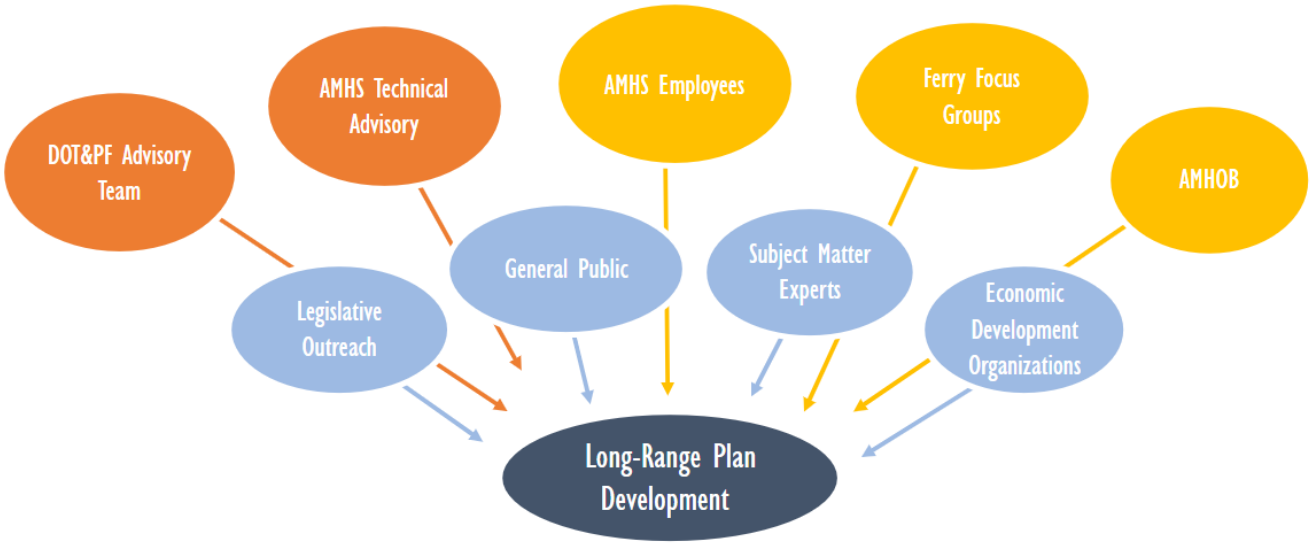
DOT&PF intends for the Plan to serve the following purposes:

- Guide internal planning, highlighting key initiatives for building up service levels and reliability through investments in workforce development, fleet and terminal assets, operational efficiency, and technology.
- Inform a strategic investment roadmap to guide funding priorities for AMHS, aligning grant pursuits and Statewide Transportation Improvement Program (STIP) projects with long-term system needs and operational sustainability.
- Coordinate with other divisions of DOT&PF, state agencies, and regional partners to ensure alignment between AMHS and broader transportation and economic development initiatives.
- Support legislative decision-making by outlining AMHS' strategy for achieving long-term system goals and identifying necessary investments to increase service reliability and financial sustainability.
- Provide transparency and guidance to the public and business community by outlining AMHS' long-term vision, anticipated service levels, and investment priorities.

ENGAGEMENT

The Plan was strengthened through extensive engagement with diverse stakeholders and community members across coastal Alaska. Recognizing the importance of local expertise, AMHS actively sought feedback throughout each phase of the Plan, ensuring community needs and service priorities were well represented. Engagement efforts sought input from ferry customers, economic development organizations, tribal leaders, public agencies, and other stakeholders. Stakeholder engagement was guided by key goals, including a commitment to strengthening communication between AMHS and the public, gathering local insights, and using stakeholder feedback to inform operational and investment decisions through a bolstered understanding of community needs relative to AMHS service.

Several advisory groups and subject matter experts, including the AMHS Technical Advisory Group, the DOT&PF Policy Advisory Group, and the Alaska Marine Highway Operations Board (AMHOB), played a critical role in shaping the Plan by providing oversight and technical direction. Public open houses and Ferry Focus Groups facilitated direct discussions with local leaders, while Southeast Conference (SEC) and Alaska Municipal League (AML) helped amplify outreach efforts across the region.



Several key themes emerged throughout the engagement process, including the need for improved service reliability, earlier schedule releases, better weekend travel options, and continued recognition of the vital role ferries play in connecting communities, supporting businesses, and providing essential transportation access. These insights help shape the vision of the Plan, ensuring it reflects the needs and priorities of Alaskans now and into the future.

PLANNING HORIZONS

Proper planning of incremental improvements is essential to the success of the Plan, which has identified three planning horizons: short-term, mid-term, and long-term. Within each horizon, specific actions and investment priorities are identified that will guide progress toward the 2045 service vision through consistent, strategic efforts.

Short-Term: Period of Variability (2025 – 2028)

The first four years of the Plan focus on replacing AMHS' most vulnerable assets, with the goal of stabilizing the system. In this phase, replacement vessels are mainly being designed and built, with one entering service. Terminal infrastructure needs are also being identified. A focus is given to building the system's workforce to ensure that crews are being prepared for higher-level positions in upcoming phases.

The key areas of focus in the short-term period include the following:

- Begin making investments and support those underway
- Focus on stabilization and return to previous service levels
- Transition and scale up workforce

Mid-Term: Initial Success (2029 – 2035)

The next seven years of the Plan focus on continuing to design and construct new vessels to replace the system's vulnerable assets with three new vessels entering service and two vessels retiring. The growth of the system's workforce continues to be a priority.

As investments begin to pay off in the mid-term period, the system will see the following benefits:

- Increased port calls to AMHS communities
- Enhanced reliability

Long-Term: Reliable Expansion (2036 – 2045)

The final years of the Plan focus on the regular maintenance of the assets, which are replaced in the short- and mid-term phases, with two additional vessels entering operation in the long-term. As the workforce is strengthened and maintained, service grows to meet the 2045 target service levels.

In the long-term period, the Plan supports AMHS in achieving the following:

- Long-term service goals are met
- Reliability goals are met
- Stable crew size

FOCUS AREAS

The Plan prioritizes safety, access to resources, affordable transportation for residents and businesses in coastal Alaska, economic growth, and a resilient workforce. By focusing on fleet renewal, terminal improvements, and workforce stability, AMHS aims to build a modern, resilient, and efficient system that ensures safe and reliable transportation for Alaskans. Developed through engagement with communities, stakeholders, and AMHS and DOT&PF staff, the Plan outlines the necessary short-, mid-, and long-term investments in people, fleet, and terminal infrastructure to support a sustainable marine transportation network that remains a vital link for coastal communities. Once implemented, these investments will help recover and enhance system reliability to better meet community service demands.

THE AMHS 2045 LONG-RANGE PLAN ENVISIONS A THRIVING SYSTEM THAT IS MAINTAINABLE, RELIABLE, AND PROVIDES CONNECTIONS TO SUPPORT THE MOBILITY OF THE RESIDENTS, COMMUNITIES, AND BUSINESSES OF COASTAL ALASKA.

AMHS has identified four main priorities to focus the direction of the system toward its 2045 vision: service, fleet and terminals, workforce, and financial priorities. These priorities are discussed in greater detail below.

1 PROVIDE A SERVICE THAT IS SAFE, RELIABLE, AND CONNECTS OUR COMMUNITIES

The 2045 target service levels aim to meet community needs, as identified through robust engagement efforts. The target service levels generally match or exceed 2022 service for each community, restoring the system to pre-pandemic levels. The Plan prioritizes increasing reliability and aligning trip frequency and connections to other communities with community needs, all while maintaining a strong safety culture.

2 MODERNIZE FLEET AND TERMINAL ASSETS TO PROMOTE RESILIENCY AND STANDARDIZATION

By 2045, AMHS aims to have six new vessels and a total fleet size of eight. Maintenance schedules and budgets will be matched to projected maintenance requirements, prioritizing preventative measures to maintain fleet reliability and minimize unscheduled downtime. Per the Plan, terminal infrastructure will also receive much needed maintenance and improvement at regular intervals in addition to new projects to support vessel interchangeability. Capital investments will improve the reliability and resiliency of the system.

3 CONTINUE TO BUILD AND SUPPORT A RELIABLE WORKFORCE

AMHS aims to have a stabilized workforce across all divisions. This includes vessel staff and crew, as well as shoreside operations and management throughout all levels of AMHS.

4 PROMOTE FINANCIAL EFFICIENCY AND SUSTAINABILITY

AMHS will focus on maintaining progress with coordinated investments in operations, vessels, and terminal assets.

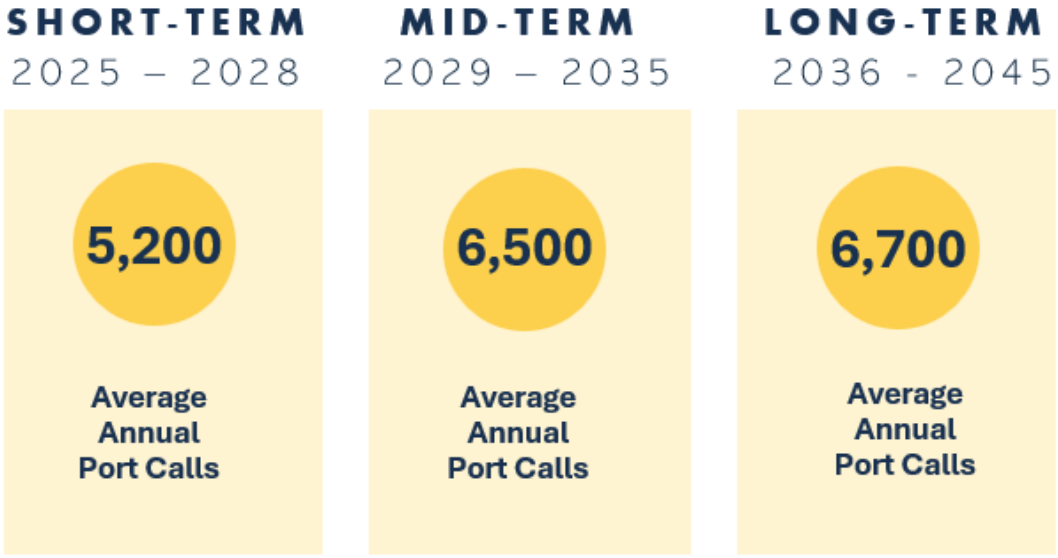
The Plan is not merely for the long-term. It presents a series of investments for short-term, mid-term and long-term actions, grouped by year into implementation timeframes. In the short- and

mid-term horizons, the primary focus is to make major capital investments to improve fleet and terminal infrastructure. The investments made in the short- and mid-term phases result in reliable service, with a consistent farebox recovery to match increased operating costs and provide stability in system appropriation needs. Key actions toward the Plan's targets and key outcomes by timeframe for each focus area are highlighted on the following pages.

SERVICE

Providing service that is safe, reliable, and connective is central to the Plan. Through strategies to improve fleet and terminal assets, workforce development, and financial efficiency and sustainability, the Plan identifies a path toward achieving target service levels. The following key actions have been identified for the Service focus area:

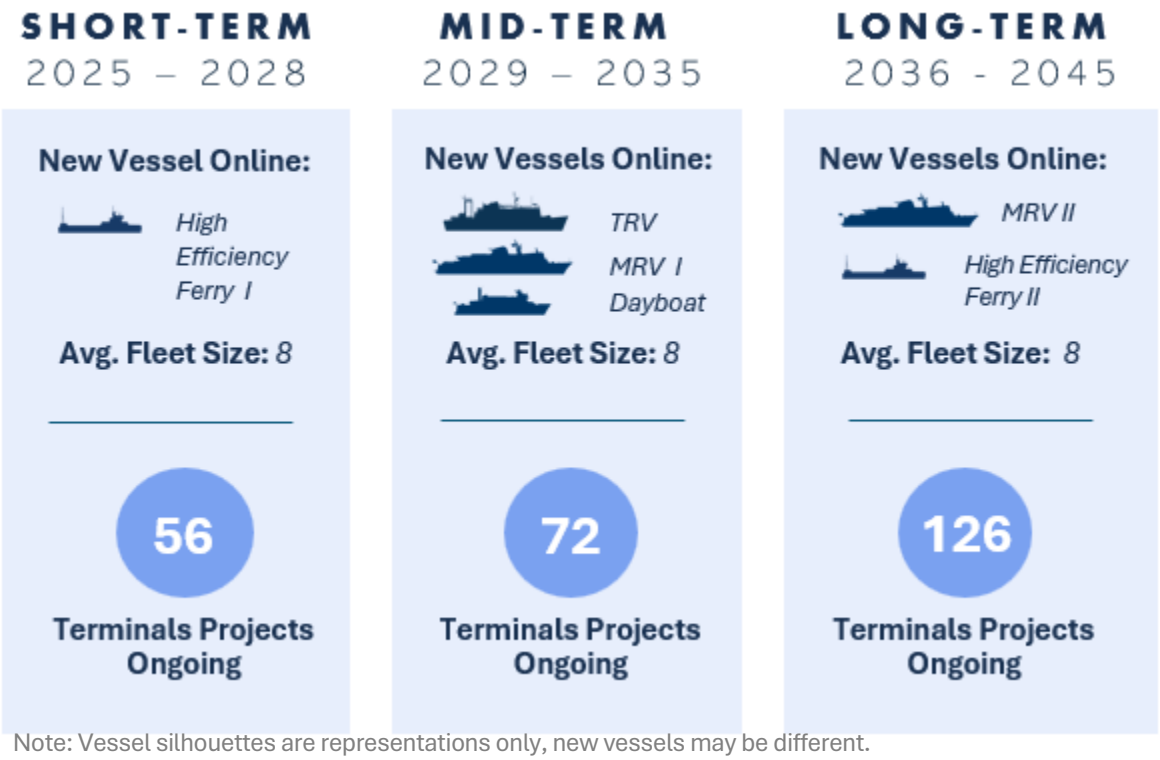
- ✓ Increase service reliability and port calls from 2022 levels
- ✓ Improve scheduling, reservation, and vessel tracking software
- ✓ Improve and expand safety and training for crew to ensure continued safe operations
- ✓ Improve customer experience
- ✓ Annually review ridership and demand to inform service planning
- ✓ Explore innovative marketing and incentive programs to spur utilization



FLEET & TERMINAL ASSETS

The modernization of fleet and terminal assets is essential to achieving the vision for AMHS service targets. Over the next 20 years, seven AMHS ferries will need to be retired. The following key actions have been identified for the Fleet & Terminal Assets focus area:

- ✓ Construct six new vessels with hybrid propulsion
- ✓ Modernize fleet and terminal infrastructure through regular planned maintenance
- ✓ Standardize fleet and terminal infrastructure to promote interoperability



Note: Vessel silhouettes are representations only, new vessels may be different.

WORKFORCE

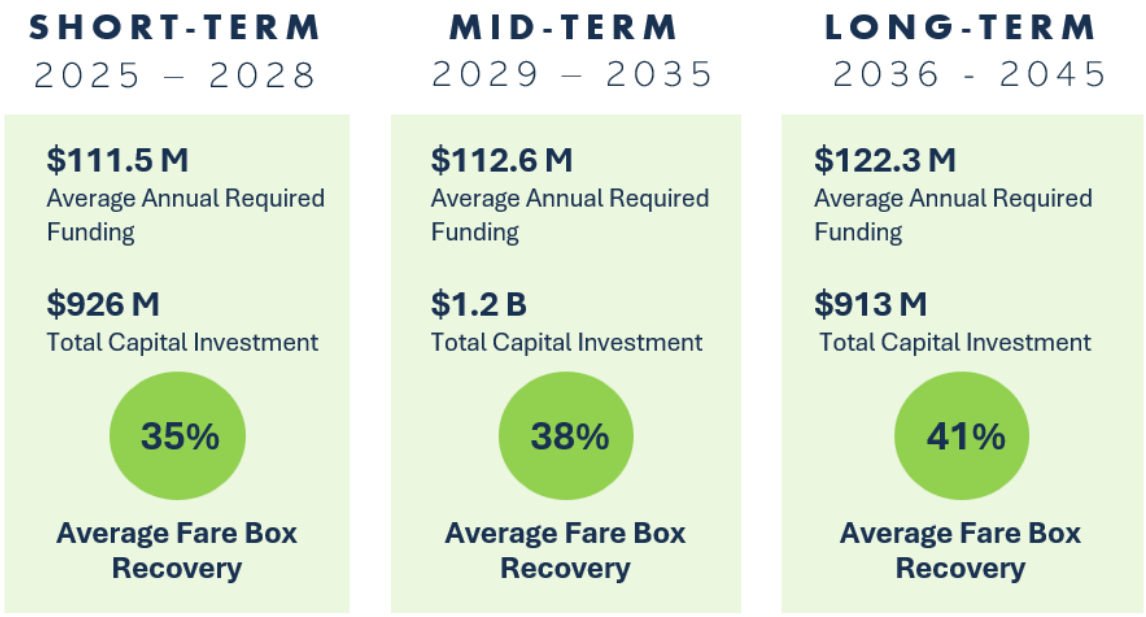
The Plan emphasizes the importance of stabilizing the AMHS workforce across all positions, including both crew and shoreside personnel. Attention to employee recruitment and retention strategies is core to this stabilization, including efficiencies in a newer fleet of the future to put less strain on workforce needs. The following key actions have been identified for the Workforce focus area:

- ✓ Provide additional funding for maritime scholarships
- ✓ Increase recruitment in high schools and vocational academies
- ✓ Provide payment for in-state travel to increase recruitment and retention of employees
- ✓ Establish a referral bonus program
- ✓ Support advancement opportunities
- ✓ Grow partnerships with training institutions, educational institutions, tribal organizations, non-profit organizations, and other strategic partners to develop a workforce pipeline

FINANCIAL EFFICIENCY

The Plan balances the needs of the community, increased service, and system reliability with more efficient operating costs through a modernized fleet, providing more service over time with higher farebox recovery through investments in capital infrastructure. The following key actions have been identified for the Financial Efficiency focus area:

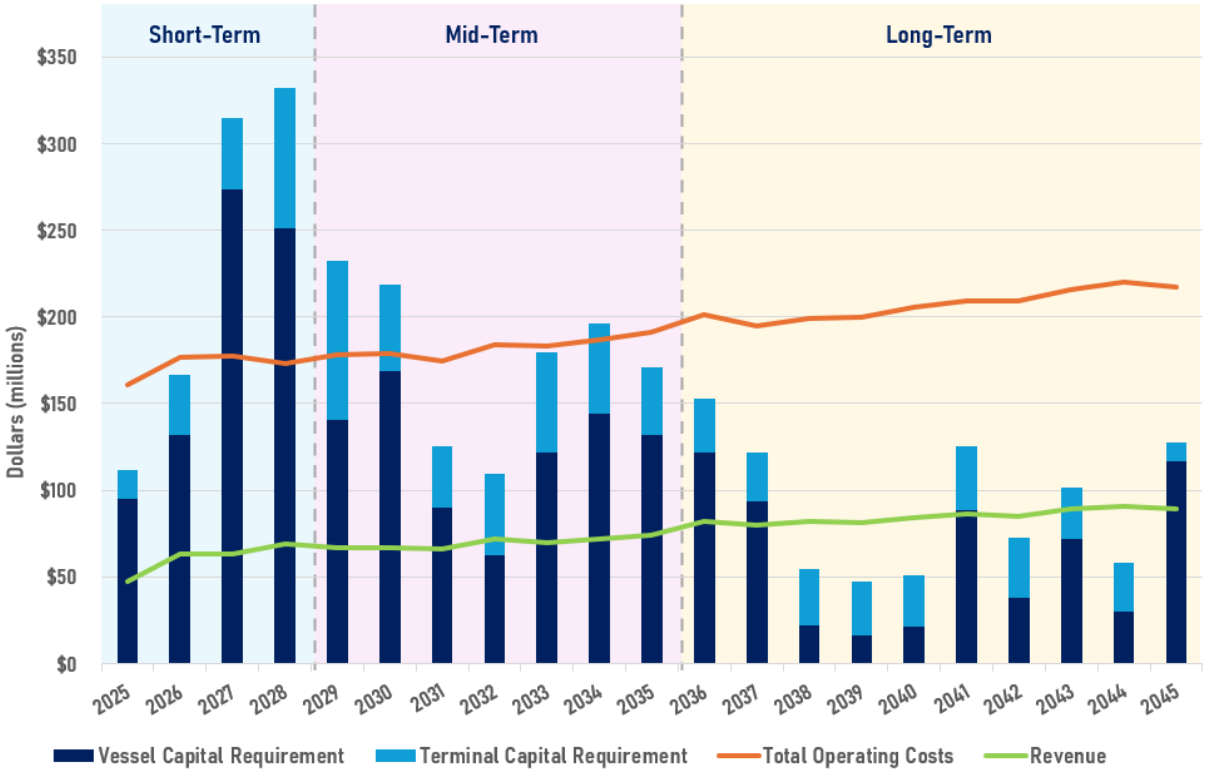
- ✓ Develop a sustainable fare adjustment policy
- ✓ Foster external partnerships
- ✓ Identify and implement onboard passive revenue generation
- ✓ Improve financial tracking processes and management



Note 1: Annual required funding includes vessel overhaul costs.
Note 2: Farebox recovery rates are notional and based on an annual fare level escalation corresponding to an assumed rate of inflation. A fare study will be completed to provide a recommendation on rate adjustments.

The short-term is a period of high capital investment to begin, or continue, important infrastructure improvements. Over the rest of the planning horizon, operating costs and fare revenue grow as service levels and service reliability increase. Capital needs are reduced as new vessels enter service.

Financial efficiency and complementary growth in revenue are illustrated on the graphic below, which represents a year-by-year breakdown of key financial elements of the plan, with capital investments in fleet and terminals represented in the stacked bars and total operating costs and revenue represented by the lines.



Financial Summary

IMPLEMENTATION

Successful implementation of the Plan will depend on a coordinated set of investments in AMHS' fleet, terminal infrastructure, workforce, and operations over the next 20 years. Every initiative described in the Plan will take time and persistence to achieve. As a visionary document, the Plan establishes a framework for long-term system reliability and will require complementary implementation plans providing specific guidance on achieving its goals to ensure its success.

A series of performance metrics within each focus area are recommended to track and report on progress toward Plan goals. The proper management and documentation of these data points will strengthen the system's data-driven decision-making and provide transparency to performance and focus. Historically, data collection and reporting within AMHS has been limited and inconsistent. In instances where data has been collected and stored, it is often time-consuming for staff to extract and use. In recognition of this limitation, the enhancement of organizational knowledge management and data collection practices is a key facet of focus area actions.

AMHS recommends targeted investments to stabilize and modernize the system, ensuring reliable service for Alaska's coastal communities. The Plan prioritizes fleet renewal, terminal infrastructure upgrades, and workforce development to maintain a state of good repair and enhance operational efficiency.

Incremental progress towards the 2045 target service levels and increasing service reliability will be reinforced with each capital investment into fleet and terminal infrastructure. Continued focus on workforce initiatives for recruitment and retention will strengthen the workforce to meet growing service needs, while new vessel designs will seek to provide efficiencies for crew and provide an attractive working environment and enhanced customer experience.

The Plan is estimated to require $3.07 billion in capital funding over the next 20 years. In addition, AMHS will continue to require ongoing state and federal investment to sustain operations. Public funding to augment AMHS' operating revenue is expected to average $111.5 million in the short-term, growing to $128 million by 2045. Farebox recovery is expected to grow from 35% in the short-term to 41% in the long-term, therefore decreasing the percentage of funding appropriation needed to meet rising costs over the 20-year planning horizon.

The consequences of not implementing the Plan, whether through insufficient funding or lack of action on key recommendations, would result in a continued decline in ferry service reliability and service levels. Without necessary vessel replacements and maintenance, aging ships would become increasingly prone to mechanical failures, leading to more frequent cancellations and extended service disruptions. The condition of terminal infrastructure would gradually deteriorate, increasing safety risks and requiring costly emergency repairs. The loss of dependable ferry service would impact residents, businesses, and visitors alike, limiting access to essential goods and services, disrupting local economies, and further isolating communities that rely on AMHS as their primary transportation link.

SUMMARY AND NEXT STEPS

AMHS is a critical transportation mode that supports the economic, social, and emergency needs of Alaska's coastal communities. The ferry system provides essential mobility for residents, businesses, and visitors, connecting remote areas of coastal Alaska while supporting economic development and tourism. For many communities, AMHS is the only year-round transportation option, ensuring access to medical care, emergency services, and economic opportunities.

The Plan outlines a coordinated set of investments and service strategies to be implemented over the next 20 years, categorized into short-, mid-, and long-term actions. The investments are interdependent, meaning decisions in one area—such as fleet renewal, workforce development, or technology upgrades—impact overall service reliability and efficiency. This is reflected by the fact that many of the goals, strategies, and actions in the Plan span across multiple focus areas.

The Plan is a living document, designed to guide long-term decision-making while remaining adaptable to evolving needs and conditions. The Plan will be revised and updated at least every five years, with short-term progress updates produced annually. Regular progress updates and implementation planning and actions will be necessary to refine recommendations and ensure AMHS remains a resilient, financially sustainable, and effective transportation system for Alaska's coastal communities.

In summary, the Plan will inform discussions and decisions by lawmakers, citizens, the Governor's Office, DOT&PF, and AMHS management and staff. The key takeaways are as follows:

- ✓ The fleet and terminals must be modernized to improve reliability and achieve service goals.

- ✓ A combination of policies and incentives to attract and retain a stable workforce is necessary.
- ✓ The system must receive a combination of State and Federal funding to support capital investments and operating support.

Transportation is a vital component to all other economic activity and serves as part of the glue that holds society together and promotes the well-being of citizens. Planning is a tool to shape the future, minimize risk, and inform the public. This transportation plan is a significant step toward a strong future for Alaska and its coastal communities.

TABLE OF CONTENTS

APPENDICES

A – Background

A1 Legislative, Regulatory, and Union Factors

B – Engagement

B1 Public Engagement

B2 Public Comment Response

C - Service

C1 Service Level Framework

C2 Service Scenario Development & Selection

C3 Vessel Characteristics

C4 Economic Trends

C5 Ridership and Revenue Projections

D – Vessel Infrastructure

D1 Vessel Capital Cost Estimates

E – Terminal Infrastructure

E1 Terminal Capital Cost Estimates

F – Workforce

F1 Workforce Analysis

G – Financial

G1 Financial Background and Future Strategies

G2 Financial Plan

The AMHS 2045 Long-Range Plan envisions a thriving Alaska Marine Highway System that is maintainable, reliable, and provides connections to support the mobility of the *residents*, *communities*, and *businesses* of coastal Alaska.

INTRODUCTION

Alaska Marine Highway System (AMHS) ferry routing covers more than 3,500 miles, providing service to 33 communities across coastal Alaska, from Metlakatla in the south and Dutch Harbor (Unalaska) in the west, as well as the two ports of Bellingham, WA and Prince Rupert, B.C. Only 5 of the 33 Alaska communities served by AMHS are connected to Alaska's continental highway system, making AMHS a critical transportation link for Alaska residents and businesses, as well as visitors to the state. As AMHS vessels navigate vast areas of Alaska's coastline, they also provide a critical first response function and are periodically called upon to assist other vessels and the United States Coast Guard (USCG) in the event of an emergency. A map of port communities served by AMHS is shown in Figure 1.

Figure 1: AMHS Port Communities

The system is divided into three major regions: Southwest, South Central, and Southeast. Southwest covers the area from Kodiak west to Dutch Harbor (Unalaska). South Central covers Homer, Seldovia, and Prince William Sound. Southeast includes the communities between Bellingham, WA, north to Yakutat. Additionally, there is typically Cross Gulf service during the summer that connects the three regions. The AMHS fleet currently consists of nine vessels, including four mainline vessels that provide overnight accommodations and serve longer routes with multi-day trips, four dayboat vessels with no passenger overnight accommodations that connect smaller communities on trips that take less than a day, and one shuttle vessel that operates on a short, 45-minute route.

The AMHS 2045 Long-Range Plan (referred to as "the Plan" throughout this document) provides a 20-year vision to guide the operation and management of new and existing system investments. The Plan proposes capital investments for the system's aging fleet and terminal infrastructure, recommends policies to promote workforce resiliency, and lays out a plan for a service that prioritizes reliability. The

success of the Plan depends on continued efforts toward implementation, and AMHS intends to track progress through annual reporting and ensuring that the Plan reflects the future conditions and needs of the system through formal Plan updates to be completed every five years.

PURPOSE

The Plan was developed by AMHS, a division of the Alaska Department of Transportation and Public Facilities (DOT&PF), in consultation with the Alaska Marine Highway Operations Board (AMHOB) and the communities the system serves, with the purpose of guiding capital and operating investments to incrementally achieve the 2045 vision for the system. The Plan will guide investments in the fleet, terminals, and operational elements vital to AMHS' success such as its workforce, management, funding, and operational tools.

The Plan sets out to:

- Review existing DOT&PF planning initiatives and inputs.
- Highlight existing and future opportunities for engagement.
- Identify 2045 target service levels based on community needs.
- Identify a future service scenario for AMHS-served communities to meet 2045 target service levels.
- Identify the supporting workforce and infrastructure needs to implement the service scenario.
- Outline a capital replacement plan for fleet and shoreside facilities.
- Offer recommendations to enhance future resiliency and sustainability.

The requirements for AMHS long-range plans are set forth in Alaska Statute 19.65.011, as described below.

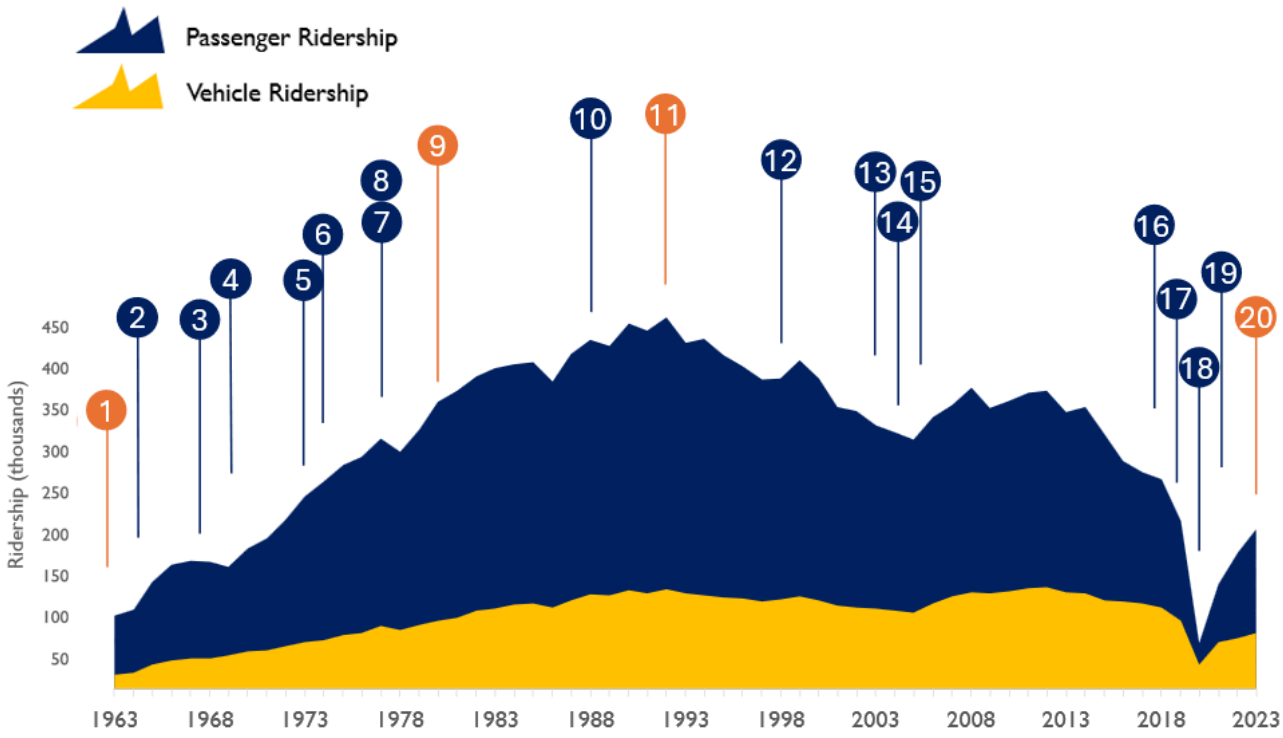
> *Sec. 19.65.011. Short-term and comprehensive long-range plans.*
> *The Department of Transportation and Public Facilities, in consultation with the Alaska Marine Highway Operations Board, shall prepare a short-term plan and a comprehensive long-range plan for the development and improvement of the Alaska marine highway system and shall, in consultation with the Alaska Marine Highway Operations Board, revise and update the short-term plan annually and the comprehensive long-range plan at least every five years. The short-term plan must describe the means by which effective and efficient progress toward priorities and goals defined in the comprehensive long-range plan will be attained, must include recommendations for the state operating and capital budgets, and must include a description of skills or competency gaps in the membership of the Alaska Marine Highway Operations Board. The comprehensive long-range plan must include priorities and goals for the Alaska marine highway system and a proposed strategic maintenance and vessel replacement plan and may recommend performance measures, including output, efficiency, and effectiveness measures. The department shall submit both the short-term and the comprehensive long-range plans and revisions and updates of the plans to the legislature and the governor and make the plans available to the public.*

HISTORY AND BACKGROUND

AMHS is a state-owned ferry system that has provided essential transportation to Alaska's remote coastal communities since commencing operations in 1963 and is guided by the following mission statement:

> *"The mission of the Alaska Marine Highway System is to provide safe, reliable, and efficient transportation of goods and vehicles among Alaskan communities, Canada, and the 'Lower 48', while providing opportunities to develop and maintain a reasonable standard of living and high quality of life, including social, education, and health needs."*

Over the past six decades, AMHS' system-wide service capacity for vehicles and passengers has evolved due to many factors. Figure 2 highlights some of these major events throughout the history of AMHS, identifying key milestones in ridership, technological advancement, and fleet composition, along with the total number of passengers and vehicles carried each year.



1. **1963** – AMHS begins operation with the *Malaspina*, *Matanuska*, *Taku*, *Chilkat*, and *Nenana* Ferries
2. **1964** – *Tustumena* enters AMHS fleet
3. **1968** – *Wickersham* enters AMHS fleet
4. **1969** – *E.L. Bartlett* enters AMHS fleet
5. **1973** – *Columbia* enters AMHS fleet
6. **1974** – *LeConte* enter AMHS fleet and *Wickersham* sold
7. **1977** – *Aurora* enters AMHS fleet
8. **1977** – AMHS computerizes reservations
9. **1980** – 300,000 passengers transported
10. **1988** – *Chilkat* sold
11. **1992** – 420,000 passengers transported
12. **1998** – *Kennicott* enters AMHS fleet
13. **2003** – *E.L. Bartlett* sold
14. **2004** – *Lituya* and *Fairweather* enter AMHS fleet
15. **2005** – *Chenega* enters AMHS fleet
16. **2018** – *Taku* sold
17. **2019** – *Tazlina* and *Hubbard* enter AMHS fleet
18. **2020** – COVID-19 pandemic
19. **2021** – *Fairweather* and *Chenega* sold
20. **2023** – 180,000 passengers transported

Figure 2: Events in AMHS History and Annual Systemwide Ridership

THE CURRENT STATE OF AMHS

Like many transit services in Alaska and the nation, AMHS is facing significant challenges and is struggling to provide a dependable service to its customers. The greatest challenges have been experienced in the following four focus areas:

- Service
- Infrastructure
- Workforce
- Finances

Service

The challenges caused by the aging fleet, workforce shortages, and unstable funding all contribute to a decreased level of service reliability. Unreliable service, including canceled or delayed sailings, inhibits access to healthcare services, social and cultural connections, educational opportunities, and business opportunities. As only five of the AMHS served communities are accessible by the continental highway system, AMHS is a lifeline connection for coastal communities. Without reliable ferry service, the communities, businesses, and visitors that depend on AMHS are often unable to travel or forced to depend on other modes of transportation, which may be more expensive and ill-suited for their needs. In public engagement conducted throughout Plan development, community members and stakeholders consistently identified reliability as the most essential service element for AMHS to maintain and improve.

Additionally, the system has fallen behind in implementing technological features that would improve vessel operations and customer experience.

Infrastructure

AMHS currently struggles to maintain its existing fleet in operational condition due to the average age of the fleet. As vessels age, the maintenance costs associated with keeping them operational increases. The John A Volpe National Transportation Systems Center[1] has estimated that maintenance expenses resulting from the age of a vessel increase by 2% of the new vessel annual maintenance expenses for each year of vessel age. Furthermore, AMHS has been confronted with significant unplanned maintenance needs due to deferred maintenance on several older vessels in recent years. This has resulted in unplanned out of service time.

The average age of the current AMHS fleet is 36 years, with the vessels' ages as follows:

- The *Tustumena* and *Matanuska* are over the age of 60
- The *Columbia* and *LeConte* are in their 50s
- The *Aurora* is in its late 40s
- The *Kennicott* and *Lituya* are 26 and 20 years old, respectively
- The *Tazlina* and *Hubbard* are under 10 years old

Figure 3 shows the ages of each vessel relative to a 30-year service life in blue, with years of operation beyond 30 years of age highlighted in orange and noted as periods with increased maintenance needs.

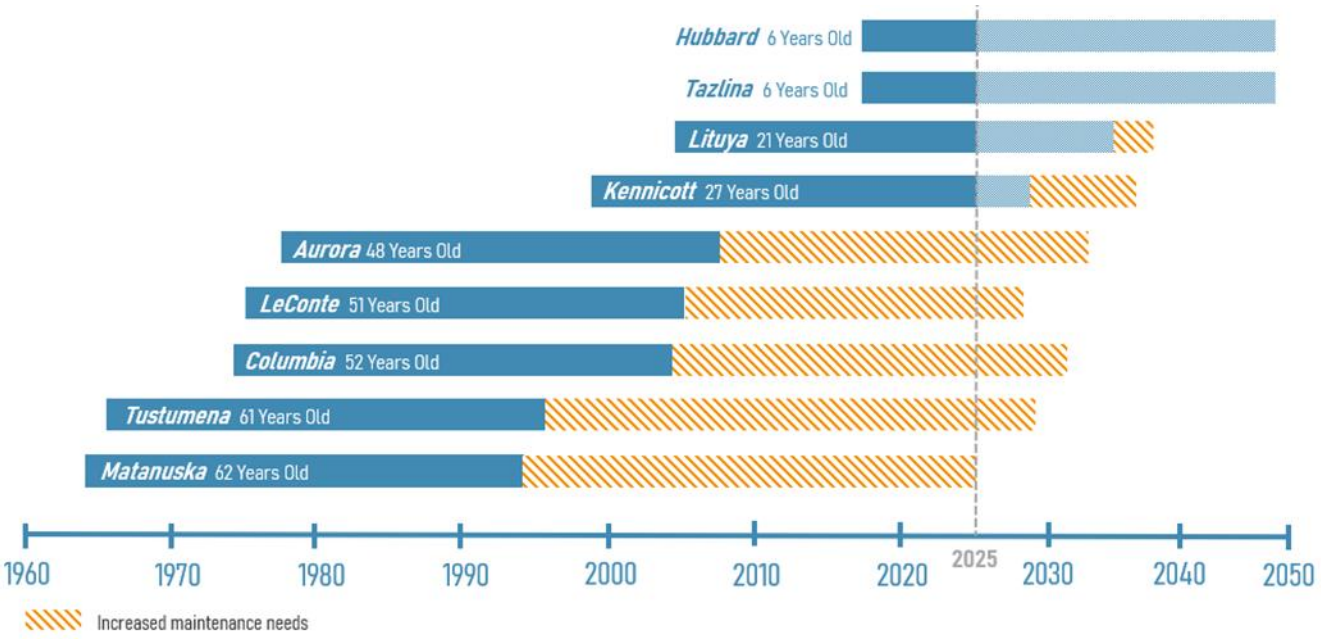


Figure 3: Age of Vessels

[1] John A Volpe National Transportation Systems Center, "Ferry Lifecycle Cost Model for Federal Land Management Agencies User Guide", 2019

As the average age of the AMHS fleet has continued to increase, the system has experienced a higher number of delays and cancellations related to vessel maintenance or repairs. Older vessels are more prone to unexpected breakdowns, steel and structural degradation, propulsion problems, or other mechanical malfunctions due to their aging systems and components. Over time, salt water corrodes the hull, requiring continual steel repair. Older vessels often have outdated equipment that makes spare parts expensive and difficult to obtain. Older vessels also often have less fuel-efficient engines that can result in higher fuel consumption, increased operating costs, and a larger environmental impact. As maritime regulations continue to evolve and become more stringent, retrofitting vessels to comply with the latest emissions and safety standards can be costly and challenging.

One example of how repair and refurbishment costs can impact a vessel's maintenance cost and out of service time is the winter 2022 overhaul of the *Matanuska,* where the need to complete extensive steel replacement work was discovered. Coupled with the cost for the necessary major renovations required to maintain the International Convention of the Safety of Life at Sea (SOLAS) certification, the unanticipated steel replacement work has kept the *Matanuska* from returning to service.

Another example is the recent work on the *Columbia*. In December 2024, the *Columbia* returned to service after an extended overhaul period, which included replacing or repairing 188 windows, completing $8.6 million in steel repairs (including a new deck in the MSD room), replacing 789 feet of fire main piping along with 144 fire main valves, installing new radars and a gyrocompass, installing new controls for bow thruster and propulsion, renovating the wheelhouse with new floors and windows, extensive engine and gear work, upgrading the refrigeration system, painting of the hull and all exterior decks, and installing new lounge flooring.

In addition to the challenges related to operating older vessels, a lack of standardization across the fleet limits the interchangeability of assets. The lack of interchangeability prevents the system from moving vessels to certain terminals, thus limiting the resilience of the system. For example, *Tazlina* and *Hubbard* entered service without crew quarters, limiting their ability to operate on routes longer than 12 hours. This prevents them from covering service on longer routes when *Aurora* or *LeConte* are out of service.

Workforce

AMHS is nothing without the people working daily to keep vessels running, provide passengers with services, book reservations, maintain schedules, and keep AMHS in regulatory compliance. AMHS is currently facing workforce shortages, a challenge present throughout the wider maritime industry. AMHS faces several significant challenges impacting its workforce, leading to chronic worker shortages.

AMHS vessel workforce includes licensed and unlicensed personnel, represented by three collective bargaining units (Inlandboatmen's Union [IBU], Marine Engineers' Beneficial Association Union [MEBA], and International Organization of Masters, Mates, and Pilots [MM&P]). U.S. Coast Guard regulations stipulate a minimum number of licensed crew required for operation of each AMHS vessel. If the minimum number of crew are not available for a sailing, the trip must be canceled.

In recent years, AMHS has had to keep boats out of service due to a system-wide shortage of qualified crew personnel. The shortage of crew has been caused by high turnover rates and difficulties hiring due in part to pay disparities with other ferry systems and high travel costs. During the summers of 2022, 2023, and 2024, one mainline vessel remained out of service due to crew shortages. **Appendix F1** details the specific challenges of retaining and developing AMHS crew members.

Crewing Shortage

As of January 30, 2025, to provide the desired seven-vessel schedule and with two vessels in layup, AMHS needs to fill 84 vessel crew vacancies. The labor shortages are across all crew departments.

Beyond vessel crew shortages, AMHS also has open positions related to administration and capital project management, which have been difficult to fill. These positions are critical to supporting AMHS operations and to implementing the capital projects in the Plan.

As a division of DOT&PF, AMHS also relies on DOT&PF staff for support across several functional areas, including the following:

- Office of the Commissioner: Provides direction to ensure AMHS operations are aligned with the broader Alaska DOT&PF transportation goals. The Office of the Commissioner also provides support services to AMHS, including:
  - Workforce development and recruitment.
  - Communications: DOT&PF helps manage public outreach and stakeholder engagement to ensure clear and consistent messaging about AMHS service changes, plans, and public engagement opportunities.
  - Liaison with the Governor's Office and Legislature on matters concerning AMHS budget requests.
  - Liaison with Alaska's federal delegation on matters of planning and programming and federal funding.
- Program Management and Administration:
  - Provides Human Resources services to AMHS, including employee and labor relations
  - Provides accounting support, including budgeting.
  - Performs AMHS non-construction procurements, contracting and professional services, and informal construction-related procurements up to $100K.
  - Supports AMHS with planning, coordinating, procuring, contracting, training, monitoring, and securing information resources.
- Statewide Design & Engineering Services: Engineering and capital planning for terminal assets utilized by AMHS. Terminal maintenance is a function that falls within AMHS.

- Planning and Program Development: The Division of Planning and Program Development, through the Capital Improvement Program (CIP) and Statewide Transportation Improvement Program (STIP), Federal Aid Team, and Capital Budget Team, which secure and allocate federal and state funds for AMHS vessel replacements and refurbishments and terminal upgrades. AMHS coordinates with the Division to align planning documents with the broader set of DOT&PF transportation goals and planning documents.

The goals and strategies in the workforce focus area will support the growth of a robust workforce in all sectors of AMHS.

Finances

Like most public transportation services, AMHS' operating revenues are insufficient to pay for all system operating expenses. Due to the disparity between operating revenues and operating expenditures, AMHS requires significant public funding to sustain operations. System operating expenditures and revenue are highly related to service levels and the number of ticketed passengers and vehicles. In recent years, the system has seen reduced revenue due primarily to a reduction in service and corresponding loss of ridership. This sensitivity to changing service and reliance on public funding exposes the system to fiscal uncertainty.

Labor costs are AMHS' largest expense, constituting about 70% of the budget, driven by operational needs and union agreements. These agreements dictate pay increases tied to the rate of inflation as measured by the Consumer Price Index (CPI). With proposed service levels, labor costs will reach 73% of operating expenses by 2045.

Therefore, under current conditions, the required subsidy for AMHS operations will continue to grow as labor and other costs continue to rise and fare levels remain constant, as there is no commensurate policy for adjusting fares.

Given that AMHS' operating revenue does not pay for all operating expenses, the system has limited ability to fund capital expenditures with service revenue. AMHS requires significant public funding to pay for vessel and terminal capital projects. The federal government and the State of Alaska have historically been critical funding sources for capitalized vessel overhaul, vessel construction, and terminal work.

GUIDING INFLUENCES

The Plan presents a vision for the system, highlighting improvements in each of the four focus areas outlined in the previous section. The vision for the system recognizes and addresses current challenges, working in line with existing state and area planning efforts. While the Plan is the first modern, forward-looking planning document for AMHS, existing regional and modal plans have included AMHS within their transportation-related goals and strategies. The following sections highlight related planning efforts and other major drivers that have influenced the development of the Plan.

Figure 4 depicts the organization of DOT&PF's family of plans and where the Plan fits into the framework. The AMHS 2045 Long-Range Plan is a Tier III Modal & Systems Plan, setting out specific goals and actions for the Marine Highway System while still adhering to overarching statewide governance and DOT&PF priorities.

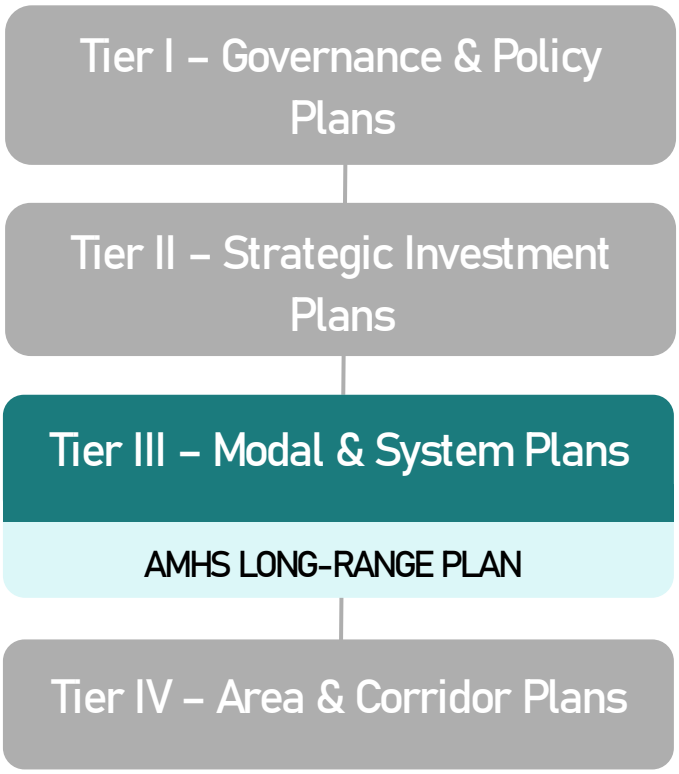


Figure 4: Alaska DOT&PF Family of Plans

Keep Alaska Moving[2]

Keep Alaska Moving through service and infrastructure is DOT&PF's mission, developed by the office of the DOT&PF Commissioner in the latest Strategic Plan, which puts forth a modern, resilient, and agile vision for the Alaskan transportation network.

Under the DOT&PF's Strategic Plan, the intended impact of AMHS is to:

- Provide a safe and efficient transportation system for Alaska to thrive.
- Provide Alaskans with access to goods, services, economic opportunities, community events, and the world.

The Plan outlines goals for organizational excellence, areas of strategic investment, and specified modes of transportation for Alaska's varied geographies. AMHS is included as a vital mode for rural and waterway transport.

Alaska Moves 2050[3]

Alaska Moves 2050 is the state's Long-Range Transportation Plan (LRTP). The current draft plan, updated most recently in 2022, provides the long-term vision, policies, and decision-making framework that will guide the development of Alaska's transportation system over the coming years. It outlines goals, policies, and measurable actions for an adaptable and resilient transportation system that will continue to serve all Alaskans, businesses, and visitors.

This Plan aligns with the goals set out in the LRTP, which are:

SAFETY: Provide for and continuously improve the transportation system's safety for all users.

MOBILITY AND ACCESS: Move people and goods efficiently and equitably by strategically supporting all modes, improving accessibility, safety, personal mobility, and interconnectedness.

[2] Alaska DOT&PF. "DOT&PF Vision." https://dot.alaska.gov/comm/strategic_plan.shtml. Accessed February 2025.
[3] *Alaska Statewide Long-Range Transportation Plan*, September 2022 Draft, https://dot.alaska.gov/alaskamoves2050/

ECONOMIC VITALITY: Plan for and invest in transportation infrastructure that supports economic growth and lowers costs of goods and services.

STATE OF GOOD REPAIR: Plan for full life cycle costs across the transportation system, including planning, construction, operation, and maintenance, to improve funding allocation consistently and effectively.

RESILIENCY: Assess risk and invest in solutions to develop a transportation agency and system that will adapt to and recover from the effects of climate change, natural disasters, and other disruptions.

SUSTAINABILITY: Promote a sustainable, clean, equitable transportation system to reduce costs to consumers and businesses and provide wider social and environmental benefits.

Area/Regional Transportation Plans

These regional, multimodal transportation plans are developed for specific parts of the state. Area plans address mobility issues unique to specific regional needs within and beyond the region, often including AMHS as a vital mode. Area plans are intended to be updated annually.

The 2045 Plan is intended to be referenced in future iterations of area and regional transportation plans.

Existing area plans and year of latest version are as follows:

- Southeast Alaska Transportation Plan (2014 Draft) – *update in progress*
- Prince William Sound Area Transportation Plan (2001)
- Southwest Area Transportation Plan (2016)
- Northwest Area Transportation Plan (2022)
- Yukon-Kuskokwim Delta Transportation Plan (2018)
- Interior Alaska Transportation Plan (2012) – *update in progress*, *aimed completion 2025*

Other Major Drivers

While AMHS can evaluate and improve many aspects of its operations, the system is bound by a series of external requirements and drivers, particularly related to legislative and regulatory requirements, union contracts, and funding. For more information on union, regulatory, and legislative drivers, see Appendix A1. Funding challenges and considerations are described in Appendix G1.

In addition to the area and regional transportation plans developed by DOT&PF, other local and transportation entities are working on various plans that may include AMHS.

HOW THE PLAN WAS BUILT

The Plan was formed through extensive technical analysis and community engagement aimed at identifying the community needs that form the baseline of the Plan. From the time the Plan development kicked off in the fall of 2022, the planning effort was conducted as a collaboration between AMHS planning staff supported by a consulting team, AMHS and DOT&PF leadership, staff, and crew, and community members from across coastal Alaska. Specific input was gathered in each of the planning phases. During the Analysis Phase, AMHS focused on identifying service needs and existing conditions data, which supported development of a service scenario that reflects the desire for an improved, more reliable service by 2045. In the Report Phase, preliminary findings were shared for input on the analysis and recommendations to be provided in the final Plan. Collaboration will continue into the Implementation Phase to measure progress and ensure that Plan recommendations and strategies are enacted.

The Plan development phases are outlined in Figure 5, and the Analysis Phase is discussed in more detail in the sections that follow.

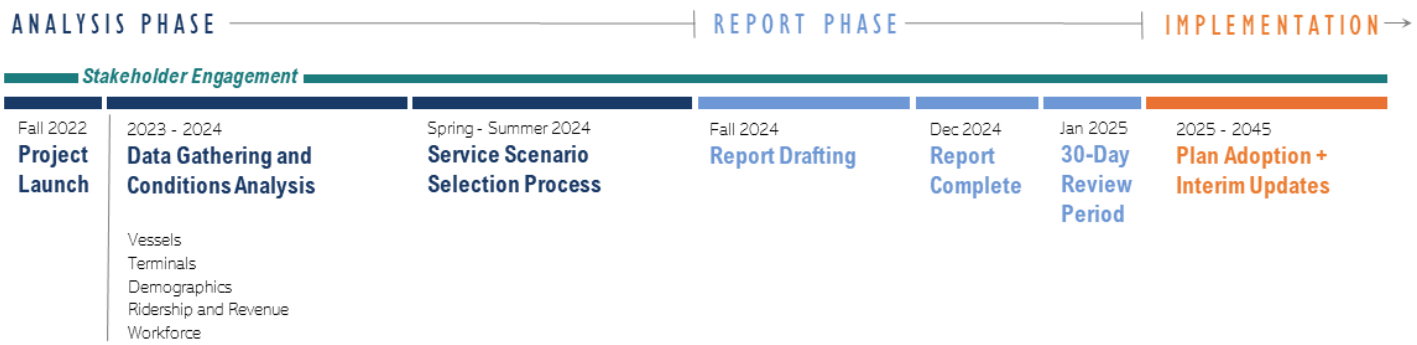


Figure 5: Plan Development Phases

DATA GATHERING AND CONDITIONS ANALYSIS

Plan development began in fall of 2022 with an in-depth, systemwide technical and community needs assessment. Technical analyses included assessment of the existing conditions of vessels and terminals, and review of demographics, ridership, and workforce data. Historically, data collection and reporting within AMHS have been limited and inconsistent. In instances where data has been collected, it is often onerous for staff to extract and use.

In addition to providing a baseline for Plan development, a primary goal of the first phase was to set up a data collection approach that would enable AMHS to develop ridership, vessel, and terminal health forecasts moving forward.

This first phase also included an initial round of engagement to touch base with communities. Notably, a community needs survey was distributed to gather feedback which provided a baseline understanding of community uses and expectations for AMHS service. The survey received 2,630 responses, representing each AMHS-served community, as well as others from across the state and the Lower 48. Results of this survey can be found in Appendix B1, with an example shown in Figure 6.

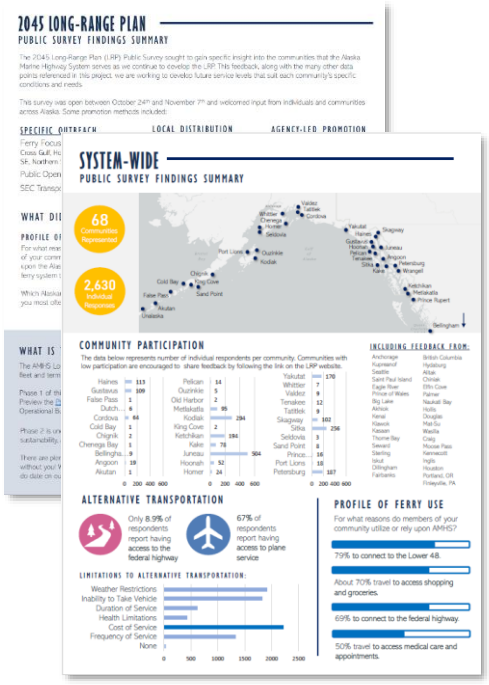


Figure 6: Example Results of the Plan Engagement Survey

SERVICE SCENARIO DEVELOPMENT

The approach for Plan development used potential future service scenarios to communicate and assess options for what AMHS service could look like in the future, and ultimately as a way to determine the resources and investments necessary to achieve the selected future vision. A "Service Scenario" is a potential combination of a certain fleet configuration and vessel routes as well as required terminal infrastructure, workforce, and funding. Service Scenarios enable comparisons of potential future configurations of the system with the intention of selecting the scenario that most effectively meets the 2045 target service levels relative to considerations such as capital cost requirements, operations budget requirements, workforce and crew requirements, and farebox recovery.

A multi-step process was used to develop and refine the list of Service Scenario options before final selection of the 2045 Plan Service Scenario. Potential service scenarios were created based on the findings from technical analyses and assessment of community needs. AMHS hosted workshops to analyze each scenario against a set of criteria, including sustainable workforce size, service performance, fleet size and composition, and cost effectiveness. These factors were deemed essential for evaluating a future fleet's efficiency, sustainability, and performance. In late 2024, a final scenario was selected under the advisement of DOT&PF and AMHOB.

Figure 7 provides an overview of the Service Scenario Development process and schedule, elaborating upon the *Service Scenario Selection Process* phase shown in Figure 5 on page 12.

Figure 7: Long-Range Plan (LRP) Service Scenario Selection Process

Throughout the process of developing and selecting the 2045 Plan Service Scenario, the potential scenarios were evaluated for their alignment with the Plan's focus areas and goals. Proposed scenarios that could not support those goals were modified or removed from the analysis before final selection.

The Service Scenario Development began with establishing a target level of service. Appendix C1 details how a target level of service was determined for each community in the system. Appendix C2 describes how the 2045 Plan Scenario was selected. Appendix C3 outlines the characteristics of each of the vessel types included in the Service Scenario Development process. Appendix C4 and Appendix C5 provide additional background on financial information that was used in this analysis.

The selected 2045 Plan Service Scenario is the target fleet composition for the system in 2045, and the primary driver of the implementation needs included in this Plan.

COMMUNITY AND STAKEHOLDER ENGAGEMENT

The Plan was strengthened by engagement with stakeholders as diverse as the communities that AMHS serves. AMHS worked to bolster each project phase with community expertise, relying on community members and stakeholders to provide insight and feedback on project goals, community needs, and future service levels. Multiple engagement methods and opportunities for feedback were offered, as shown in Figure 8.

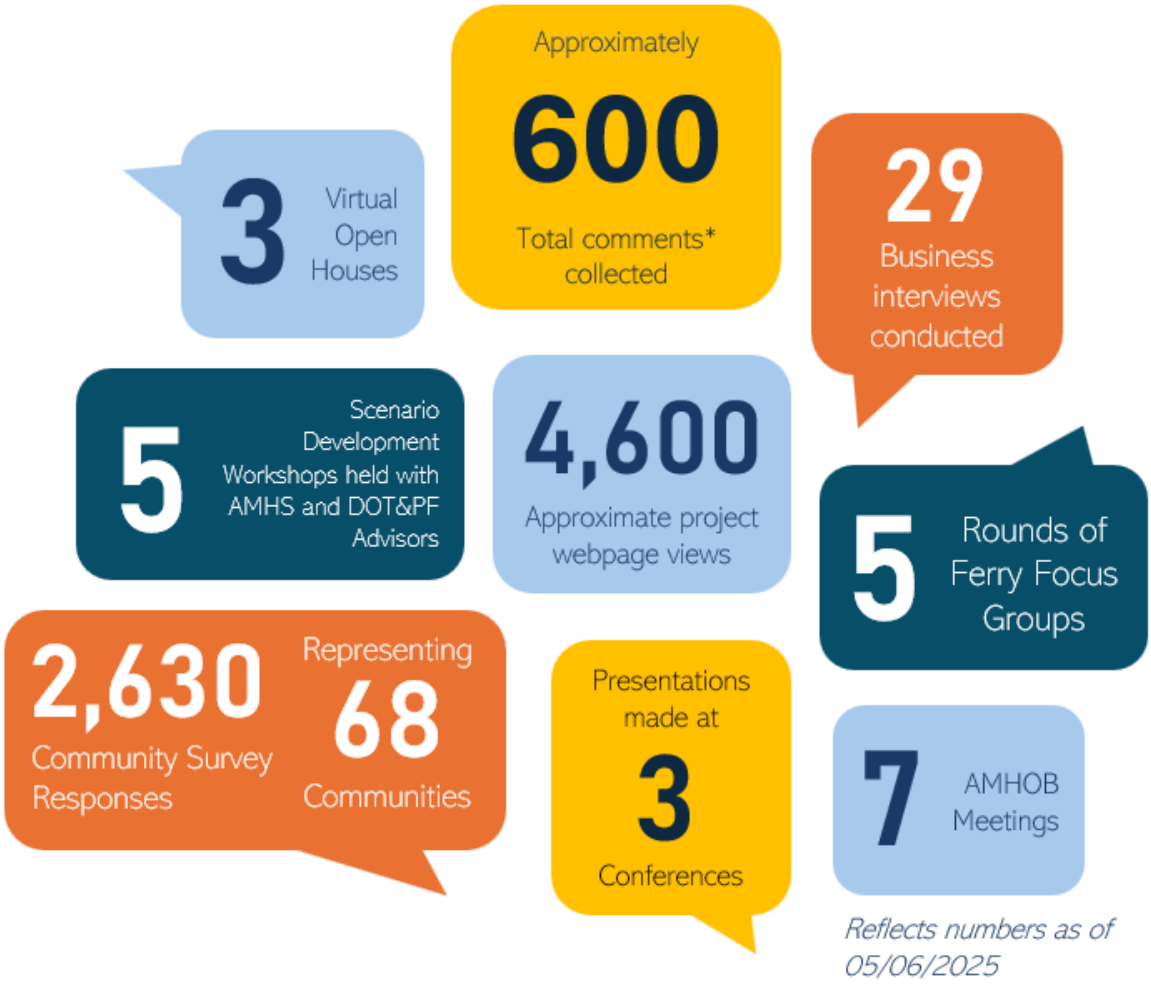


Figure 8: Engagement by the Numbers

Engagement has been ongoing throughout each phase of Plan development and is intended to be continued as the Plan is implemented.

With awareness that several state and area planning efforts were in development concurrent with this Plan, engagement activities were chosen strategically to avoid overwhelming certain groups with requests for input. AMHS worked with community leaders to act as conduits for Plan information, collaborated with regional organizations to reach their members, and partnered with DOT&PF Planning to coordinate with existing outreach resources and networks when possible. See **Appendix B1** for further details on the engagement strategy and results from community and business surveys.

Figure 9 summarizes the number of times community members and various stakeholder groups were engaged during Plan development.

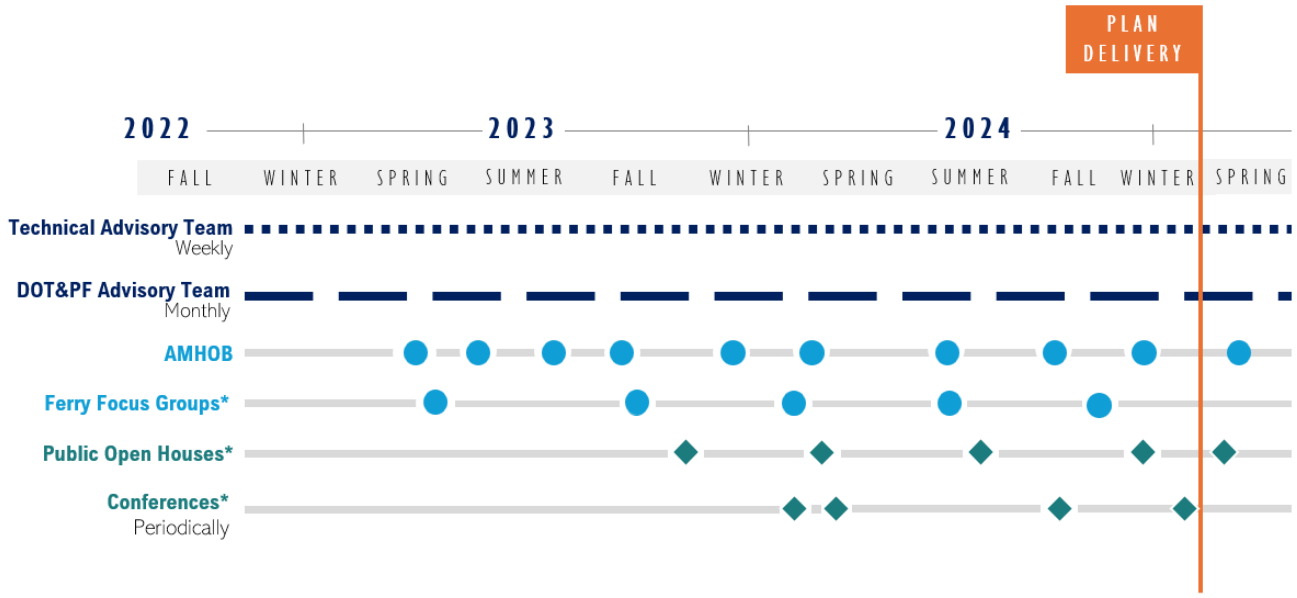


Figure 9: Summary of Engagement Meeting Touchpoints

Community Engagement Goals

As Plan development progressed, the nature of engagement activities shifted to align with the goals of each project phase. However, the few key goals outlined below were consistent throughout all phases:

- Establish and reinforce lines of communication between AMHS and the public.
- Increase transparency by keeping public stakeholders informed of the long-range planning process and establish lines of communication for future AMHS updates.
- Gain local insight from community leaders and stakeholders that is necessary to inform development and analysis of service scenarios.
- Utilize engagement feedback to make informed capital and operating decisions.

Stakeholder Groups

As part of the long-range planning process, AMHS consulted with ferry customers, planning organizations, internal stakeholders, tribal leaders, and the public to inform each step of the plan. With an understanding that Alaska's coastal communities host a wide variety of demographic and interest groups, AMHS employed a variety of engagement strategies and methods with the intention of encouraging and accommodating participation from different groups.

Each stakeholder group and its role in shaping the Plan is outlined on the following page.

AMHS TECHNICAL ADVISORY

The core technical advisory committee for the development of the Plan met with the consultant team weekly throughout the project duration. The committee included executive leadership, customer service, public relations, dispatch and operating specialties. This group was regularly engaged in the development and review of Plan elements and provided regulatory and legislative direction to keep the project on track.

DOT&PF POLICY ADVISORY

The DOT&PF Policy Advisory group included representatives across departments to provide oversight and assurance that the direction of the Plan aligns with DOT&PF's existing and planned goals and initiatives.

AMHOB

AMHS reported to and sought input on the plan's progress from the Alaska Marine Highway Operations Board (AMHOB) on a quarterly basis. Presentations were held both virtually and in person, per AMHOB's direction. Each presentation made to AMHOB was live streamed for public viewing, and recordings of each meeting were published to AMHOB's webpage.

FERRY FOCUS GROUPS

AMHS initiated a series of Ferry Focus Groups, notably in early project phases, to engage directly with community leaders to better understand and verify community conditions and needs. Quarterly Ferry Focus Groups brought together local leaders from each of Alaska's service areas, including city clerks, school administrators, tribal leaders, chambers of commerce, and senators. These service area-specific groups were formed to gain local input on service schedules, supplemental service opportunities, and special event occurrences.

SOUTHEAST CONFERENCE (SEC)

SEC is the state and federally designated regional economic development organization for Southeast Alaska. SEC serves as the collective voice for advancing the region's economy and has remained a strategic partner for AMHS since its establishment in 1961. SEC has 240 member organizations representing governments and businesses from the region's 35 communities.

AMHS presented Plan development updates at multiple conferences hosted by SEC and consulted with SEC leadership at key project milestones.

NATIONAL ASSOCIATION OF DEVELOPMENT ORGANIZATIONS (NADO)

Funding for a series of executive business interviews was provided by USDA Rural Development, with NADO as a coordinating partner for the project. NADO's mission is to advocate for federal policies and programs that support equitable community development, economic competitiveness, rural development, economic mobility, and quality of life. NADO focuses on critical areas such as transportation planning, workforce training, and affordable housing, all of which align with the needs of communities across the United States.

ALASKA MUNICIPAL LEAGUE (AML)

AML is a nonprofit, nonpartisan, statewide membership organization of 165 cities, boroughs, and unified municipalities, representing over 97 percent of Alaska's residents. AML hosted a series of Community Transportation Workshops throughout 2024 and partnered with AMHS to share project updates during each workshop.

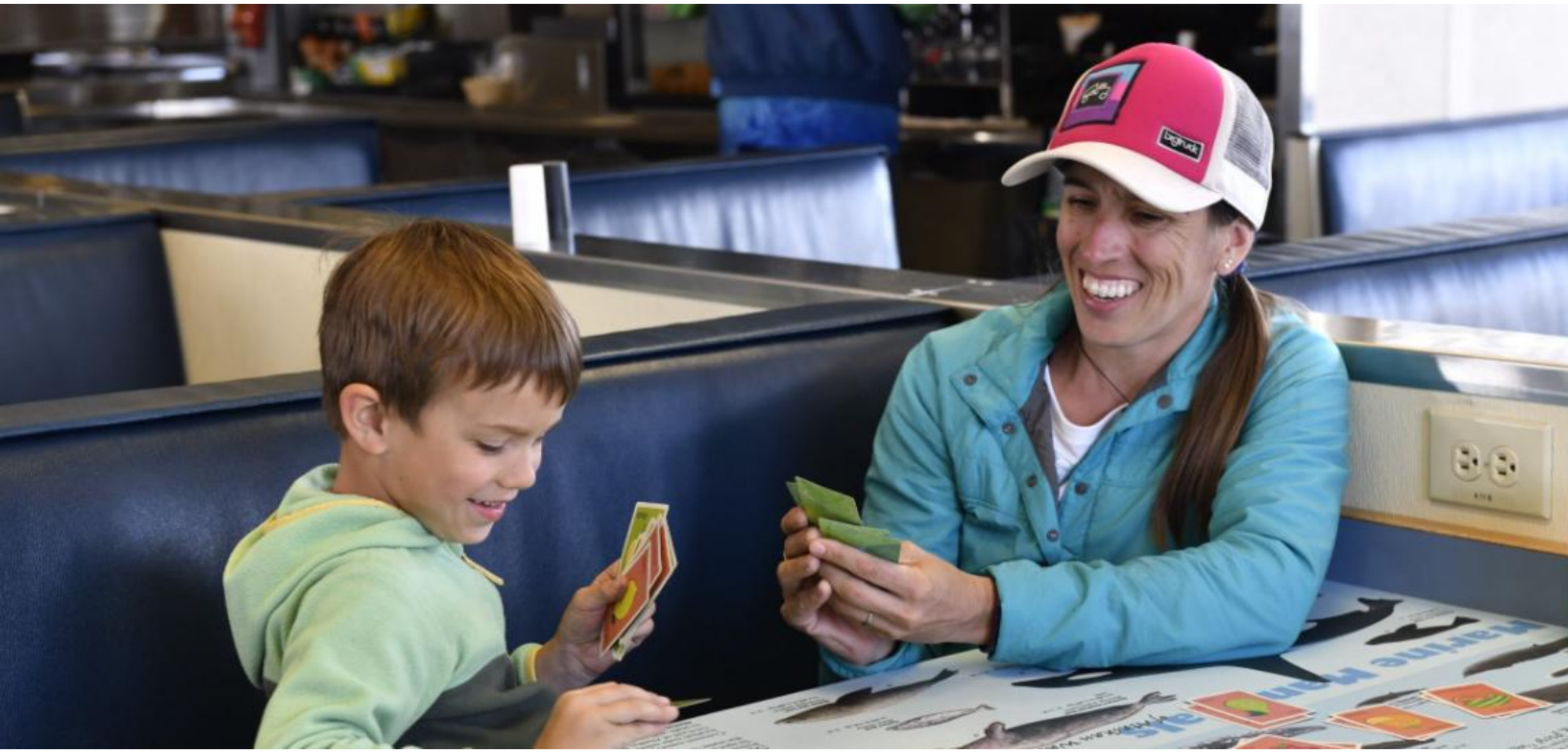
PUBLIC OPEN HOUSES

Four Public Open Houses were held during the project, serving as a way to connect with interested community stakeholders. These meetings focused on sharing Plan updates and progress towards completion. The Public Open Houses were held at key decision points throughout the planning process, inviting feedback that AMHS would incorporate into the Plan.

Key Themes

Options to provide public comments were available for the duration of Plan development. In addition to collecting community input through the Plan webpage, public comments were invited at public open houses, through a public survey, and in exit surveys distributed following select Ferry Focus Groups. The following statements reflect the most common sentiments heard throughout various engagement activities.

- Service reliability is the primary concern.
- Earlier schedule releases would better support trip planning.
- A schedule that better supports weekend trips between Alaskan communities would be beneficial.
- The ferry plays a crucial role in the operations of many Alaskan businesses.
- Attendees of important cultural gatherings rely on the ferry for access.
- The ferry is a lifeline to otherwise isolated communities, remaining the most affordable way to access appointments, transport vehicles, and travel for school and work.



BRINGING IT ALL TOGETHER

As described in the previous sections, the Plan was developed through a combination of existing conditions review, service scenario analysis, and community and stakeholder engagement. Frequently throughout the planning process, community groups and stakeholders were asked to participate in Plan development by sharing insight into current service and transportation needs and providing input on the future vision for service.

The recommendations put forth in the Plan are the results of two years of consideration and input from various stakeholder groups. While the Plan outlines capital and operating investment through 2045, progress toward implementation will be reviewed on an annual basis, with a formal update published every five years. Ongoing data collection and community engagement will be key to this continued effort.

This process served to develop a well-informed understanding of the system as it is in 2024, ensuring that all future planning would be grounded in real conditions, actual community needs, and be coordinated with other planning efforts.

Analysis and Findings Documentation

This document provides a summary of findings from the extensive technical analysis conducted during Plan development. For more in-depth information about any of the sections in the Plan, please refer to the accompanying memos, organized into sections as follows:

A – Background

B – Engagement

C – Service

D – Vessel Infrastructure

E – Terminal Infrastructure

F – Workforce

G – Financial

THE 2045 VISION

The Plan envisions a thriving system that is maintainable, reliable, sustainable, resilient, and provides connections to support the mobility of the residents, communities, and businesses of coastal Alaska. The sections below organize the 2045 vision into four focus areas: service, fleet and terminals, workforce, and financial.

PROVIDE A SERVICE THAT IS SAFE, RELIABLE, AND CONNECTIVE FOR OUR COMMUNITIES

The Plan envisions increased service in 2045 relative to current levels, with a focus on improved reliability. As shown in Table 1, 2045 target service levels return the system to pre-pandemic (2018) levels and aim to provide each community with at least as much service as they received in 2022.

Table 1: Service Look Ahead

CALENDAR YEAR	PORT CALLS
2018	**5,500**
2022	3,900
2025	4,600
2035	6,500
2045	**6,500**

+1,000
Port Calls from 2018

UPDATE FLEET AND TERMINAL ASSETS TO PROMOTE RESILIENCY AND STANDARDIZATION

The 2045 modernized fleet will be equipped to provide a reliable service. The younger fleet of eight vessels, shown in Figure 10, will be less likely to require unexpected maintenance and downtime. In the case that unplanned outages occur, there will be enough redundancy in the 2045 fleet to provide the backup needed to limit service impacts. The future fleet will also support modifications to some routes and the addition of new routes. See Appendix C2 for more information on vessel routes in 2045.

By 2045, the Plan envisions a more flexible system, which requires standardization of both fleet and terminal infrastructure. With routine maintenance prioritized and significant upgrades carried out, AMHS' terminal infrastructure will promote a sustainable service by increasing vessel compatibility and design consistency between terminals to support vessel interoperability, thereby improving AMHS' ability to shuffle vessels across routes as needed to provide service coverage during vessel outages.

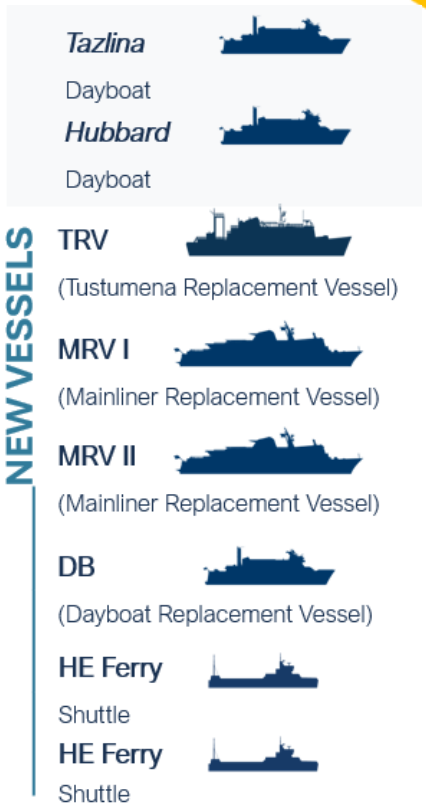


Figure 10: The 2045 AMHS Fleet

*Vessel silhouettes are representations only; new vessels may be different.

CONTINUE TO BUILD AND SUPPORT A RELIABLE WORKFORCE

AMHS aims to build a resilient workforce capable of meeting future demands and maintaining essential transportation services across Alaska. By 2045, AMHS intends to have a stabilized workforce across all divisions. With the focus on outreach and retention, there will be a larger pool of candidates interested in working for AMHS.

As of January 30, 2025, AMHS had 484 crew members, falling well short of the 568 crew members required to provide the currently desired service levels with seven vessels operating and two vessels in layup. By 2045, the goal is for AMHS' workforce to grow beyond current levels. At the same time, the total crew requirement for the 2045 fleet composition is anticipated to be lower, at only 530 crew members.

As the Plan is implemented and service evolves toward the 2045 vision, workforce requirements will become better aligned to the available labor market, and AMHS, with a renewed fleet of modernized vessels, will be better positioned as an attractive place to work and grow one's career.

PROMOTE FINANCIAL EFFICIENCY AND SUSTAINABILITY

AMHS intends to complete a fare study and will work toward a system that is financially resilient. Strong management, thoughtful allocation of resources, data collection and reporting, and scheduled fare adjustments will provide stability for future operations and capital planning. Additionally, this Plan will serve to support future grant funding opportunities and provide insight into funding appropriation needs through timely financial information.

HOW TO READ THE PLAN

The Plan is intended to guide the next 20 years of AMHS management and investment to incrementally achieve the 2045 vision for the system. This guidance is provided through the goals, strategies and actions, and measurable metrics identified for each focus area.

FOCUS AREAS

The Plan outlines recommendations for strategic investment under the following four focus areas.

Figure 11: Plan Focus Areas

Each of the four focus areas are addressed in a dedicated section of the Plan. These sections are organized as a framework to guide implementation using the subsections defined below.

Goals and Strategies

Goals are targets set to be achieved over the next 20 years. They are guiding statements that will keep the system moving in the right direction.

Example - Provide service that prioritizes community needs and connections.

Each goal has strategies and actions that are needed to achieve the goal. The actions are specific activities that AMHS can implement to work toward the associated goal. Certain strategies and actions may serve to achieve multiple goals and are repeated under all applicable goals.

Example - Continue and expand support for community events

Key Metrics

Performance metrics are measures to track progress toward goals. AMHS does not currently track many of these proposed metrics. Tracking these metrics will be important for future progress reporting and accountability.

Metrics are not tied to specific strategies, but rather to overarching goals. With limited staffing capacity in the short-term, these key metrics are limited to those that are most essential. As the Plan is revisited,

there is the possibility for additional key metrics to be added once more robust data management practices are in place.

> *Example - Customer Satisfaction - Evaluate customer satisfaction via onboard surveys and identify areas for improvement.*

Implementation Outlook

The implementation outlook outlines the benefits that AMHS will begin to realize in the short-term, mid-term, and long-term as investments recommended by the Plan across each focus area are made.

PLANNING HORIZONS

Major modernization of a transportation system does not occur overnight. Proper planning of incremental improvements is essential to the success of this plan, which has identified three implementation phases: short-term, mid-term, and long-term.

Each focus area section outlines recommended actions within these three planning horizons. The section below characterizes the goals of each timeframe and previews the structure that will be used to organize the planning horizons in each focus area.

While the Plan lays out a vision for AMHS service in 2045, it is important to recognize that achieving the target service levels will take continued, incremental efforts. Every initiative described in this Plan will take time and persistence to achieve. As progress is made over the three planning horizons, the characteristics of provided service and the focus of operational improvements and capital investments will shift. The characteristics of service and key focus of investments for each planning horizon are summarized below.

Short-Term: Period of Variability (2025 – 2028)

The first four years of the Plan focus on replacing AMHS' most vulnerable assets, with the goal of stabilizing the system. In this phase, replacement vessels are mainly being designed and built, with one entering service. Terminal infrastructure needs are also being identified. A focus is given to building the system's workforce to ensure that crew are being prepared for higher-level positions in upcoming phases.

The key areas of focus in the short-term period include the following:

- Begin making investments and support those underway
- Focus on stabilization and return to previous service levels
- Transition and scale up workforce

Mid-Term: Initial Success (2029 – 2035)

The next seven years of the Plan focus on continuing to design and construct new vessels to replace the system's vulnerable assets with three new vessels entering service and two vessels retiring. The growth of the system's workforce continues to be a priority.

As investments begin to pay off in the mid-term period, the system will see the following benefits:

- Increased port calls to AMHS communities
- Enhanced reliability

Long-Term: Reliable Expansion (2036 – 2045)

The final years of the Plan focus on the regular maintenance of the assets, which are replaced in the short- and mid-term phases, with two additional vessels entering operation in the long-term. As the workforce is strengthened and maintained, service grows to meet the 2045 target service levels.

In the long term, the Plan supports AMHS in achieving the following:

- Long-term service goals are met
- Reliability goals are met
- Stable crew size

SERVICE

FOCUS AREA 1: PROVIDE A SERVICE THAT IS SAFE, RELIABLE, AND CONNECTS OUR COMMUNITIES

Providing quality service is paramount to ensuring the success of the system. For both AMHS and their customers, safety, reliability, and connection are identified as essential elements of quality service.

Providing *safe* service is the system's top priority and encompasses the safety of passengers, crew, fleet, terminals, and the environment. Providing *reliable* service ensures that customers can depend on the system to reach their destinations as scheduled. Providing a service that *connects* Alaskan communities is responsive to feedback heard through public engagement that inter-system connections are vital to the lives of system residents.

GOALS AND STRATEGIES

With a focus on improving the quality of system service, the following goals have been identified for Focus Area 1 (Service):

A. Invest to establish a service that is safe and reliable.
B. Provide service that prioritizes community needs and connections.
C. Improve customer experience from booking to completion of sailing.
D. Promote transparency and increase access to information.

The following sections provide a summary of each goal and outline proposed strategies for goal achievement and performance metrics to track goal progress.

Goal 1A: Invest to establish a service that is safe and reliable

Reliability and safety are two key aspects of system performance. AMHS is committed to providing safe service, and the Plan prioritizes maintaining and enhancing safety as service levels grow.

Strategies for safety and reliability of the system are centered around modernizing the fleet through vessel replacement, implementation of new technology, and investing in workforce hiring and training.

Strategies and actions for achieving this goal include:

STRATEGIES	ACTIONS
1A.1 – 2045 Service Scenario	▪ Follow the Strategic Maintenance and Vessel Replacement Plan discussed in Focus Area 2. ▪ Recruit and retain workforce to properly crew vessels. ▪ Incrementally add service as new vessels are added, building toward 2045 Service Levels.
1A.2 – Continue with the process of creating a Safety Action Plan with yearly goals and initiatives.	▪ Provide opportunity for crew members to attend a yearly crew safety conference. ▪ Complete annual Safety Action Plan updates and regularly review the plan and goals.
1A.3 – Implement scheduling software to modernize scheduling process.	▪ Implement a new vessel scheduling program (currently being tested).

Goal 1B: Provide a service that prioritizes community needs and connections

AMHS is an integral component of many coastal communities and the broader Alaska highway system. Strengthening connections with these communities and integrating with other multimodal transportation systems remains a top priority in service planning.

Strategies and actions for achieving this service goal include:

STRATEGIES	ACTIONS

1B.1 – Work towards a 2045 service level that reflects community needs.	▪ Continuously engage the public to stay in tune with current and evolving community needs.
	  ○ Aim to use engagement tactics such as onboard surveys, AMHOB, ferry focus groups, and public comment forums.
	  ○ Consult with partner organizations to stay up to date with local community conditions and needs.
	▪ Continuously engage with internal DOT&PF departments, including the Statewide Civil Rights Office regarding Title VI compliance to ensure that best practices relating to service development are met.

1B.2 – Actively participate in DOT&PF transportation planning processes to include	▪ Work with DOT&PF to evaluate the feasibility of the following road connections:

new roadway connections to better connect communities to AMHS service.	○ Kake – Petersburg ○ Across Baranof Island ○ Tenakee - Hoonah
1B.3 – Continue and expand support for community events.	▪ Maintain and improve lines of communication between AMHS communities and AMHS schedulers to support: ○ Cultural and tribal events ○ Sporting events ○ School events ○ Other community events

Goal 1C: Improve customer experience from booking to sailing

AMHS intends to explore opportunities to improve how customers plan, purchase, and experience trips. By creating a streamlined booking system through a comfortable, easy-to-use application, AMHS aims to improve how they serve customers and meet their travel needs.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
1C.1 – Improve infrastructure for customer booking and trip planning.	▪ Continue to work on the customer reservation system to improve customer service. Evaluate the customer reservation system against industry best practices and make necessary improvements.
1C.2 – Invest in improvements to enhance customer experience.	▪ Continue to enhance internet access for passengers on vessels and at terminals. ▪ Continue to look for customer amenities that improve customer experience. ○ Explore potential online customer experiences such as an interactive virtual naturalist or "did you know" facts that are relevant to the location of the vessel.

Goal 1D: Promote transparency and increase access to information

Utilize technology upgrades and forward-looking planning to improve communication between customers and crew and foster long-term trust in AMHS' ability to connect customers to where they want to go.

Strategies and actions for achieving this goal include:

STRATEGIES	ACTIONS
1D.1 – Invest in communications technology to improve information sharing.	▪ Improve the reservations system to provide real-time updates and notifications that will reach customers in a direct and timely fashion. ▪ Install real-time monitors to display vessel locations in larger terminals. ▪ Explore ways to improve Alaska 511 to incorporate as a reporting tool.
1D.2 – Release schedules in advance to allow for community members, businesses, and visitors to better plan their travel with AMHS, increasing its viability as a transportation option.	• Release the summer service schedule by the previous October and the winter schedule by the previous June.

KEY METRICS

The table below identifies the key metrics to measure AMHS progress and track the success of the system in achieving the service goals identified in Focus Area 1.

METRIC	DESCRIPTION	STATUS
Schedule Release	Measure compliance with on-time or early schedule releases. Target release of summer sailing schedule by the previous October and the Winter sailing schedule by the previous June.	Currently tracking
Vessel Uptime	Track vessel downtime for maintenance related incidents and report as an uptime percentage.	Currently tracking – Monthly/Quarterly/Annual reports
Planned Port calls versus Actual Port Calls.	Evaluate the initially planned number of port calls compared to the actual number of port calls each season.	Establish a reporting process to enable tracking of this metric.
Passenger Capacity Utilization	Track number of passengers compared to the maximum allowable by the USCG for each vessel	Currently tracking
Vehicle Deck Utilization	Track percentage of vehicle deck that is used each trip compared to the total usable square footage of the vehicle deck.	Currently tracking

Employee and Passenger Injuries	Track number and cause of employee and passenger injuries on AMHS property.	Currently tracking – Annual report
Customer Satisfaction	Evaluate customer satisfaction via onboard surveys and identify areas for improvement.	Establish a reporting process that formalizes the distribution, response and tracking of all customer survey responses.
Booking Completion Rate	The number of bookings completed compared to the number started.	In development.
Event Accommodation Rate	Number of events accommodated compared to the number requested.	In development.

IMPLEMENTATION OUTLOOK

Throughout short-, mid-, and long-term planning horizons, safe and reliable service is prioritized, balancing service level increases against the need for service reliability as new vessels become available. Service levels over the life of the Plan, shown as annual system-wide port calls, or the number of times that a vessel stops in a community, are shown in Figure 12. Providing positive customer experience will also remain a consistent goal throughout all phases. In the short-and mid-terms, this will look like improving current procedures and systems while planning for and investing in modernized solutions for the long-term.

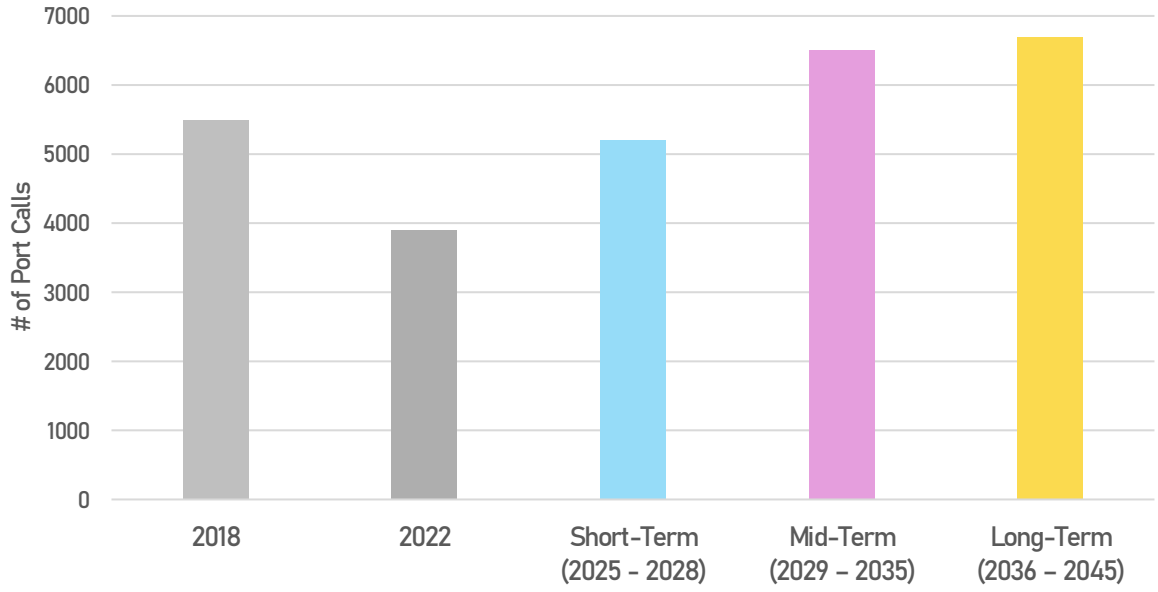


Figure 12: Average Annual Service Levels across the Plan

Planning Horizons

The section below summarizes the priorities for service and key projects identified for the short-, mid- and long-term. Ongoing strategies are recommended to be implemented and continued throughout each

planning horizon and beyond, while project-based strategies are discrete projects that occur during one of the three planning horizons.

Ongoing

Ongoing strategies related to service are focused on providing a standard of transparency and communication between AMHS and its customers, ensuring that service schedules and routing continue to reflect the needs of changing communities and, above all else, maintain safe operations.

- **Safety** is at the core of this system and the service it provides. Among the many safety management procedures is the attendance of a yearly crew safety conference and regular review of the Safety Action Plan.
- **Engagement** with the community will continue to be strengthened with cultural, school, tribal, and other community events considered during schedule development. Sustained engagement with communities will continue throughout the Plan horizon to ensure that service resources are used to best meet the needs of customers.

Short-Term (2025 – 2028)

The focus of short-term improvements is on maintaining existing service levels, increasing reliability, and preparing for new vessels to come online. This short-term period will set the stage for projects that will be available in the mid- and long-term planning horizons, including a review of existing customer-supportive technologies and planning for infrastructure improvements.

Between 2025 and 2028, the average annual port calls will be around 5,200, pending timely delivery and introduction of new vessels.

PROJECTS UNDERWAY DURING THIS PERIOD:

- Review of customer reservation system technology
- Advance release of schedules
- Public Wi-Fi on-board all vessels
- Real-time vessel tracking technology introduced for customer use
- Testing vessel scheduling software

Mid-Term (2029 – 2035)

The focus of mid-term improvements is to gradually increase service as new vessels come online while still maintaining essential reliability and safety for customers and crew. Service level gains toward the 2045 Target Service Levels will be realized through more predictable overhaul periods with a newer fleet (see Focus Area 2), the addition of a high service frequency shuttle between Haines and Skagway, reduced safe minimum crewing levels with new vessels, and gains in workforce levels.

Average annual port calls will increase to an average of 6,500 between 2029 and 2035, assuming that vessel and terminal capital projects are completed on schedule.

PROJECTS UNDERWAY DURING THIS PERIOD:

- Implement a customer reservation system app
- Improved scheduling software and processes

Long-Term (2036 – 2045)

The focus of the long-term is to realize the target service levels and outlined goals set forth by the Plan. With modern vessels, a healthy workforce, and improved customer service experience, the system is set to provide reliable service to its users.

In the long-term period, the average annual port calls will increase to 6,700, pending timely introduction of new vessels.

Table 2 lists the 2045 target service levels, by frequency, for AMHS-served communities.

Table 2: 2045 Target Service Level Frequencies, by Community

COMMUNITY	FREQUENCY	COMMUNITY	FREQUENCY
Akutan*	A few times a month	**Metlakatla**	Once or more a day
Angoon	A few times a week	**Old Harbor***	A few times a month
Bellingham	About once a week	**Ouzinkie**	A few times a week
Chenega Bay	A few times a month	**Pelican**	A few times a month
Chignik*	A few times a month	**Petersburg**	A few times a week
Cold Bay*	A few times a month	**Port Lions**	A few times a week
Cordova	Several times a week	**Prince Rupert**	A few times a month
Unalaska*	Once a month	**Sand Point***	A few times a month
False Pass*	A few times a month	**Seldovia**	A few times a week
Gustavus	A few times a week	**Sitka**	A few times a week
Haines	Once or more a day	**Skagway**	Once or more a day
Homer	Several times a week	**Tatitlek**	A few times a month
Hoonah	A few times a week	**Tenakee Springs**	A few times a week
Juneau	Once or more a day	**Valdez**	A few times a week
Kake	A few times a week	**Whittier**	Several times a week
Ketchikan	Once or more a day	**Wrangell**	A few times a week
King Cove*	A few times a month	**Yakutat**	About once a month
Kodiak	A few times a week		

*Communities on the Aleutian Chain typically do not receive service in the winter operating season due to weather constraints.

FLEET AND TERMINAL INFRASTRUCTURE

FOCUS AREA 2: UPDATE FLEET AND TERMINAL ASSETS TO PROMOTE RESILIENCY AND STANDARDIZATION

GOALS AND STRATEGIES

The following goals have been identified for Focus Area 2 (Fleet and Terminal Infrastructure):

A. Modernize the fleet through new builds and renovations.
B. Promote system efficiency through planning and management systems.
C. Standardize fleet and terminal assets to increase compatibility and consistency.
D. Reduce environmental impact in infrastructure design and construction.

Proposed strategies to meet these goals and the performance metrics that will be used to track progress towards goals are outlined in the following sections.

Goal 2A: Modernize the fleet and terminals through new builds and renovations

To support reliable and sustainable service in the future, AMHS must replace and upgrade aging terminal and fleet infrastructure.

Terminal Key Site Component categories of the terminal infrastructure condition assessment include in-water, uplands, and utility elements:

IN-WATER

- Dock, Approach Trestle, and/or Bulkheads
- Dolphins / Mooring Structures
- Floats
- Vehicle Transfer Bridge
- Apron and/or Intermediate Ramp
- Transfer Bridge Lift System
- Access Catwalks and Passenger Gangways

UPLANDS

- Uplands Terminal Building
- Uplands Staging and Parking

UTILITIES

- Backup Generator
- Electrical Utilities
- Other Utilities

Figure 13 shows the average conditions of each AMHS terminal from condition assessments available in 2024. This figure represents the average condition of all terminal assets for each site. Please refer to the accompanying Appendix E1 for a more detailed description of terminal infrastructure asset condition broken down by key site component categories.

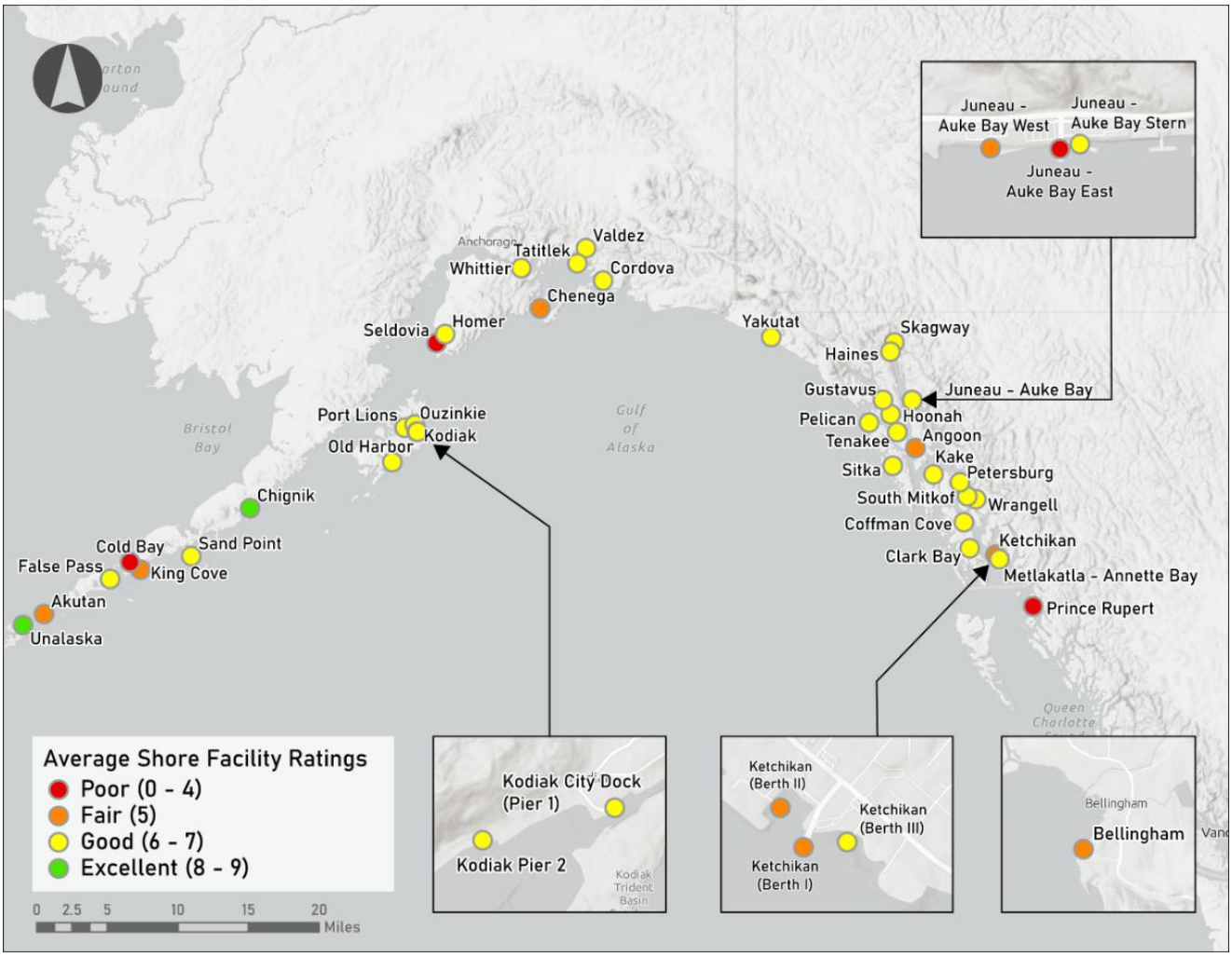


Figure 13: Terminal Average Condition Summary

In addition to replacing many of the fleet's current vessels, AMHS plans to implement modern features on board its vessels. In 2024, AMHS received federal funding to install Wi-Fi on its vessels. In December 2024, the *Columbia* returned to service with Wi-Fi operational and available to passengers. Wi-Fi will be added to the existing vessels throughout 2026 and included on future vessels.

Strategies for achieving this goal are summarized in the table below and detailed in the following sections.

STRATEGIES	ACTIONS
2A.1 – Replace vessels between the ages of 30 and 35 depending on their condition.	▪ Implement the vessel replacement plan. (see Figure 14)
2A.2 – Explore vessel technologies to modernize the fleet such as onboard Wi-Fi, more efficient propulsion systems and reduced emission equipment.	▪ Add public and crew Wi-Fi to all vessels. ▪ Build new vessels with hybrid propulsion.

2A.3 – Upgrade terminal infrastructure.	▪ Invest in terminal improvement projects that address asset conditions, vessel compatibility, and aging infrastructure. ○ Refer to **Appendix E1** for detailed list of terminal improvement projects, broken down by each terminal key site component, projected through the long-range planning horizon. ▪ Complete currently planned terminal upgrades included in the Statewide Transportation Improvement Program (STIP).
2A.4 – Standardize and modernize berthing and mooring structures to accommodate modern and future vessels.	▪ Invest in terminal improvements that support standardization of mooring configurations. ▪ Upgrade vessels to maximize standardized configurations. ▪ Complete an electrification study and work with DOT&PF to find opportunities to provide shore power at the terminals.
2A.5 – Make Americans with Disabilities Act (ADA) accessibility upgrades to vessels and terminals.	▪ Review existing terminal infrastructure for ADA compliance and incorporate ADA accessible design in future terminal upgrades. ▪ Ensure ADA compliance on new vessels.
2A.6 – Invest in vessel capital improvement projects to upgrade existing vessels.	▪ Complete *Kennicott* generator replacement as required by regulation.
2A.7 – Support the Alaska Electric Vehicle Infrastructure Program.	▪ Develop policies and procedures for carrying alternative fueled vessels (such as electric vehicles). ▪ Upgrade key terminals to include vehicle charging stations to be used after vehicles have disembarked from the vessels.

*Both Prince Rupert, Canada, and Hyder, Alaska are being evaluated for port feasibility.

Goal 2B: Promote system efficiency through deployment of capital assets

AMHS' capital assets must be deployed and maintained appropriately to maximize their effectiveness and useful life. A well-functioning ferry system will efficiently use its assets to improve operational effectiveness.

Strategies and actions for achieving this goal include:

STRATEGIES	ACTIONS
2B.1 – Establish internal AMHS roles dedicated to capital asset management and deployment.	▪ Add a Shipyard Planner position for development of advanced shipyard specifications. ▪ Create an internal quality steering committee (completed). ▪ Continue development of a Management of Change committee. ▪ Enhance terminal asset management practices.
2B.2 – Maintain an asset management system on each vessel to track the lifecycle of vessel components to facilitate proactive maintenance planning.	▪ Implement an asset management system on all vessels (completed).
2B.3 – Ensure that adequate vessel construction support is available to implement the future fleet plan.	▪ Augment existing construction management staff with contractors to support the new vessel construction projects recommended in the Plan.
2B.4 – Adhere to the vessel retirement and replacement schedule shown in the fleet replacement plan.	▪ Refer to the fleet replacement plan and Plan goals and strategies when making vessel retirement decisions.
2B.5 – Implement geographic packaging of terminal improvements.	▪ Use a progressive design build project approach to include design, permitting, and construction into regional projects. ▪ Communicate with surrounding communities to continue to look for project partnering opportunities to reduce mobilization costs.
2B.6 – Create and maintain a maintenance program for terminals.	▪ Create and maintain a program for tracking routine preventative maintenance projects on a rolling five-year basis to provide consistency for budget planning. ▪ Continue performing Terminal Condition Assessments and create repair plans biennially with dedicated grant funding.

Goal 2C: Standardize fleet and terminal assets to increase compatibility and consistency

Standardization of fleet and terminal designs allows vessels to more easily be moved between routes to provide service coverage during planned shipyard periods or unplanned downtime. Maximizing opportunities for vessel interoperability through fleet and terminal standardization is an important element in enhancing system resiliency.

Strategies and actions for achieving this goal include:

STRATEGIES	ACTIONS
2C.1 – Invest in terminal improvements at State-owned terminals which support standardization of mooring and other operational processes.	▪ Establish a terminal design manual that identifies preferred standards, such as bridge lift systems and terminal float designs for stern berths, side berths and a combination of both. ▪ Replace aging transfer bridge lift systems with systems that do not require specialty proprietary equipment.
2C.2 – Invest in vessel capital improvement projects to upgrade existing vessels.	▪ Complete Alaska Class Ferry *Tazlina* Crew Quarters Project.
2C.3 – Update the AMHS Safety Management System (SMS) to comply with current policy and procedures.	▪ Rewrite the AMHS Safety Management System (completed and approved by American Bureau of Shipping (ABS) and USCG). ▪ Continue quarterly review and updating of specific sections of SMS.

*Both Prince Rupert, Canada, and Hyder, Alaska are being evaluated for port feasibility.

Goal 2D: Reduce environmental impact in infrastructure design and construction

Environmental sustainability helps communities thrive through transportation investments that promote reduced greenhouse gas emissions and air pollutants, energy independence, efficiency, low-cost transportation, and a healthy environment.

In 2018, AMHS signed on as a participating member of Green Marine, the largest voluntary environmental program for the maritime industry in North America. The environmental certification program offers a map for ship owners, port authorities, terminal operators, and shipyard managers to voluntarily reduce their environmental footprint. Continued participation in this program will help guide AMHS to meet and exceed industry best practices.

Strategies and actions for achieving this goal include:

STRATEGIES	ACTIONS
2D.1 – Conduct sustainable transportation research to identify opportunities for AMHS to reduce its impact and implement improvements when feasible.	▪ Aim to explore opportunities within the following areas: ○ No-emission and low-emission ferry vessel designs ○ Shoreside charging and port electrification ○ Renewable diesel ○ Automation through digitization ○ Emissions and exhaust upgrades to existing vessels (i.e., *Kennicott*) ○ Hotel cost efficiencies (heating systems, lighting, etc.)
2D.2 – Monitor and adapt terminals as needed to address issues with potential sea level rise and erosion.	▪ Develop terminal improvement projects with consideration to improving the resilience of terminals relative to issues such as sea level rise and erosion.
2D.3 – Enhance the environmental sustainability of operations fleet-wide.	▪ Complete an annual emissions assessment and create a decarbonization plan for the fleet. ▪ Develop a fleetwide environmental sustainability program that promotes energy-saving measures in operations. ▪ Continue participation as a member of the Green Marine network with annual reporting.

STRATEGIC MAINTENANCE AND VESSEL REPLACEMENT PLAN

To maintain a reliable, resilient fleet into the future, the vessel replacement plan calls for vessels to be replaced when they are between the ages of 30 and 35, contingent on condition. The Alaska Class Ferries (ACF) vessels, *Tazlina* and *Hubbard*, are the newest vessels in the fleet and will not reach the age of 30 until after 2045. Furthermore, the *Hubbard* recently had crew quarters added, increasing system interoperability by extending the allowable daily operation time from under 12 hours to over 12 hours (see Appendix A1 for further information regarding the USCG limits on daily vessel operational hours). This increase in allowable operating time expands the number of routes *Hubbard* can service. In 2025, *Tazlina* will undergo a similar project.

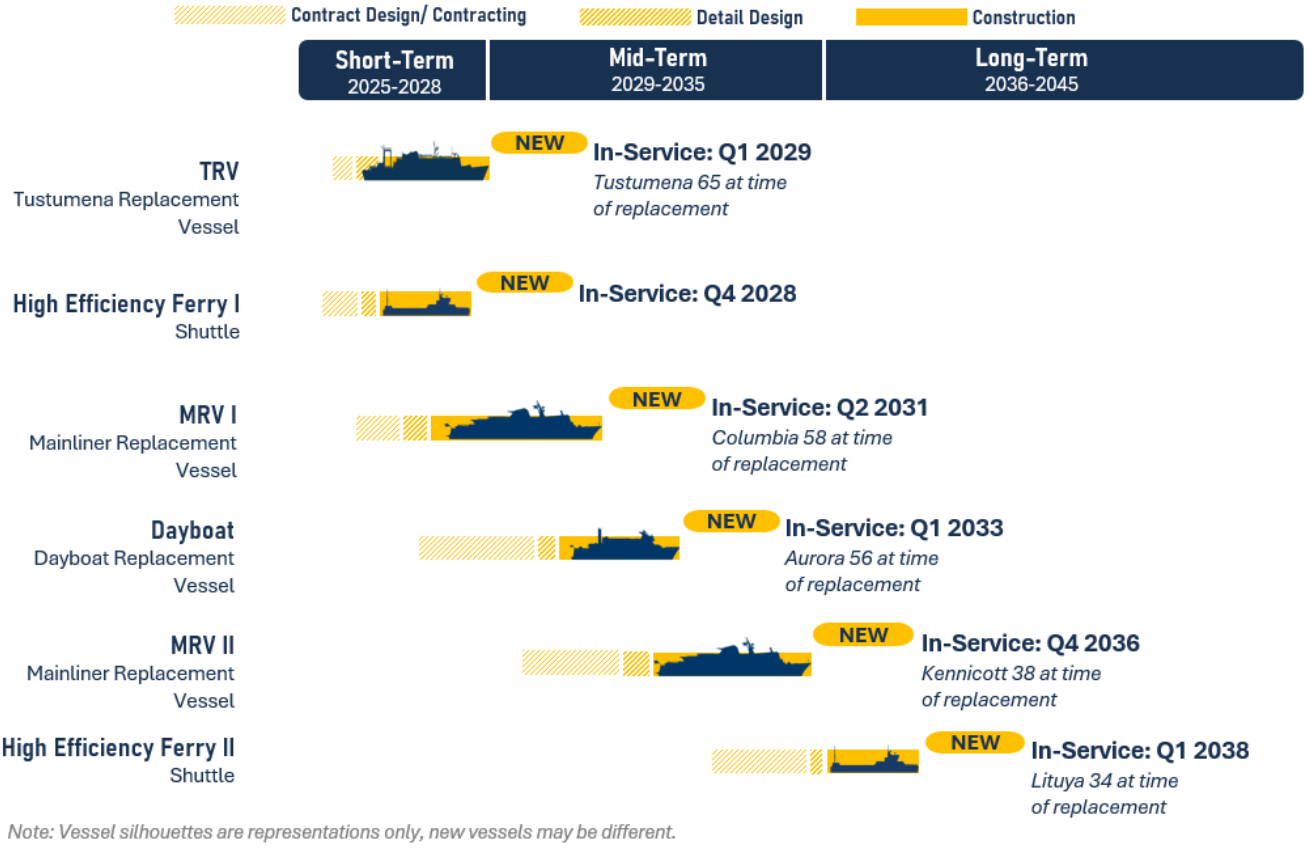
To avoid further reductions in service, it is imperative that AMHS maintains their current vessels in good working order until the older vessels can be replaced. This can be accomplished through completing periodic vessel maintenance such as yearly vessel overhauls. As new vessels join the fleet, it is important that they also receive proper yearly maintenance. Additional information about the cost associated with

building each new vessel and the yearly maintenance activities associated with properly maintaining the fleet is discussed in Appendix D1.

Modernization

The Plan calls for a modernized AMHS fleet, achieved through the vessel replacement plan that identifies construction of six new vessels. By 2038, all existing vessels except the ACF will have been replaced. The new vessel configurations and annual maintenance times are discussed further in Appendix C3.

Figure 14 shows the timeline of vessel replacements, identifying the age of current vessels at the planned time of replacement.



High Efficiency Ferry

- Point-to-point multiple times a day
- Single crew
- Operates less than 12 hours a day
- No crew or passenger cabins

Dayboat

- Single crew
- Can operate longer than 12 hours if needed
- Not intended for passengers to overnight
- Has crew cabins, but no passenger cabins

Mainliner

- Double crew
- 24-hour operation
- Has crew and passenger cabins
- Allows for multi-night stays by passengers

Figure 14: Vessel Replacement Timeline

The fleet replacement plan has two identified decision points, in 2026 and 2033, at which time AMHS will have the opportunity to evaluate current operations and adjust the plan as necessary. This is discussed further in the implementation outlook section of this focus area.

While many of the routes will continue their current or similar operations, the increased fleet and terminal standardization allows AMHS to adjust the routes as operationally needed instead of being significantly constrained by vessel and terminal compatibility. The future fleet will support modifications to some routes and the addition of new routes.

The first routing change will happen with the completion of a new terminal in South Tongass (Saxman) targeted for 2030, when the Metlakatla shuttle will run between Saxman and Metlakatla. This will shorten the trip time for the vessel, which will allow it to complete at least three roundtrips a day, five days a week or more.

In 2031, the first mainline replacement vessel (MRV I) will be added to the Bellingham to Skagway route. The MRV I route between Bellingham and Skagway will be modified to add stops in Kake and Sitka on both the northbound and southbound trips. Service to Prince Rupert, B.C., or Hyder, AK will also resume at this time.

In the summer of 2031, a new route will be added to increase access to medical services in Sitka. The route will start in Juneau and stop in Tenakee, Angoon, and Sitka.

For more information on vessel routes, see Appendix C2.

Figure 15 shows the 2045 Operating Plan. MRV stands for Mainline Replacement Vessel, TRV is for Tustumena Replacement Vessel, HUB is short for *Hubbard*, TAZ is short for *Tazlina*, DB is short for Dayboat and HEF stands for High Efficiency Ferry. The operating plan shows graphically when a vessel is serving a particular route and out of service time for maintenance over the calendar year.

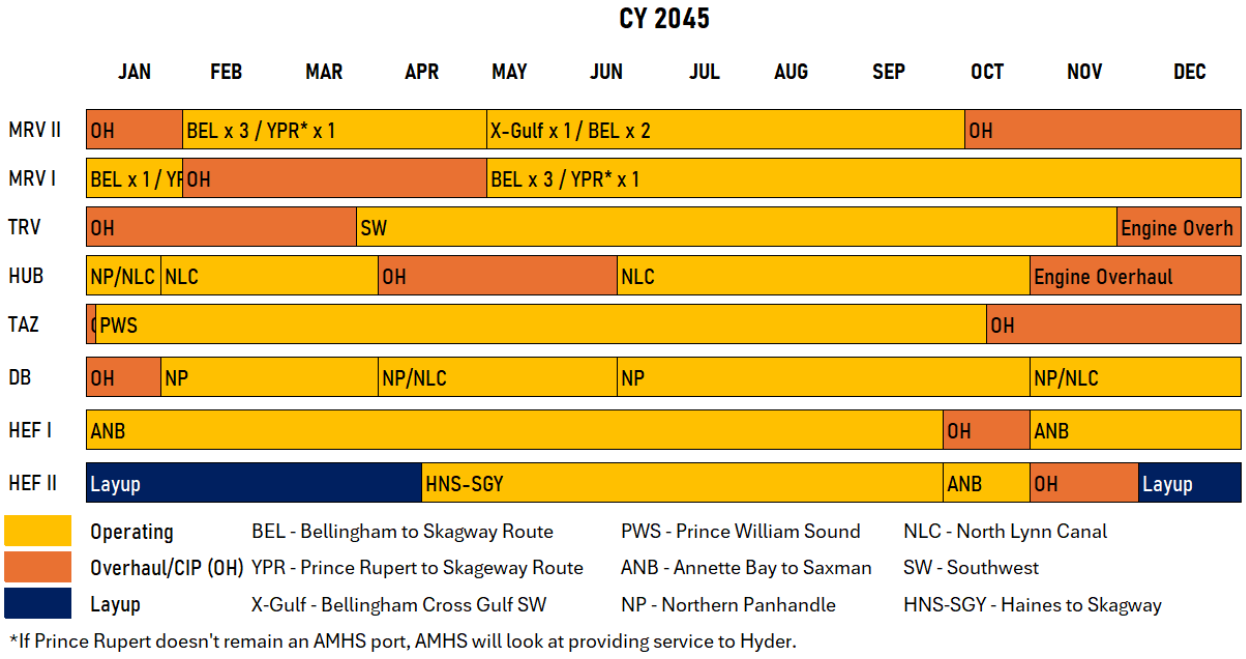


Figure 15: 2045 Operating Plan

Standardization

While there will be three major vessel classes, certain aspects such as vehicle loading door locations and pilothouse arrangement will be standardized across the fleet to support vessel and crew interoperability.

Resiliency

Each new vessel will have a hybrid propulsion system which will enable the vessel at minimum to turn off their main engines while in port to lessen the environmental impacts of the vessel.

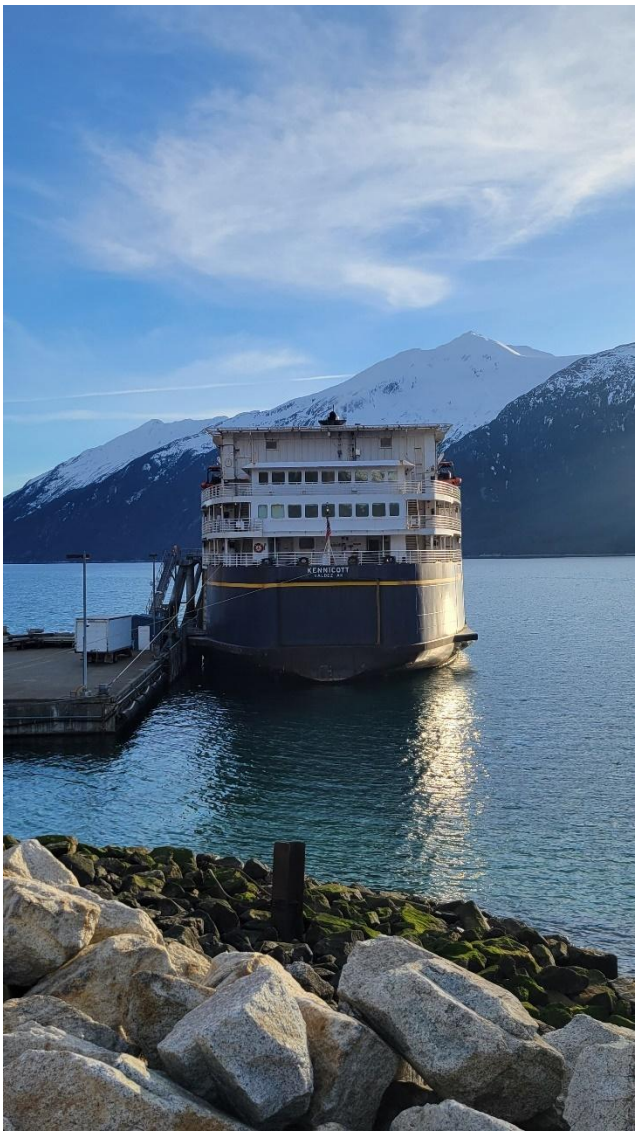
For each vessel design, new technologies and design elements that have potential to provide efficiencies for the crew will be investigated and incorporated.

TERMINAL INFRASTRUCTURE IMPROVEMENTS

Alaska DOT&PF is responsible for designing, constructing, operating, and maintaining the State of Alaska's ferry transportation infrastructure system, which currently includes 43 terminal facilities serving 35 communities. The Terminal Capital Projects Plan identifies the recommended maintenance and improvement projects needed to support the 2045 fleet plan. Each project was identified with the goals of the Plan in mind to increase reliability, apply standardization where possible, and enhance customer experience. Additionally, a preliminary sea-level rise resiliency assessment was completed to identify areas of risk and opportunity when planning and designing future terminal projects.

Refer to Appendix E1 for details on how the Terminals Capital Projects Plan was developed.

Maintaining, upgrading, and improving terminal infrastructure assets is essential for meeting the goals of the Plan. Generally, maintenance will be required on some terminal assets every five years. All terminal infrastructure upgrades will be designed and completed with a focus on modernization, standardization, and resiliency to promote a sustainable service.



Modernization

Investing in terminal improvement projects that address asset conditions and aging terminal infrastructure is critical for reducing the risk of service outages. Upgrading terminal infrastructure assets, such as adding vessel shore charging, will promote a sustainable and reliable service. Modernizing terminal key site components will improve system reliability and reduce repair and maintenance costs. By adding electric vehicle (EV) charging stations at key ports, the statewide EV charging infrastructure is expanded, enabling light-duty EV travel and providing confidence for EV travelers when commuting throughout the state for work, recreation, and tourism.[4]

Standardization

Standardizing terminal infrastructure will promote a sustainable service by increasing compatibility and consistency to support vessel interoperability and reducing the risk of affecting service. Standardization should be factored into future terminal improvement projects. A terminal design manual should be established and enforced to promote standardization and efficiency for future projects.

Resiliency

Factoring resiliency into terminal improvement projects will reduce the risk of service impacts from environmental factors and weather events. Terminal improvement projects should be developed with consideration to improving the resilience of terminals to issues such as sea level rise and erosion. Reducing environmental impact in infrastructure design and construction is needed to promote a sustainable and reliable service.

[4] Alaska Energy Authority, "State of Alaska Electric Vehicle Infrastructure Implementation Plan FY24"

KEY METRICS

Progress and success within this focus area will be monitored using the key metrics outlined below.

METRIC	DESCRIPTION	STATUS
Terminal metrics:		
Percentage of projects completed on time and within budget	Evaluate overall performance of completing terminal projects on time.	Setting up framework to enable tracking
Engineer's Estimate and Bid Evaluations	Evaluate the average engineer's estimate of construction costs over low bid.	Currently Tracking
Average Development Schedule	Track average project development time from project initiation to bid.	Currently Tracking
Capital Program Dollars Evaluation	Compare planned capital program dollars with delivered capital program dollars.	Currently Tracking
Design Costs Evaluation	Evaluate project design costs over construction costs at award.	Currently Tracking
Terminal Projects Final Project Costs Evaluation	Evaluate final project costs over project award costs.	Currently Tracking
Awards Versus Closeout Evaluation	Evaluate project awards versus project closeouts.	Currently Tracking
Construction Engineer Costs Evaluation	Evaluate construction engineer costs over contractor payments.	Currently Tracking
Vessel metrics:		
Overhaul Completion on Schedule	Track shipyard overhaul days versus planned days.	Currently Tracking
Overhaul Completion on Budget	Track shipyard costs versus planned costs.	Currently Tracking
Work Order Tracking	Track work orders in the preventative maintenance and shipyard programs for timeliness and completion.	Currently being tracked in Computerized Maintenance Management System (CMMS)
Shipyard Uncompleted Work	Track work included in the project specification but was not able to be completed due to shipyard specific issues.	Setting up framework to enable tracking

METRIC	DESCRIPTION	STATUS
Vessel Build Cost Estimates versus Bids	Evaluate the engineer's estimate compared to the bids received.	Currently Tracking
Vessel Build Award versus Actual Cost	Evaluate the project award amount versus the final project cost.	Currently Tracking
Average Age of the Fleet	Track the average age of the vessels.	Currently Tracking

IMPLEMENTATION OUTLOOK

Fleet

The Plan outlines a new vessel build schedule necessary to meet the 2045 service level targets. Across the Plan horizon, vessels currently owned by AMHS will also require regular maintenance and major overhauls. Figure 16 shows the impact of vessel replacements on the overall fleet age and number of port calls. Average fleet age is drastically reduced over the 20-year planning horizon and the decrease in cumulative fleet age correlates directly with an increase in port calls. This is due in large part to the increased reliability that comes with a younger fleet. Maintenance can be planned and performed on schedule, with less need for unplanned maintenance and service disruptions. This increase in port calls is also due to a more flexible fleet. Vessel and terminal interoperability will increase from standardization efforts, which can mitigate the impact of a vessel requiring unplanned out of revenue service time. The figure also shows the greatest degrees of change will occur in the mid-term. This action will rely heavily on efforts in the short-term, such as design and construction, to set things in motion.

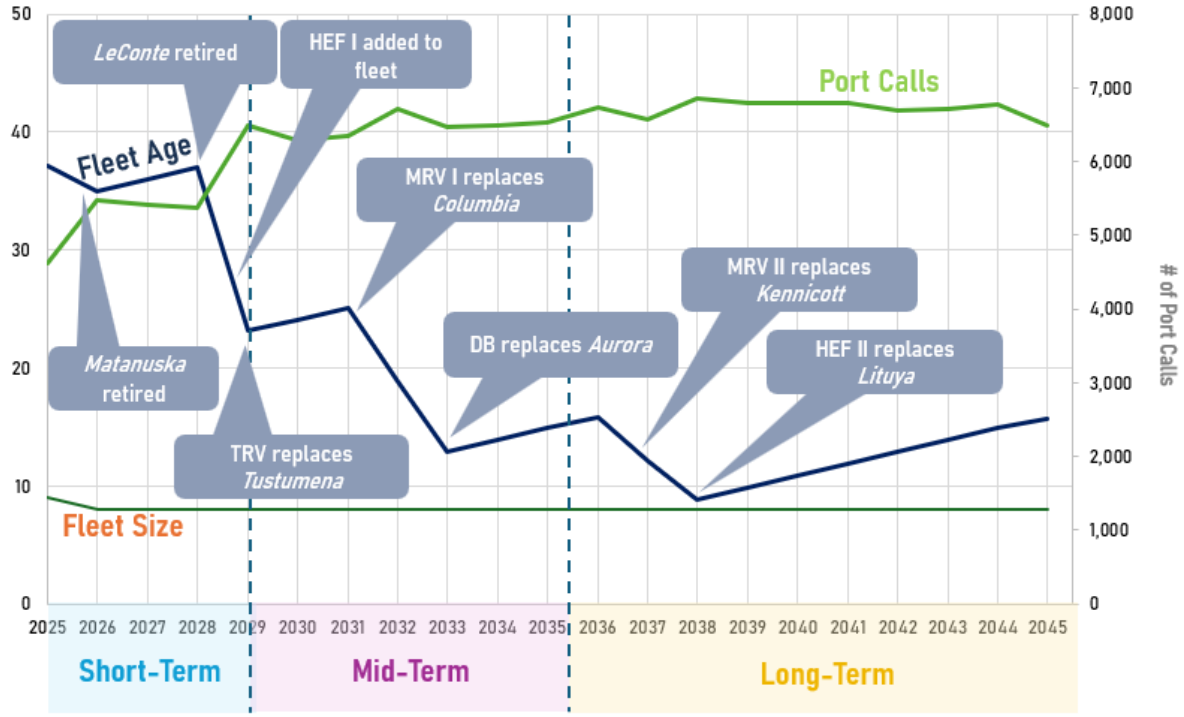


***Figure** 16: Average Fleet Age and Fleet Size vs Fleet Size*

Planning Horizons

The section below summarizes key vessel projects and strategies by planning horizon.

Ongoing

The following practices should be introduced in the short-term and carried out as continuous priorities going forward.

- Facilitate crew adherence with updated SMS policies and procedures.
- Practice routine preventative vessel maintenance.
- Improve ADA compliance through policy and in design of new vessels.
- Increase interoperability through standardization efforts.
- Conduct research into sustainable transportation measures to identify opportunities for AMHS to reduce its impact.

Short-Term (2025 – 2028)

A major focus in this phase is to initiate design and construction for vessels that are scheduled to be delivered in the mid-term. In these first four years, the *LeConte* and *Matanuska* are recommended for retirement, and a new High Efficiency ferry is scheduled to enter the fleet. Other necessary fleet modernization projects will take place to ensure compliance with USCG regulations, as well as for compatibility with the 2045 Service Scenario.

The average fleet age in this period is 36 years. In 2026, AMHS will have the opportunity to evaluate which type of vessel to build for the fourth new vessel.

STRATEGIES:

- Establish internal AMHS roles dedicated to capital asset management and deployment.
  - Shipyard Planner position for development of advanced shipyard specifications
  - Continue development of Management of Change committee

VESSEL PROJECTS UNDERWAY DURING THIS PERIOD:

- Alaska Class Ferry *Tazlina* Crew Quarters
- *Kennicott* generator replacement as required by regulatory requirements
- Three new vessels in design
  - TRV
  - MRV I
  - Dayboat

VESSEL PROJECTS COMPLETED:

- High Efficiency Ferry I

Mid-term (2029 – 2035)

Between 2029 and 2035, *Tustumena*, *Columbia*, and *Aurora* will be retired from service and replaced by three new vessels – TRV, MRV I, and a new Dayboat. The fleet size will remain the same, but the average fleet age will reduce to 19 years. Continued preventative maintenance will maintain a healthy fleet. In 2033, AMHS will have the opportunity to evaluate which type of vessel to build for the fifth new vessel.

VESSEL PROJECTS UNDERWAY DURING THIS PERIOD:

- Two new vessels in design
  - MRV II
  - High Efficiency Ferry II

VESSEL PROJECTS COMPLETED:

- TRV
- MRV I
- Dayboat

Long-term (2036 – 2045)

In the last years of the planning horizon, the final two vessel projects will be delivered. Two new vessels, MRV II and High Efficiency Ferry II, are scheduled to join the fleet with the intent of replacing *Kennicott* and *Lituya*, respectively. With this replacement, the overall average fleet age will be 13 years. With this younger fleet, maintenance requirements are anticipated to be routine and predictable.

SHORT-TERM
2025 – 2028

New Vessel Online:
High Efficiency Ferry I
NEW

Vessels Under Design:
TRV
MRV I
Dayboat

Vessels Replaced/Removed:
Matanuska
LeConte

Average Fleet Age: 36

MID-TERM
2029 – 2035

New Vessel Online:
TRV
MRV I
Dayboat

NEW
NEW
NEW

Vessels Under Design:
MRV II
High Efficiency Ferry II

Vessels Replaced/Removed:
Tustumena
Columbia
Aurora

Average Fleet Age: 19

LONG-TERM
2036 – 2045

New Vessel Online:
MRV II
High Efficiency Ferry II

NEW
NEW

Vessels Under Design:
None

Vessels Replaced/Removed:
Kennicott
Lituya

Average Fleet Age: 13

Note: Vessel silhouettes are representation only; new vessels may be different.

Terminals

Beginning work in the short- and mid-term planning horizons is critical to the completion of both preventative maintenance and terminal improvement projects. There are significant lead times associated with executing a major terminal improvement project. Example project completion durations are shown in Figure 17 below. For a major terminal improvement project, the Design & Planning and Permitting & Contracting phases can take roughly three years to complete. Construction durations vary by project scope but may take 1.5 years to complete. The Plan also outlines a schedule of terminal improvement projects across terminals used by AMHS to support standardization of mooring and other operational processes.

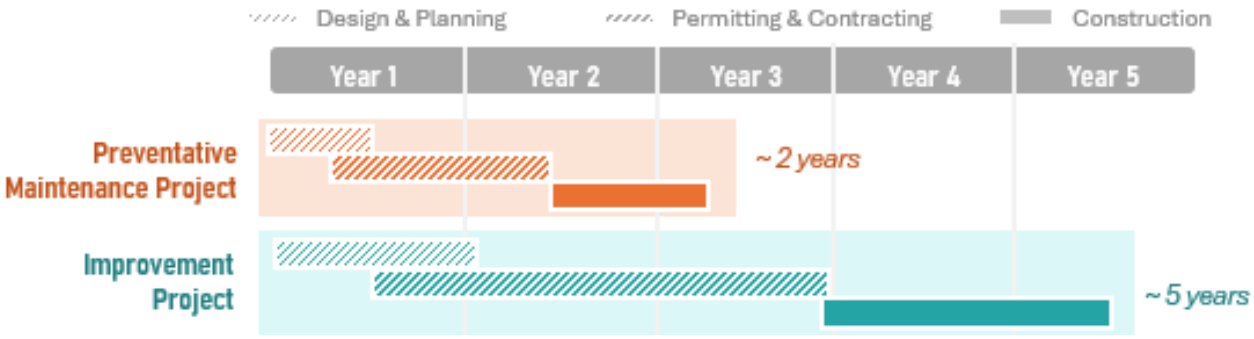


Figure 17: Example Timeline for Completion of Major Terminal Projects

The four types of terminal capital projects are described in greater detail below.

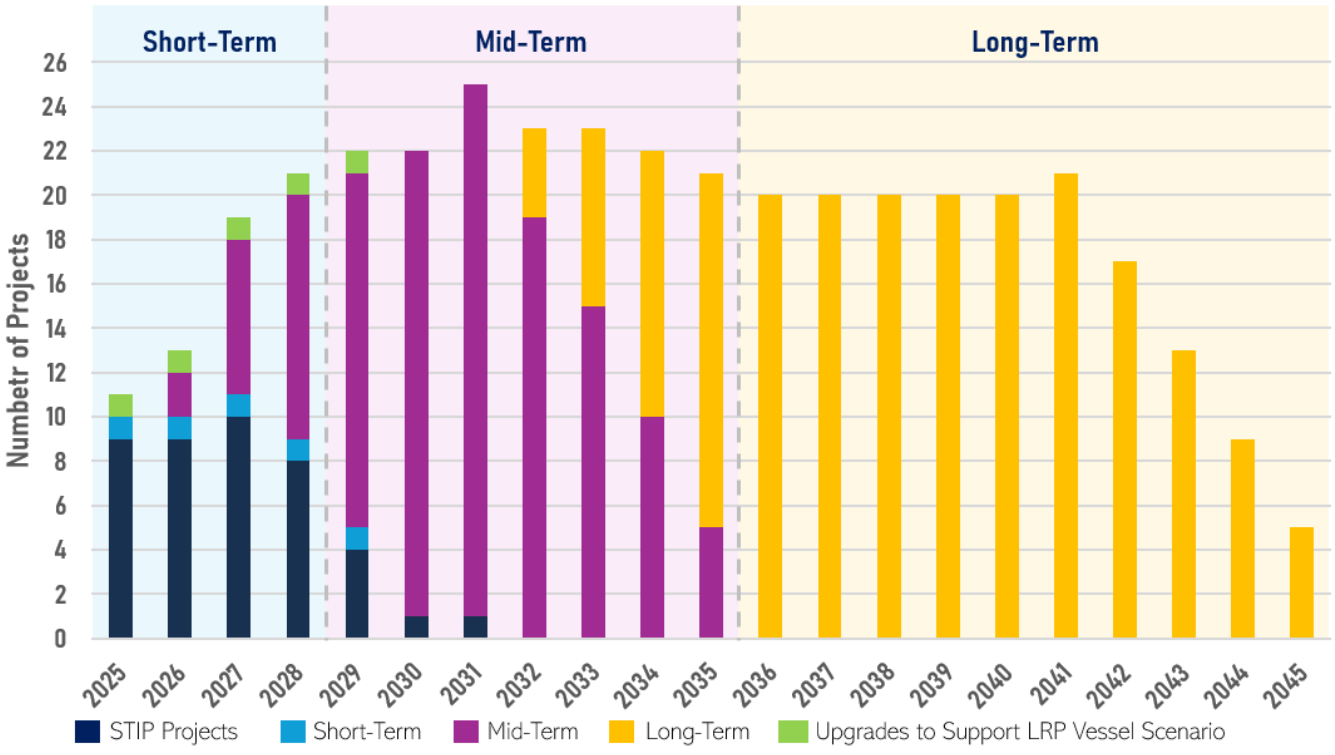
TERMINAL IMPROVEMENT PROJECTS - Replacement or major repair of existing terminal infrastructure, recommended based on current condition of existing terminal infrastructure.

TERMINAL MAINTENANCE PROJECTS - Routine maintenance of existing terminal infrastructure for the purpose of preserving and maintaining the service life of assets.

TERMINAL STIP PROJECTS - Terminal projects that are already in progress. These projects and associated funding are identified in the 2024-2027 STIP published by Alaska DOT&PF.

TERMINAL 2045 PLAN SCENARIO UPGRADE PROJECTS - Terminal infrastructure upgrades needed to support the 2045 Plan Service Scenario. These projects were identified based on the vessel service scenario in coordination with Alaska DOT&PF engineering staff.

Figure 18 shows the number of projects to be completed each year, which includes upgrades such as a dolphin installation in Haines to support the Plan Vessel Scenario. The dolphin will allow the High Efficiency Ferry to be at the dock along with another vessel. Note that this figure does not include the routine preventative maintenance projects. Maintenance projects will be carried out on a rolling basis, recommended to occur at each terminal every five years to ensure that routine upkeep is completed and that all facilities are modernized and standardized in accordance with the Plan.



NOTE: Routine preventative maintenance projects are not included in this figure. Terminal preventative maintenance projects are recommended to occur at every terminal at approximately 5-year intervals.

Figure 18: Terminals Major Project Schedule

Due to these long project lead times, projects set to be delivered in one timeframe (e.g., mid-term) may need to begin initial planning and design activities in the previous term (e.g. short-term) to ensure on-time completion of construction. For example, the Terminal Capital Projects Schedule in Figure 18 reflects some mid-term terminal improvement projects commencing in the short-term in order to accommodate these long lead time scheduling requirements.

Planning Horizons

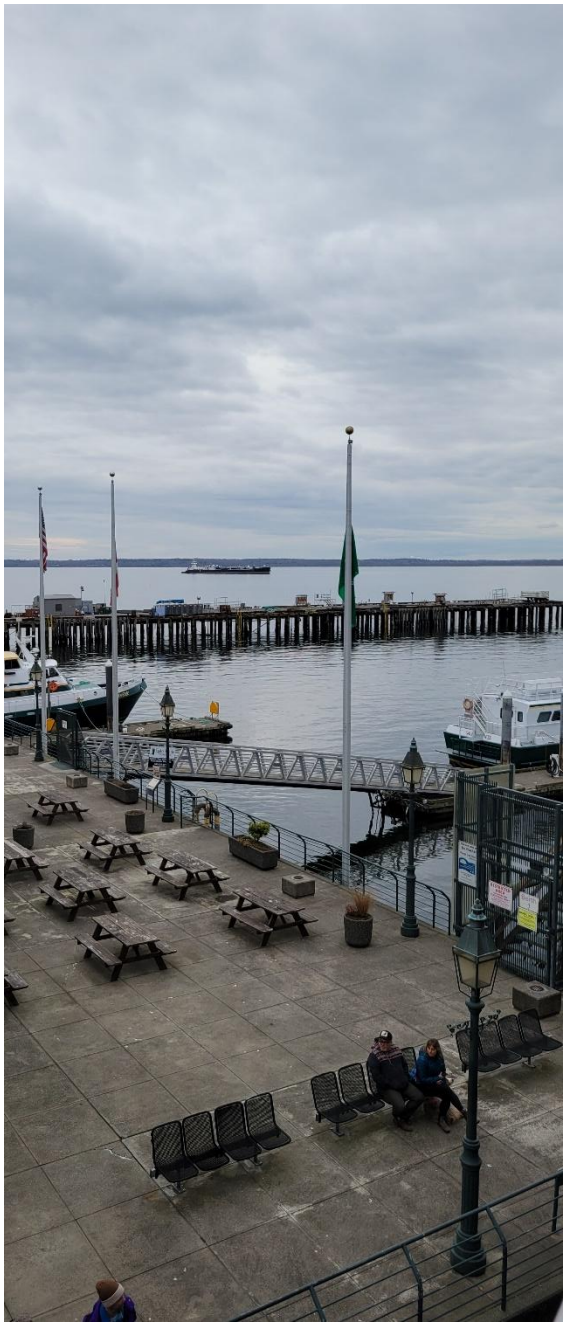
The section below summarizes key terminal projects and costs by planning horizon. For details on specific terminal improvement projects, please refer to Appendix E1.

Ongoing

Routine practices that are introduced as a part of the Plan should be adopted in the short-term phase and continued throughout all project phases. These actions are intended to guide improved terminal facility management and design best practices.

Keeping a regular schedule for maintenance and repairs will also ensure an annual line-item budget allocation for AMHS terminals.

- Routine preventative maintenance projects on a rolling five-year basis to provide a consistent budget.
- Terminal Condition Assessments and repair plans biennially with dedicated grant funding.
- Develop and adhere to a terminal design manual.
- Impart a progressive design build project approach to include design, permitting and construction into regional projects.
- Maintain an asset management system that tracks the condition of terminal infrastructure.
- Establish an internal role dedicated to capital asset management and deployment.
  - DOT&PF terminals asset management
- Continuation of the build out of the Cascade Point Ferry Terminal.



Short-Term (2025 – 2028)

Beginning work in the short-term planning horizons is critical to the completion of both preventative maintenance and terminal improvement projects. There are several STIP projects that support the terminals' ability to accept an Alaska Class Vessel, while one project includes the addition of a dolphin in Haines to support the Plan Vessel Scenario. Projects planned for the short-term are mapped in Figure 19. Note that smaller, routine preventative maintenance projects are not included and occur on a regular basis as needed.

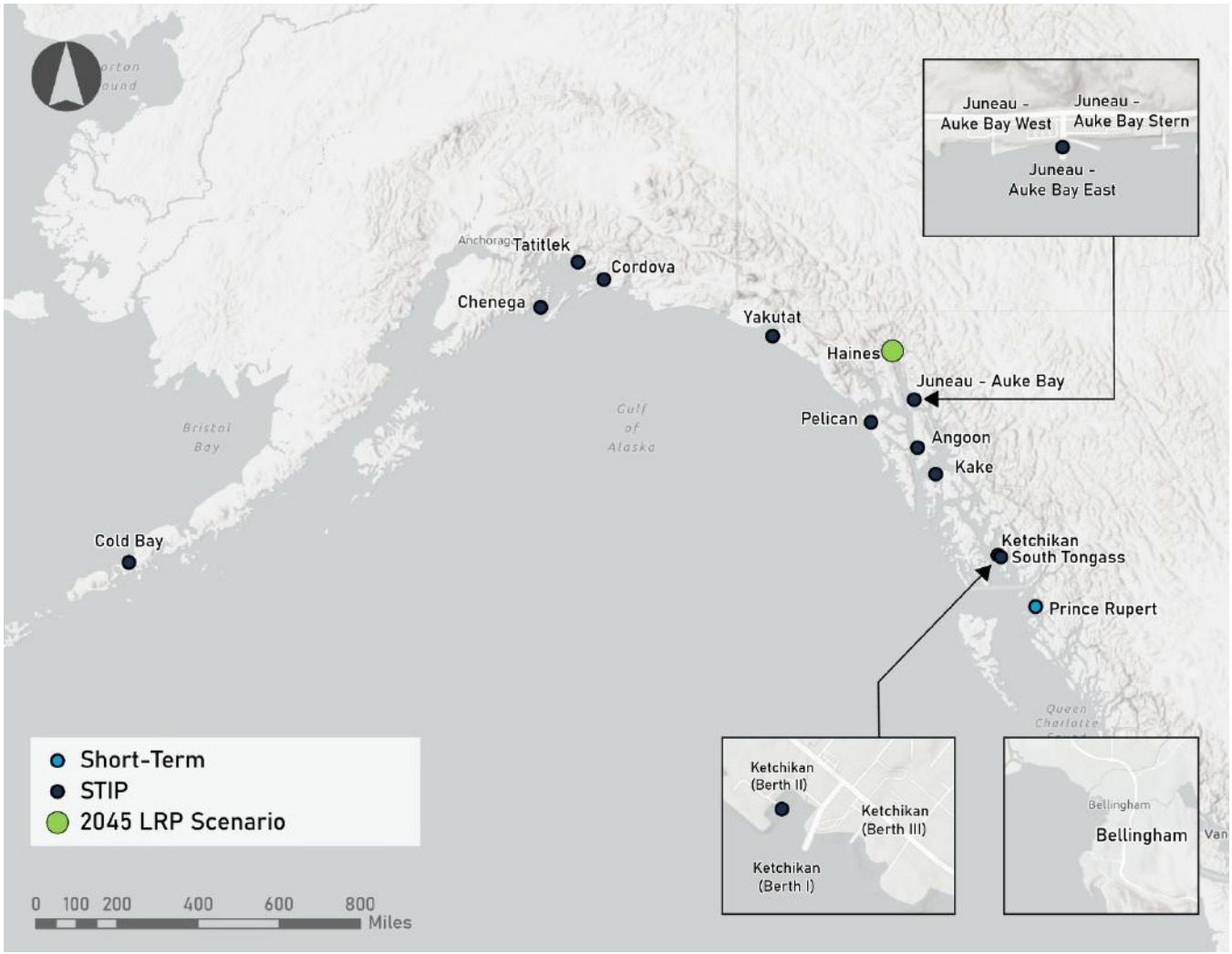


Figure 19: Short-Term (LRP) Terminal Projects

Mid-Term (2029 – 2035)

Mid-term projects are mapped in Figure 20 below. STIP and Plan scenario projects are continuations of projects started in the short-term and are now primarily in the construction stage. Note that smaller, routine preventative maintenance projects are not included and occur on a regular basis as needed.

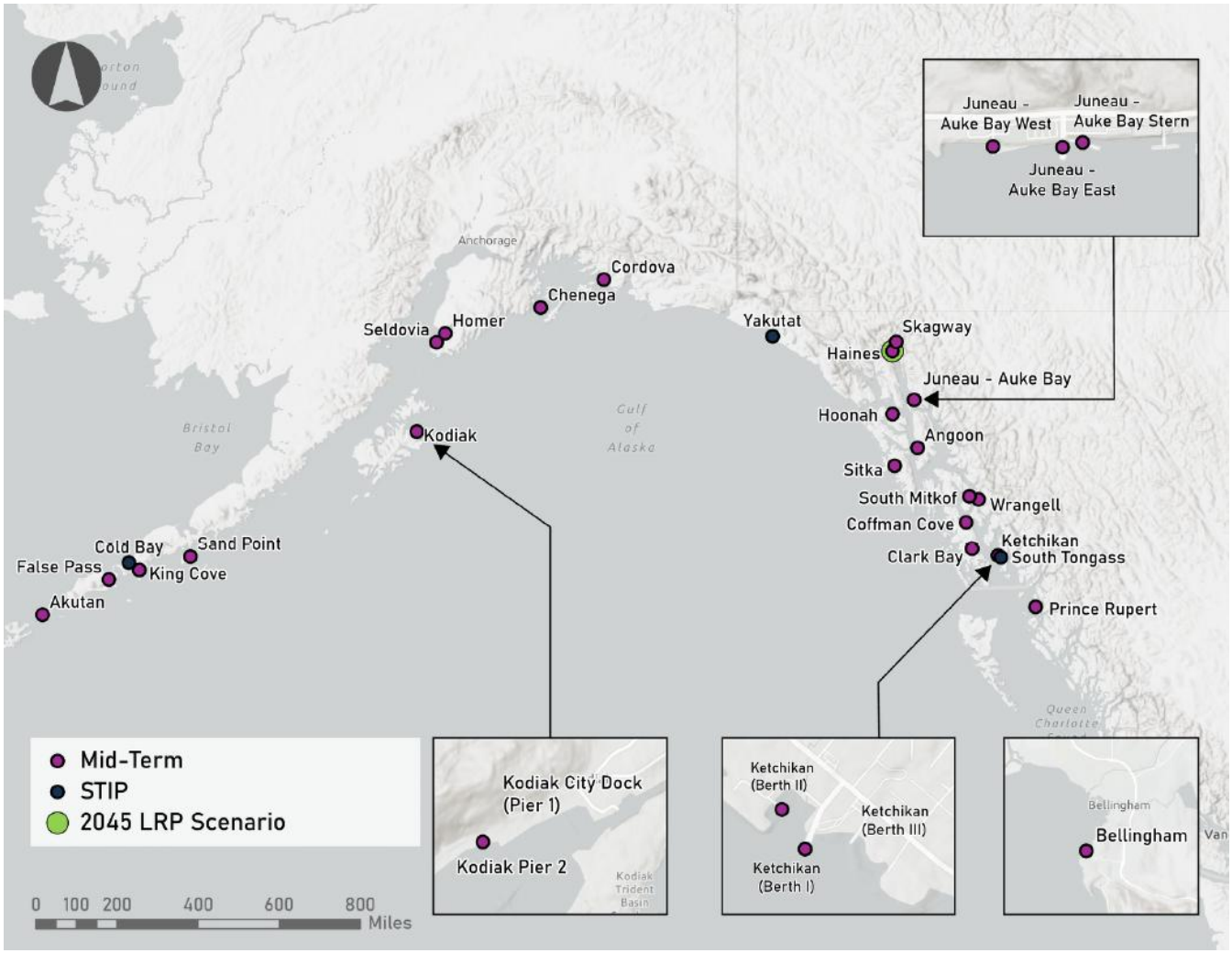


Figure 20: Mid-Term Plan (LRP) Terminals Projects

Long-Term (2036 – 2045)

Long-term projects are mapped in Figure 21 below. In the long-term, the STIP projects from the short-term and the Plan scenario project should be completed with terminal preservation projects for various terminal elements occurring in this period. Note that smaller, routine preventative maintenance projects are not included and occur on a regular basis as needed.

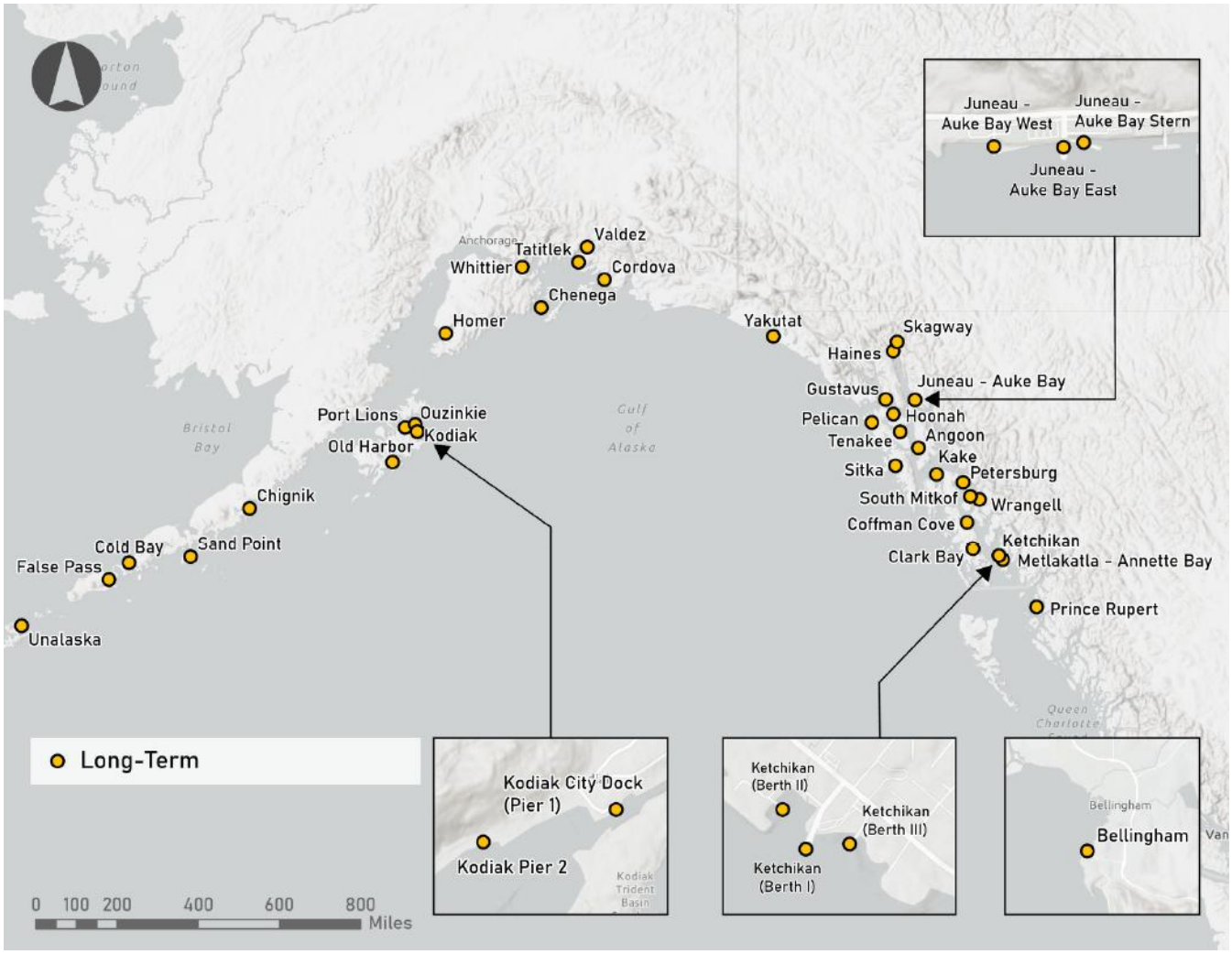


Figure 21: Long-Term Terminals Projects

Table 3 lists the location of terminal projects that are planned for each planning horizon. The table identified abbreviations for time periods with "S" identified for short-term, "M" for mid-term, "L" for long-term and "STIP" to identify a project that is planned and funded through the current Statewide Transportation Improvement Program. See Appendix E1 for a more detailed breakdown of what is included within specific components (in-water, uplands, and utilities).

Table 3: Terminal Projects

TERMINAL	IN-WATER	UPLANDS	UTILITIES
Akutan Village Dock	M	L	-
Angoon Ferry Terminal	STIP/M/L	M/L	-
Auke Bay East Stern Berth	M/L	L	L
Auke Bay Ferry Terminal East Berth	STIP/M/L	L	L
Auke Bay Ferry Terminal West Berth	M/L	L	L
Bellingham Ferry Terminal	M/L	M	M
Chenega Dock	STIP	L	-
Chignik City Dock	L	L	-

TERMINAL	IN-WATER	UPLANDS	UTILITIES
Clark Bay (Hollis) Ferry Terminal	M/L	L	M
Coffman Cove Ferry Terminal	M/L	L	M/L
Cold Bay Dock	STIP/L	M	M
Cordova Ferry Terminal	STIP/L	L	L
Dutch Harbor City Dock (Unalaska)	L	L	L
False Pass Dock	M/L	L	L
Gustavus Dock	L	L	L
Haines Ferry Terminal	M/L	L	L
Homer Dock Bridge	L	M/L	L
Hoonah Ferry Terminal	M/L	L	L
Kake Ferry Terminal	STIP/L	L	L
Ketchikan Ferry Terminal (Berth 1)	M/L	M/L	L
Ketchikan Ferry Terminal South (Berth 2)	STIP/M/L	L	STIP/L
Ketchikan Transfer Facility (Berth 3)	L	L	L
King Cove City Dock	M/L	M	-
Kodiak City Dock (Pier 1)	L	L	L
Kodiak Pier 2	L	M	L
Metlakatla (Annette Bay) Ferry Terminal	L	L	L
Old Harbor City Dock	L	L	L
Ouzinkie	L	L	-
Pelican Ferry Terminal	STIP	-	-
Petersburg Ferry Terminal	L	L	L
Prince Rupert Ferry Terminal*	S/M/L	M	M
Port Lions Village Dock	L	L	L
Sand Point City Dock II	L	M	L
Seldovia City Dock	M	M	M
Sitka Ferry Terminal	M/L	L	L
Skagway Ferry Terminal	M/L	L	L
South Mitkof (Petersburg) Ferry Terminal	L	L	M/L
Tatitlek Ferry Terminal	STIP/L	-	-
Tenakee City Dock	L	L	L
Valdez Ferry Terminal	L	L	L
Whittier Ferry Terminal	L	L	L
Wrangell Ferry Terminal	M/L	L	L
Yakutat City Dock	STIP/L	-	L

S = Project started in short-term, M = Project started in mid-term, L = Project started in long-term

*Both Prince Rupert, Canada, and Hyder, Alaska are being evaluated for port feasibility.

WORKFORCE

FOCUS AREA 3: CONTINUE TO BUILD AND SUPPORT A RELIABLE WORKFORCE

A properly sized workforce is key to preventing unforeseen cancellations and maintaining system service reliability. Outside of AMHS, many other areas of DOT&PF are needed to keep the system running smoothly from communications, finance, terminal engineering, labor relations, and more.

GOALS AND STRATEGIES

With the focus on building and maintaining the workforce needed to provide the 2045 service envisioned by the Plan, the following goals have been identified for Focus Area 3 (Workforce):

A. Invest in the growth and development of Alaska's maritime workforce.
B. Support increased recruitment efforts.
C. Increase retention by exploring strategies to support current AMHS employees.
D. Pursue training and education partnerships to support internal career growth.
E. Improve internal organization structures to support hiring, staffing, and data collection.

Proposed strategies to meet these goals and performance metrics to track goal progress are outlined in the following sections.

Many of the outlined workforce strategies have already begun. AMHS has initiated several short-term workforce enhancements, including the hiring of a Recruitment Coordinator, overhauling the recruitment webpage, and expanding career outreach efforts through innovative social media campaigns. The introduction of career pathways materials, targeted at students and potential candidates, showcases clear advancement opportunities, making AMHS an attractive long-term employer. Agreements with Alaskan communities have further diversified the workforce pipeline, ensuring local engagement and representation in the maritime industry.

The timing of when additional strategies and activities are implemented heavily depends on how workforce conditions evolve. As a result, workforce strategies are not organized for the short-, mid-, and long-term. Instead, existing efforts will continue, and new programs will be implemented to supplement or replace existing programs based on evolving conditions.

Goal 3A: Invest in the growth and development of Alaska's maritime workforce

AMHS aims to develop and grow the future maritime workforce in Alaska, creating a pipeline of Alaskan students entering AMHS with the capability to advance through the ranks. By attracting local candidates and providing the opportunity for advancement within the system, AMHS can draw on Alaska residents to fill licensed positions and contribute to the local economy of small coastal communities. Overall, these efforts will support the long-term stability of the AMHS workforce, helping prevent future workforce shortages.

CURRENT PROGRESS: AMHS has already begun implementing these strategies with key successes including increased crew attendance at recent career fairs and partnerships with tribal organizations and Women Offshore, a nonprofit organization that supports women's careers in the maritime industry, to further develop a diverse pool of potential Alaska workers through Memorandums of Understanding (MOUs) and other mechanisms.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
3A.1 – Increase scholarship opportunities.	▪ Research and apply for funding for scholarships to sponsor Alaska school graduates' attendance in maritime technical schools and maritime academies.
3A.2 – Develop a pipeline of Alaskan students entering the Alaska Marine Highway System with the capability to advance throughout rankings.	**Alaska School Recruitment** ▪ Increase AMHS presence at school career fairs. ▪ Regularly coordinate with school career counselors. ▪ Partner with educational institutions within Alaska to develop Maritime Career Industry specific educational tracks. **Maritime Academy Recruitment** ▪ Increase AMHS participation in recruitment activities at maritime academies. **Partnerships** ▪ Partner with diverse organization types to further develop a pipeline of potential workers.
3A.3 – Conduct youth engagement and outreach by providing onboard educational opportunities.	▪ Organize vessel tour days to introduce youth to maritime careers.
3A.4 – Measure and improve employee satisfaction.	▪ Conduct an annual employee satisfaction survey to develop metrics for future strategies and initiatives.

Goal 3B: Support increased recruitment efforts

This goal focuses on increasing hiring by expanding job advertising and providing benefits to entice workers to join AMHS. The Plan prioritizes addressing workforce shortages by building a larger candidate pool within Alaska. Additionally, removing licensing and training progression barriers that currently exist for internal candidates will help fill current gaps, particularly for more advanced positions. These measures will reinforce the current workforce, reducing the need for crews to be "held over" due to insufficient crewing reserves.

CURRENT PROGRESS: In recent years, AMHS has made significant strides in modernizing its recruitment efforts. A dedicated AMHS Recruitment Coordinator has been hired, drastically improving the hiring process for both applicants and hiring managers. This role has streamlined workflows, reduced time-to-hire, and enhanced the overall candidate experience. Time-to-hire refers to the total duration it takes from when a job opening is posted until a candidate accepts the job offer. Additionally, AMHS has created agreements with Alaska communities to foster local workforce development, providing a direct pipeline for residents to explore career opportunities within the maritime industry.

To further support recruitment efforts, the AMHS recruitment webpage has been overhauled, and offers enhanced accessibility and detailed resources for prospective applicants. The addition of career pathways and visually engaging materials for students and candidates demonstrates AMHS' commitment to workforce growth and advancement opportunities.

Additionally, as part of Strategy 3B.1, AMHS has ramped up its social media presence across all platforms, ensuring that a broader audience is informed of employment opportunities. These campaigns highlight available positions, showcase career pathways, and present success stories, strengthening AMHS' position as a leading employer in Alaska's maritime sector.

Furthermore, AMHS has established a referral bonus program as a part of Strategy 3B.3.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
3B.1 – Grow and diversify methods of job advertisement.	▪ Utilize online and social media advertising targeted for specific ports of call. ▪ Increase community social media participation for recruitment advertising. ▪ Advertise job opportunities in coastal Alaska printed publications.
3B.2 – Explore additional compensation and benefits.	▪ Provide payment for in-state travel costs. ▪ Invest in programs to attract and retain applicants from rural Alaska communities, such as Alaska Hire. ▪ Create a Seattle travel hub wherein employee travel for work is compensated from Seattle. ▪ Explore changes to employee compensation structure.
3B.3 – Provide referral bonuses to existing employees to promote hiring.	▪ Set up and expand an employee referral bonus program (completed). ▪ Evaluate the continued use of an IBU hiring bonus.
3B.4 – Develop enhanced in-state and out-of-state recruitment materials with a strategic messaging platform to promote the benefits of living in small Alaskan communities and recreation opportunities in the surrounding areas.	▪ Showcase the natural beauty of Alaska and the community benefits of living in the state through "day-in-the-life" promotions. ▪ Highlight the regular two-weeks-on and two-weeks-off rotation, which allows more home time compared to the months-long rotations used by commercial industry standards.

Goal 3C: Explore retention strategies to support current employees

Long-term workforce reliability also depends on reducing turnover and supporting existing employees. However, challenges inherent to the system can make crew retention difficult. AMHS is striving to address these challenges and improve retention by focusing on employee satisfaction, recognition, and support.

CURRENT PROGRESS: AMHS has made early progress toward this goal, particularly with Strategy 3C.3, with the development and publication of the 'Pathways to Progression' framework shown in Figure 22 and published in the AMHS Career Pathways Guidebook.[5]

Alaska Hire

AMHS is currently expanding a program called ***Alaska Hire*** which supports Goals 3B and 3C and is aimed at providing incentives to attract and retain applicants from rural Alaskan communities. A key component of ***Alaska Hire*** will be a paid travel program for in-state travel that will help offset the high costs some current and potential future employees face in getting to work.

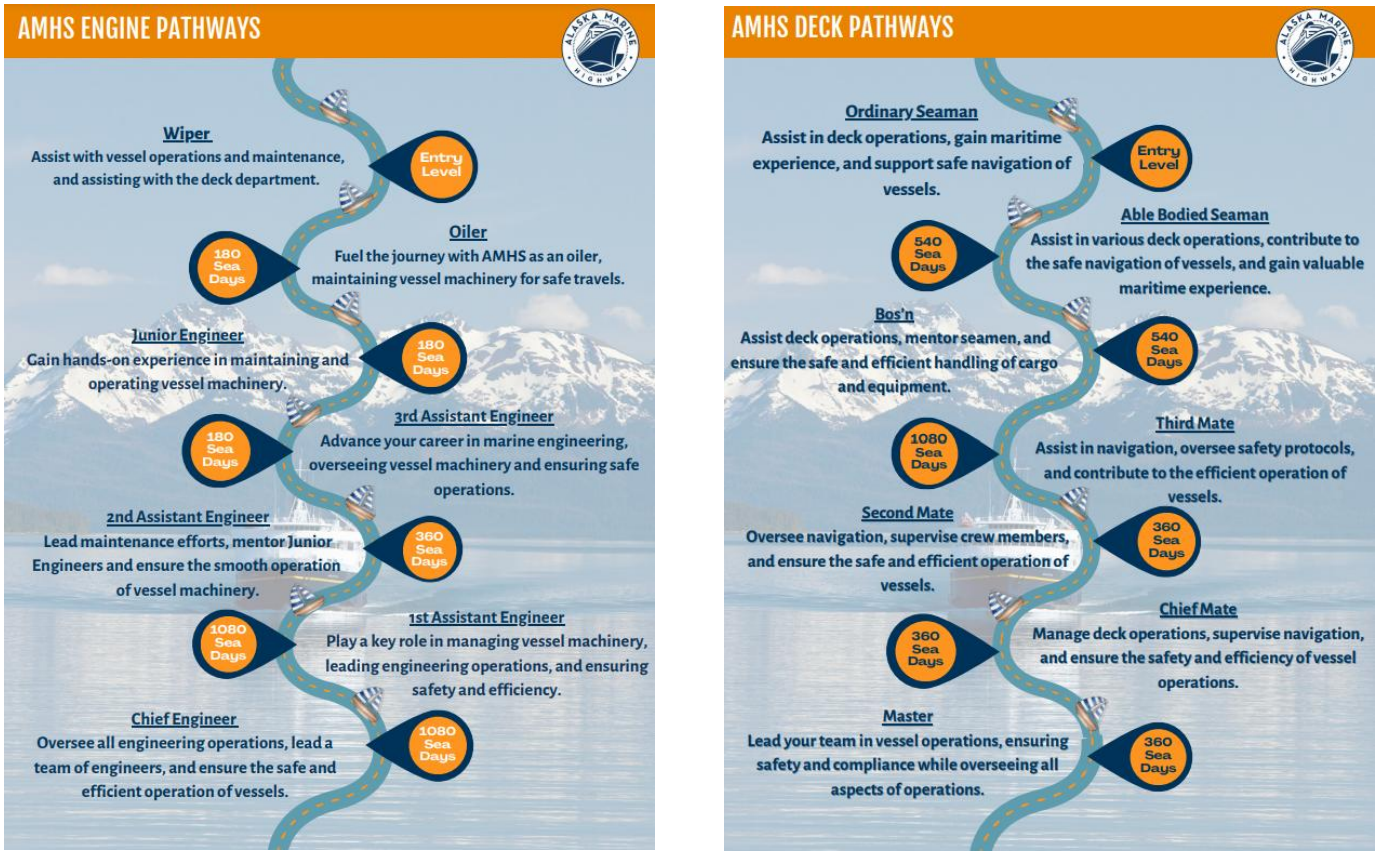


Figure 22: AMHS Career Pathways

[5] AMHS, "Career Pathways Guidebook." https://www.alaska.edu/fsmi/groups/mosi/Career%20Pathways%20-%20AMHS.pdf. Accessed February 2025.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
3C.1 – Continue to maintain crew positions in the off-season.	▪ Address staffing needs in dispatch and fleet operations to determine a scheduling configuration that maximizes worker satisfaction and service efficiency.
3C.2 – Emphasize employee recognition and support.	▪ Gather employee feedback to inform crew relations policies and practices. ▪ Cultivate a positive workspace culture to attract potential employees and increase satisfaction for current employees. ▪ Maintain increased communications through collaborative, multi-department meetings and leadership vessel visits. ▪ Invite employees to participate in new-build vessel advisory committees.
3C.3 – Support advancement opportunities.	▪ Expand the Wiper-to-Oiler Program which allows entry-level workers to start directly in the deck and engineering departments, increasing retention by offering more direct career paths. ▪ Create and guide employees through a clear "Pathways to Progression" framework illustrating licensed, skilled positions within AMHS and the requirements for prospective and current employees to advance in their careers.
3C.4 – Provide compensation comparable to competing maritime market.	▪ Explore changes to employee compensation structure to ensure market competitiveness. ▪ Provide payment for in-state travel costs.

Goal 3D: Pursue training and education partnerships to support internal career growth

A strong training program acts not only as a draw to prospective applicants but also ensures that current employees have the resources to progress to more experienced roles, which are historically difficult positions to fill. It is important to note that many of the efforts initiated today will be progressively more fruitful in upcoming years as greater numbers of crew members progress through the system and obtain higher certification and licensure. Through this goal, AMHS invests in its employees and supports their long-term career growth and success.

CURRENT PROGRESS: AMHS has numerous partnerships with diverse organizations and is working to leverage these partnerships to further develop training offerings.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
3D.1 – Provide additional opportunities for training programs to support internal career progression.	▪ Continue and expand on employer-paid training opportunities to provide advancement tracks within AMHS. ▪ Grow partnerships with training institutions.
3D.2 – Invest in employee safety training.	▪ Provide opportunity for crew members to attend a yearly crew safety conference.
3D.3 – Pursue additional funding to provide mariner wages and/or tuition reimbursement for applicable courses or time away for testing.	▪ Develop a funding plan and strategy to offer programs to bridge gaps that exist for license and career progression within AMHS. ▪ Grow partnerships with entities and education institutes for third-party scholarship options.

Goal 3E: Improve internal organization structures and systems to support hiring, staffing, and data collection

The success of the workforce strategies previously identified in the Plan will require dedication of internal resources. Through this goal, AMHS focuses on increasing organizational capacity to meet workforce needs by updating staffing structures and streamlining internal processes.

CURRENT PROGRESS: AMHS has already seen success in this goal, particularly in Strategy 3E.1, as AMHS has already created and filled a Recruitment Coordinator position dedicated to overseeing recruitment efforts.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
3E.1 – Add dedicated positions and staff committees to manage workforce items.	▪ Add an AMHS Recruitment Coordinator position (completed). ▪ Create a management of change committee. ▪ Create an internal quality steering committee (completed).
3E.2 – Streamline internal processes via updated procedures.	▪ Evaluate systematic approach to onboarding and identify opportunities for increased efficiency and defined standards of efficacy.

3E.3 – Augment staff to support departments when understaffed, so not to delay service or projects.	▪ Hire or contract additional staff as needed.

KEY METRICS

Tracking success for this focus area includes monitoring a few key metrics to understand the status of the workforce. These metrics include:

METRIC	DESCRIPTION	STATUS
Staffing Levels	Evaluate staffing levels by position and identify positions with shortages or that are at risk of experiencing shortages.	Currently tracked on a weekly basis
Employee Satisfaction	Evaluate employee satisfaction through employee surveys, collaborative meetings and leadership vessel visits.	In development
Hires and Separations	Evaluate the number of hires and separations and whether the system's crew is growing or shrinking.	Currently tracked – reports from Director are provided quarterly
Recruitment Impact	The number of hires attributed to new tools, recruitment coordinator, community, and academy visits.	In development
Digital Engagement	Social media campaign performance, including impressions, clicks, and applications generated.	Currently tracked
Web Traffic	Conversion rates and unique visitors to the updated recruitment webpage.	Currently tracked
Community Recruitment Impact	Development and participation in workforce agreements in AMHS served communities.	In development
Ad Click Rates	Track the number of times someone clicks on an ad and submits an application.	Currently tracked

IMPLEMENTATION OUTLOOK

The implementation of workforce improvements will be more consistent and sustained throughout the planning horizon as compared to the other Plan focus areas. In the short-term, efforts to improve recruitment and retentions will continue to be prioritized. Through the mid- and long-term periods, as

well as beyond, these efforts will be continued, with the hope that crewing levels will rise gradually with these improved practices.

As of January 30, 2025, AMHS has 484 crew members. Figure 23 shows the number of crew required to operate the fleet each Plan year, illustrating how fleet improvements will result in a reduction in the number of crew required to operate the fleet. The amount of projected crew decreases when the new mainliners enter service because the new mainliners will be smaller than the existing mainliners and thus will require fewer crew to operate. Refer to Appendix C3 for crew requirements by vessel type. The smaller vessels will be optimized for the route and the capacity needs of AMHS.

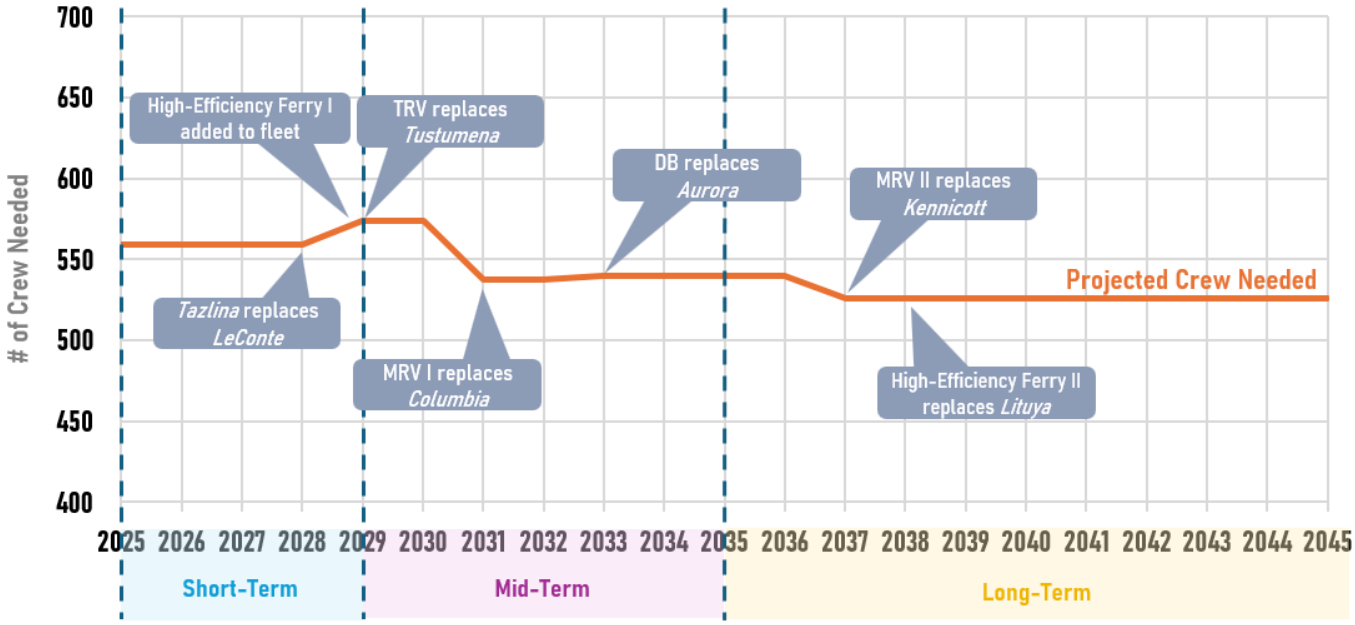


Figure 23: Projected Crew Needs

Planning Horizons

The section below summarizes key projects by planning horizon.

Short-Term (2025 – 2028)

Efforts to recruit and retain staff and crew cannot wait. With the knowledge that recruitment strategies often start with younger generations of prospective maritime employees, implementing these strategies in the short-term will set AMHS up with a growing workforce who are set to join when they are of age to begin their career.

PROJECTS UNDERWAY DURING THIS PERIOD:

- Alaska Hire: paying for in-state travel
- Alaska School Recruitment
- Community and tribal partnerships
- Continuing to leverage all existing resources to further recruitment
- Organizational Partners: Member of Women Offshore

Mid-Term (2029 – 2035) and **Long-Term** (2036 – 2045)

Continued and expanded efforts in the mid- and long-term will promote a steady pool of interested and qualified crew members.

FINANCIAL

FOCUS AREA 4: PROMOTE FINANCIAL EFFICIENCY AND SUSTAINABILITY

AMHS operations and capital projects require appropriation of state and federal funds. Accessing timely financial information and managing service revenue generation will drive informed decisions and make best use of public resources.

GOALS AND STRATEGIES

The following goals have been identified for Focus Area 4 (Financial):

A. Develop funding and revenue generation strategies to promote system sustainability.
B. Promote responsible management of system finances and resources.
C. Make strategic financial improvements to promote operational excellence.

Proposed strategies to meet these goals and performance metrics to track goal progress are outlined in the following sections.

Goal 4A: Develop revenue generating and funding strategies to promote system sustainability

Maximizing federal funding opportunities and evaluating revenue generation to appropriately manage the level of state subsidy.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
4A.1 – Create a dedicated team to raise capital needed for the extensive build program by applying for grants and exploring other funding opportunities.	▪ Identify required staff tasks and full-time equivalency requirement. ▪ Evaluate alignment of full-time equivalency requirement with current department capacity.
4A.2 – Improve monitoring, tracking, and management of grant funding opportunities.	▪ Identify priority federal programs for enhanced monitoring. ▪ Establish routine communication procedures between AMHS leadership, DOT&PF, and Alaska Office of Infrastructure to leverage current tracking mechanisms.

STRATEGIES	ACTIONS
4A.3 – Prioritize capital projects when allocating AMHS revenue to generate federal toll credits to match new federal grant programs.	▪ Continue to evaluate net benefit of generating federal toll credits to the State of Alaska based on operating and capital appropriation requirements.
4A.4 – Set a standard fare policy and structure to align with farebox recovery targets.	▪ Update the *Alaska Marine Highway System Tarriff Analysis*. ▪ Conduct a fare study and develop a fare policy identifying regular farebox recovery and expenditure benchmarks. ▪ Develop an annual fare adjustment schedule to meet customer travel and future trip planning needs.
4A.5 – Develop financial reporting tools to validate pricing of passenger services currently offered.	▪ Identify key financial reporting gaps and desired report frequency. ▪ Develop financial reports to track service revenue and associated expenditures.
4A.6 – Explore opportunities for external partnerships, such as sharing dock infrastructure and/or funding partnerships.	▪ Identify partners at docks of high interest. ▪ Evaluate dock infrastructure that may complement the current AMHS ports and infrastructure. ▪ Engage current infrastructure owners or project partners in memorandums of understanding specific to infrastructure improvement funding or dock use.
4A.7 – Establish passive revenue generation strategies.	▪ Evaluate costs and financial feasibility associated with passenger wireless internet sales program. ▪ Complete a yearly cost/price analysis of food and beverages offered on board. ▪ Develop financial feasibility assessments of potential revenue streams (such as expanded bar/restaurant service, merchandise sales, and onboard or in-terminal advertising) to ensure new revenue-generating products or services generate positive net income.

Goal 4B: Ensure responsible management of system finances and resources

Fiscal efficiency and responsibility are crucial to maximizing the amount of service that can be provided and ensuring service longevity.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
4B.1 – Pursue the fleet plan as outlined in the Plan, including capital and major maintenance needs to avoid costly, unplanned repairs.	▪ Review the Plan fleet recommendations annually to update capital and major maintenance needs based on changes in vessel condition.
4B.2 – Update the Plan and associated funding outlook every five years.	▪ Create an adaptive planning process that is regularly updated in response to changing external factors. By updating the Plan regularly, AMHS can effectively adjust, track progress, and meet its goals. ▪ Provide updated revenue and cost guidance to the Alaska DOT&PF and legislators to set budget and subsidy expectations in the near term.
4B.3 – Provide annual updates on Plan progress.	• Create a rolling three-year short-term plan that is updated annually to track financial and management progress and report updates on an annual basis.
4B.4 – Identify strategic hires and prioritize filling critical positions.	• Evaluate critical job functions related to system management, including financial analysis, project management, and procurement officers. • Evaluate the alignment of current full-time equivalency and capacity available to meet critical job functions and the projects proposed in this Plan.

Goal 4C: Make strategic financial improvements to promote operational excellence

Making smart improvements to resource management and allocation will improve the system as a whole. Adding strategic positions and improving software will improve efficiency for staff and promote a more positive experience for the customer.

Strategies for achieving this goal include:

STRATEGIES	ACTIONS
4C.1 – Expand financial reporting and evaluation capacity within AMHS.	• Explore options to add new positions and enhance tools for reporting time-sensitive financial data to help AMHS leadership better assess the system's financial position. • Evaluate feasibility of establishing vessel or route-based key performance indicators such as farebox recovery rates.
4C.2 – Invest in software improvements for crew dispatch and customer reservations.	• Evaluate crew dispatch and customer reservation software options based on system requirements. • Create budget for IT support, software licensing, staff training, and other implementation costs. • Schedule software transition.

CAPITAL INVESTMENTS

Capital investments for the Plan were estimated and encompass the vessel replacement, capitalized vessel overhaul/maintenance, terminal improvement projects, and capitalized terminal maintenance work over the 20-year planning horizon.[6] This amounts to approximately $3.07 billion in capital investment over the next 20 years. This represents an increase in investment when compared to the nearly $562 million in capital expenditures from the division over the last 10 years, which consisted largely of terminal and dock improvements, vessel replacement, maintenance overhauls, and vessel condition surveys.

The capital investment needs are based on the fleet and terminal investments identified for each planning horizon in the previous sections. To support investments in the short-term, approximately $926 million will be needed over the next four years. The largest capital investment amounts are identified in the mid-term at approximately $1.2 billion, and approximately $913 million are needed in the long-term planning horizon, which spans a nearly 10-year period. The cumulative level of investment is shown in Table 4. All Plan costs are represented in 2024 dollars for simplicity. Inflation is expected to occur within the planning horizon and capital requirement expectations should be updated regularly for annual budget purposes.

[6] All costs presented in the Plan are estimated in 2024 dollars, and do not account for future inflation

Table 4: Summary of Plan Capital Investment Requirements (in 2024 dollars)

PLAN PHASE	VESSEL CAPITAL REQUIREMENT ($*millions*)	TERMINAL CAPITAL REQUIREMENT ($*millions*)	TOTAL CAPITAL REQUIREMENT ($*millions*)
Cumulative Short-Term Costs (2025-2028)	$751.9	$173.6	$925.6
2025	*$95.0*	*$17.0*	*$112.0*
2026	*$131.8*	*$34.8*	*$166.6*
2027	*$273.8*	*$40.8*	*$314.5*
2028	*$251.3*	*$81.1*	*$332.4*
Cumulative Mid-Term Costs (2029-2035)	$859.5	$373.3	$1,232.8
Cumulative Long-Term Costs (2036-2045)	$620.0	$292.6	$921.6
TOTAL PLAN CAPITAL REQUIREMENT	**$2,231.4**	**$839.5**	**$3,071.0**

Vessel projects account for the largest capital need in the short-term period, when one vessel is added to the fleet, three vessel replacements are in design or construction, and vessel maintenance and overhaul projects are completed. Terminal capital investments in the short-term include one improvement project, eleven STIP projects and terminal maintenance. While vessel maintenance and overhauls are dependent on the age of the vessel and its size, terminal maintenance needs can be assumed as an average of $6.2 million per year spread across the AMHS terminal assets and dependent on condition. Maintenance costs continue for both terminals and vessels in the mid-and long-term. Additional capital expenditure needs for vessel replacement and terminal projects continue in the mid-term, although at lower annual levels than in the short-term with continued terminal projects and just two vessel replacement projects in design and construction.

Figure 24 shows the yearly capital requirements for vessels and terminals.

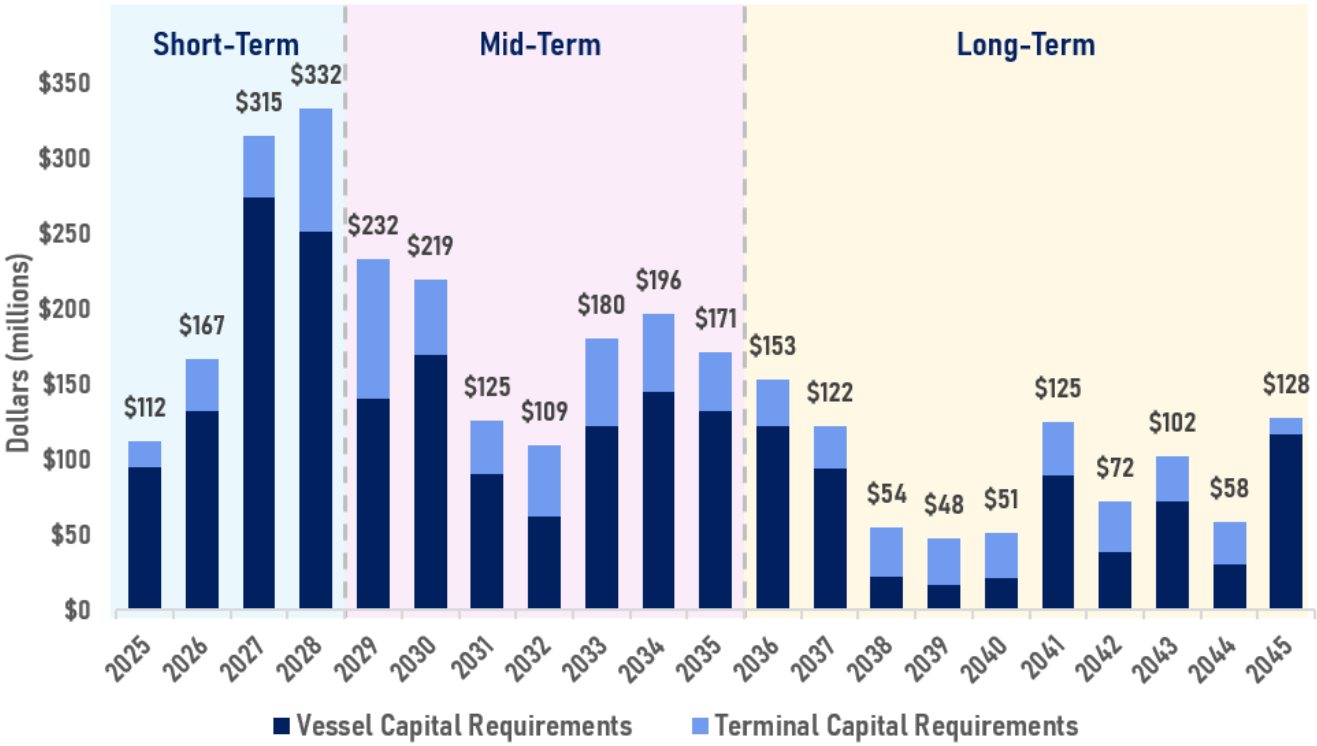


Figure 24: Plan Capital Expenditures Outlay (in 2024 dollars)

OPERATING BUDGET

To support the Plan's 2045 service scenario, funding appropriation will be needed to augment the projected service revenue to meet estimated operating expenditures. The following sections describe projected operating expenditures, service revenue, and required appropriation associated with the 2045 Service Scenario proposed in the Plan. Refer to Appendix G1 for additional information related to funding opportunities and potential revenue generating strategies.

Expenditures

AMHS operating expenditures are expected to increase throughout the planning horizon as service levels increase, and vessels are added to the AMHS fleet. Table 5 illustrates average annual operating expenditures by category for the short-, mid-, and long-term phases of the Plan.

The categories shown are the typical categories that are included in the AMHS budget that is submitted to the State of Alaska Legislature. Marine Vessel Operations include all costs associated with operating the vessels except for fuel. Marine Engineering is the department that directly designs and/or manages the design efforts for new vessels and refurbishments and repairs to existing vessels. The ferry terminals are managed by the Marine Shore Operations department. Vessel Operations Management are the shoreside employees that support vessel operations.

Costs associated with marine engineering, reservations and marketing, marine shore operations, and other AMHS support services are held constant throughout the planning time horizon, while marine vessel operations, fuel and overhaul costs change with the changing fleet make-up and service levels provided.

Table 5: Plan Operating Expenditures through 2045 (in 2024 dollars*)

BUDGET CATEGORY	SHORT-TERM (2025-2028)	MID-TERM (2029-2035)	LONG-TERM (2036-2045)
Marine Vessel Operations	$125.5 M	$134.9 M	$159.0 M
Marine Vessel Fuel	$21.7 M	$22.4 M	$22.7 M
Marine Engineering	$3.3 M	$3.3 M	$3.3 M
Reservations and Marketing	$1.5 M	$1.6 M	$1.6 M
Marine Shore Operations	$10.0 M	$10.0 M	$10.0 M
Vessel Operations Management	$5.8 M	$5.9 M	$5.9 M
Overhaul	$2.1 M	$2.4 M	$2.7 M
Other AMHS Support Services	$2.0 M	$2.0 M	$2.0 M
Total AMHS Operating Expenditures	**$172.0 M**	**$182.3 M**	**$207.2 M**

Note: All costs are represented in 2024 dollars except for crew labor wages which have been escalated over the planning horizon by current negotiated rates.

Operating Costs

Operating costs increase over the planning horizon to meet increasing service levels. The increase in service levels corresponds with enhanced service reliability. The new vessels will be more fuel efficient and have lower crew costs due to vessel designs that require less overall crew to operate. It can be observed that over time, operating expenditures rise and fall to small degrees based on the vessels in operation and applicable vessel replacements. In the long-term, cost fluctuations are more stable and AMHS-served communities will be experiencing higher service levels with higher rates of reliability.

The operating expenditures and related service levels over the planning horizon are illustrated in Figure 25.

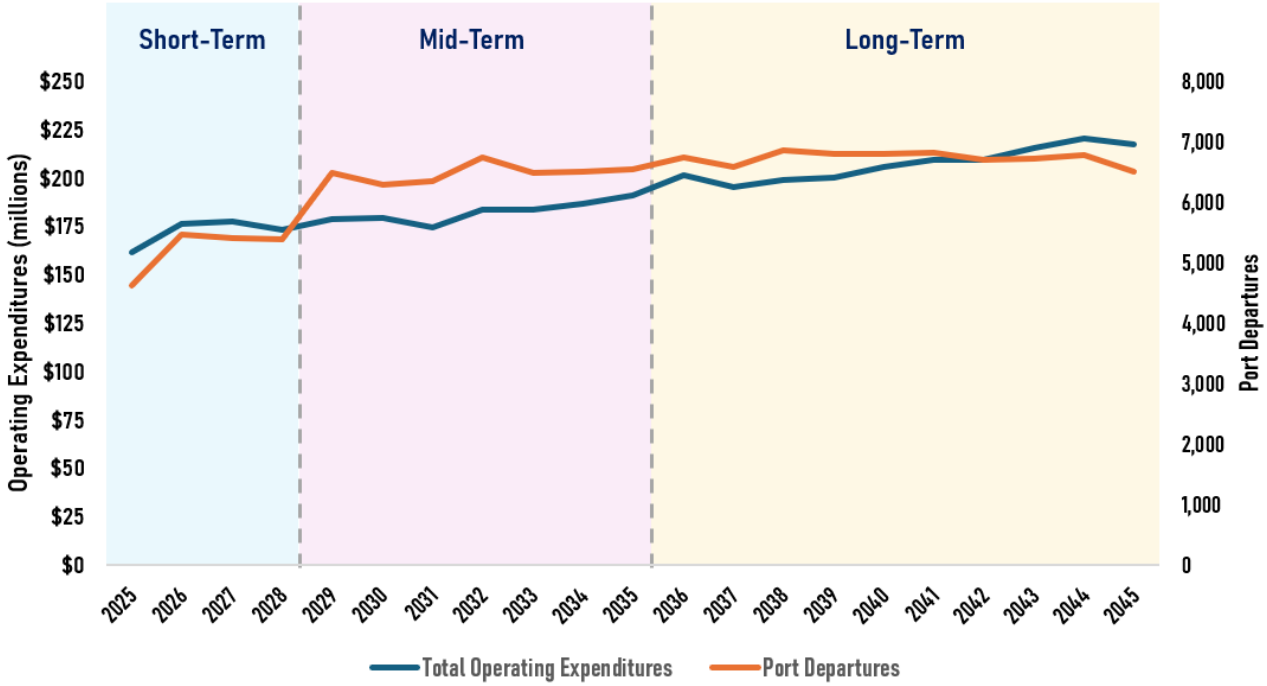


Figure 25: Operating Expenditures Compared to Service Levels (in 2024 dollars)

Revenue

AMHS generated an average of $42 million per year in operating revenue between FY2014 and FY2023. Passenger and vehicle ticket sales (fares) routinely account for more than 80% of system-wide operating revenue, followed by stateroom sales (about 10% of revenue). AMHS operating revenue is expected to increase over the Plan horizon due to increased passenger and vehicle use generated by expanded service levels. If AMHS passenger and vehicle fares are held constant at 2024 prices, AMHS annual service revenue is expected to increase proportionally along with ridership under the Plan's Service Scenario. In the short-term (2025-2028), service revenue will average $56.8 million annually and will increase to a projected $58.5 million in the long-term.

Passenger services such as food and bar sales also contribute to AMHS service revenue. The profitability (revenue less cost of goods sold) of other passenger services is currently unknown. However, AMHS operating revenues have potential to increase with enhanced visitor services such as fee-for-use Wi-Fi, additional food and bar options, and retail sales.

Fare Policy Discussion

Passenger and vehicle fare rates and cabin fees are important factors driving AMHS revenue as these three revenue sources account for 90% of operating revenue for the system. The Plan proposes that AMHS conduct a fare study to set a fare adjustment policy and structure to align with revenue targets to manage the level of state or federal appropriations required to fund system operations.

Farebox recovery rate provides a measure of service revenue as compared to systemwide operating expenditures. Yearly AMHS farebox recovery averaged 31% between FY2014 and FY2023, which is in line with many public transportation providers. Adjusting fare prices at the rate of inflation to meet expected increases in labor expenditures and other costs results in a projected farebox recovery rate of 35% in the short-term (2025-2028), escalating to 41% in the long-term, therefore decreasing the percentage of funding appropriation needed to meet rising costs over the 20-year planning horizon.

To demonstrate how service revenue and state or federal appropriation requirements could be impacted by implementing annual rate increases, Table 6 provides AMHS service revenue projections based on annual fare price increases equal to an expected annual inflation rate of 2.3%.[7] Based on annual rate increases consistent with inflation expectations, service revenue is projected to average $60.5 million in the short-term, increasing to $84.9 million in the long-term.

Table 6: AMHS Service Revenue with Annual Fare Level Increases and associated Farebox Recovery Rate

REVENUE	SHORT-TERM (2025-2028)	MID-TERM (2029-2035)	LONG-TERM (2036-2045)
AMHS Service Revenue	$60.5 M	$69.8 M	$84.9 M
Farebox Recovery Rate	35%	38%	41%

Through the next 20 years, service levels will increase due to a modernized fleet with higher reliability. This can be observed in Figure 26 as the green line identifying “Port Departures”, increasing with the *Tazlina* returning to service in 2026 with crew quarters, decreasing slightly in 2028 with the retirement of *LeConte* and continuing on an upward and stabilized trend from 2030 and going forward.

[7] Inflation expectations in this Plan are based on the U.S. Federal Reserve Bank of St. Louis 20-Year Breakeven Inflation Rate as of September 2024. https://fred.stlouisfed.org/series/T20YIEM

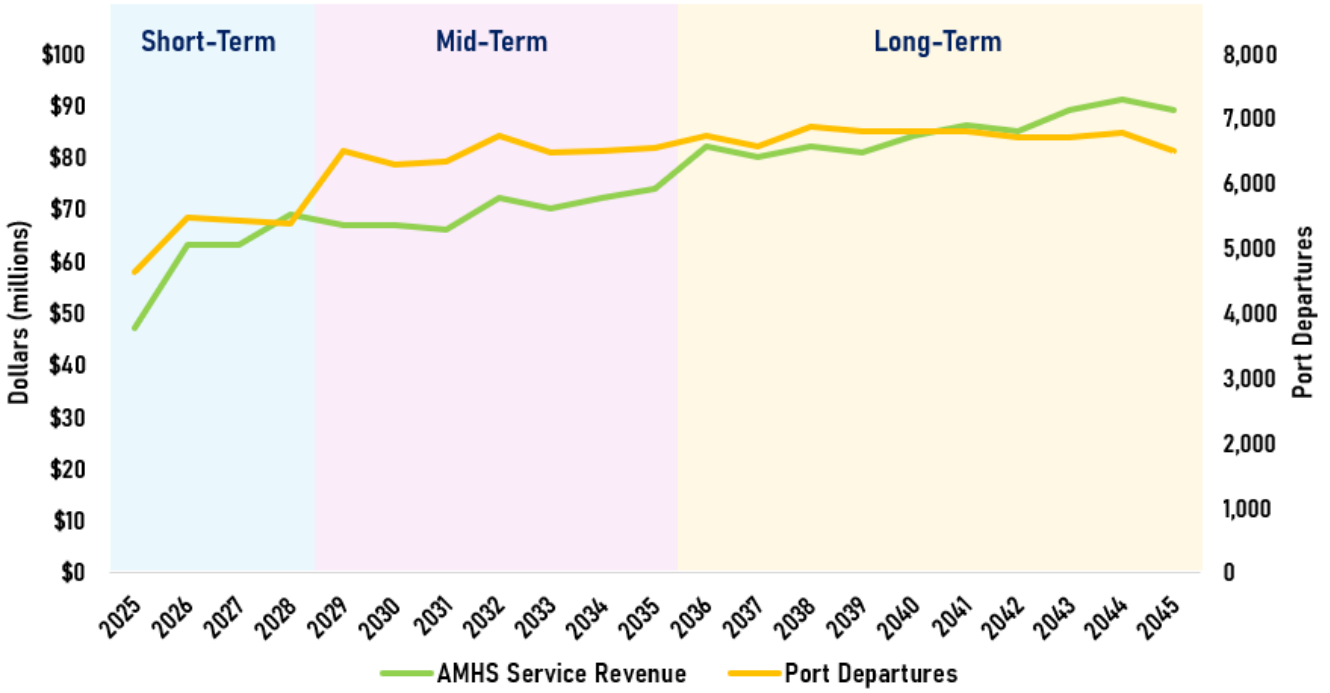


Figure 26: Anticipated Annual Service Revenue in Comparison to Service Levels

State or Federal Appropriation

AMHS requires public funding to pay for annual operating costs. Between FY2014 and FY2023, the Alaska Legislature appropriated an average of $82.6 million each year to fund the difference between AMHS service revenue and operating expenditures. Historically, this state appropriation has been paid for using state general funds, Motor Fuel tax receipts, or funding from the state's Constitutional Budget Reserve.

Passage of the 2021 federal Infrastructure Investment and Jobs Act authorized funding awarded through the Federal Transit Administration's Ferry Services for Rural Communities Program to be used to pay for operating costs. Between the federal fiscal year (FFY) 2022 and FFY2024, AMHS was awarded a total of $149.4 million in operating funds through this federal program. This program is authorized through FFY2026, and the Plan assumes that funding required to operate AMHS beyond AMHS service revenue will be appropriated by the State of Alaska.

If AMHS passenger and vehicle fare prices are adjusted annually to reflect increased operating costs, an annual average appropriation of $111.5 million will be required to fund AMHS operations in the short-term (2025-2028). This annual appropriation requirement is expected to increase to $122.3 million in the long-term (2036-2045) to account for increased service. It should be noted that these costs are represented in 2024 dollars for comparison to labor and fuel needs of the current fleet and the increase in over 1,000 port departures provided with the modernized, younger fleet of 2045.

The level of appropriation required to fund AMHS operations described in the following table assumes that all AMHS service revenue is available to fund operating expenditures. Required operating appropriations would be higher than the projections below if a portion of AMHS service revenue were used to fund AMHS-related capital projects in order to accrue federal toll credits.

Table 7 illustrates the average annual operating expenditures, AMHS service revenue, and required appropriation for the short-, mid-, and long-term phases of the plan. This data is also represented graphically in Figure 27.

Table 7: Average Annual AMHS Operating Appropriation Requirement, 2025-2045, $Millions

	SHORT-TERM (2025-2028)	MID-TERM (2029-2035)	LONG-TERM (2036-2045)
AMHS Operating Expenditures ($ millions)	$172.0	$182.3	$207.2
AMHS Service Revenue ($ millions)	$60.5	$69.8	$84.9
Average Annual Appropriation Requirement	**$111.5**	**$112.6**	**$122.3**

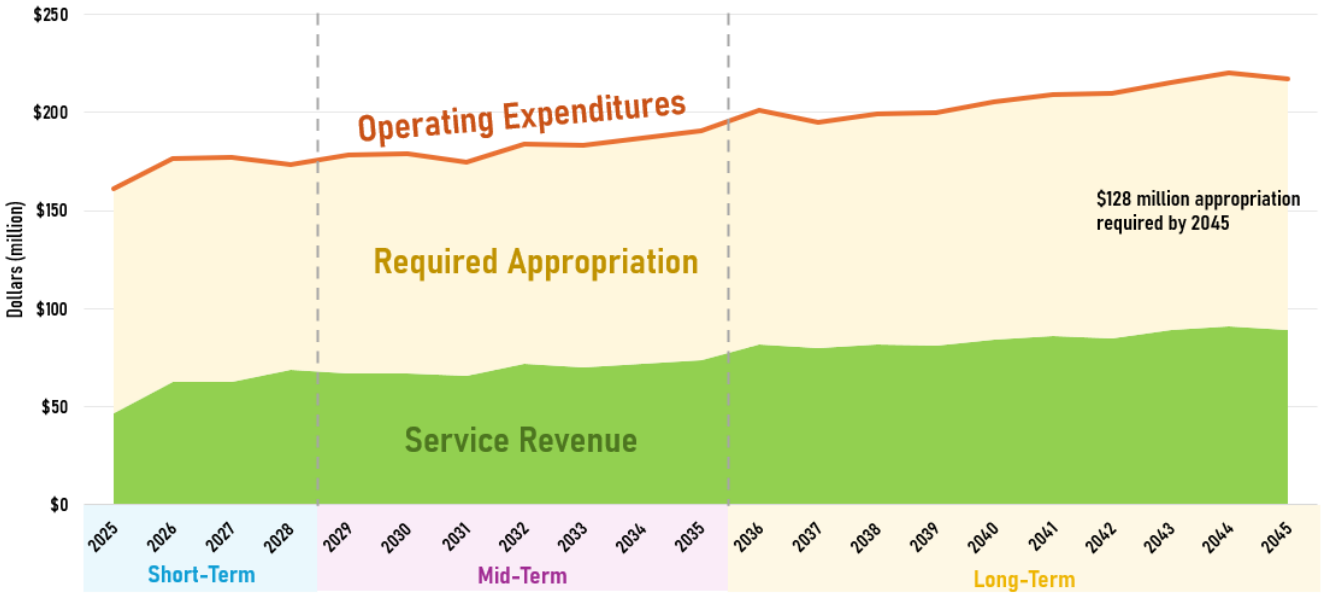


Figure 27: Annual AMHS Service Revenue, Operating Expenditures, and Required Appropriation Assuming Inflation-Based Fare Adjustments, 2025-2045

KEY METRICS

Success for this focus area will be monitored using the following few key financial metrics.

METRIC	DESCRIPTION	STATUS
Profit/Loss Statement	Summary of revenues and costs monthly.	Establishing a process and reporting will commence in Q2 - 2025
Financial Analysis by Route (Fare Box Recovery)	Analyze revenue as a percentage of cost per route.	Establishing a process and will commence in Q2 –2025
Grant Success Rate	Track number of grants applied for versus number of grants won.	Establishing a process and will commence in Q2 –2025

IMPLEMENTATION OUTLOOK

In the short- and mid-term horizons, the primary focus is to make major capital investments to improve fleet and terminal infrastructure. The investments made in the short- and mid-term phases result in reliable service, with a consistent farebox recovery to match increased operating costs and provide stability in system appropriation needs. Capital requirements are reduced significantly in the long-term. Figure 28 shows the Plan financial summary across the short-, mid-, and long-term horizons with operating costs and revenue shown as lines and capital costs by terminals and vessels in bars.

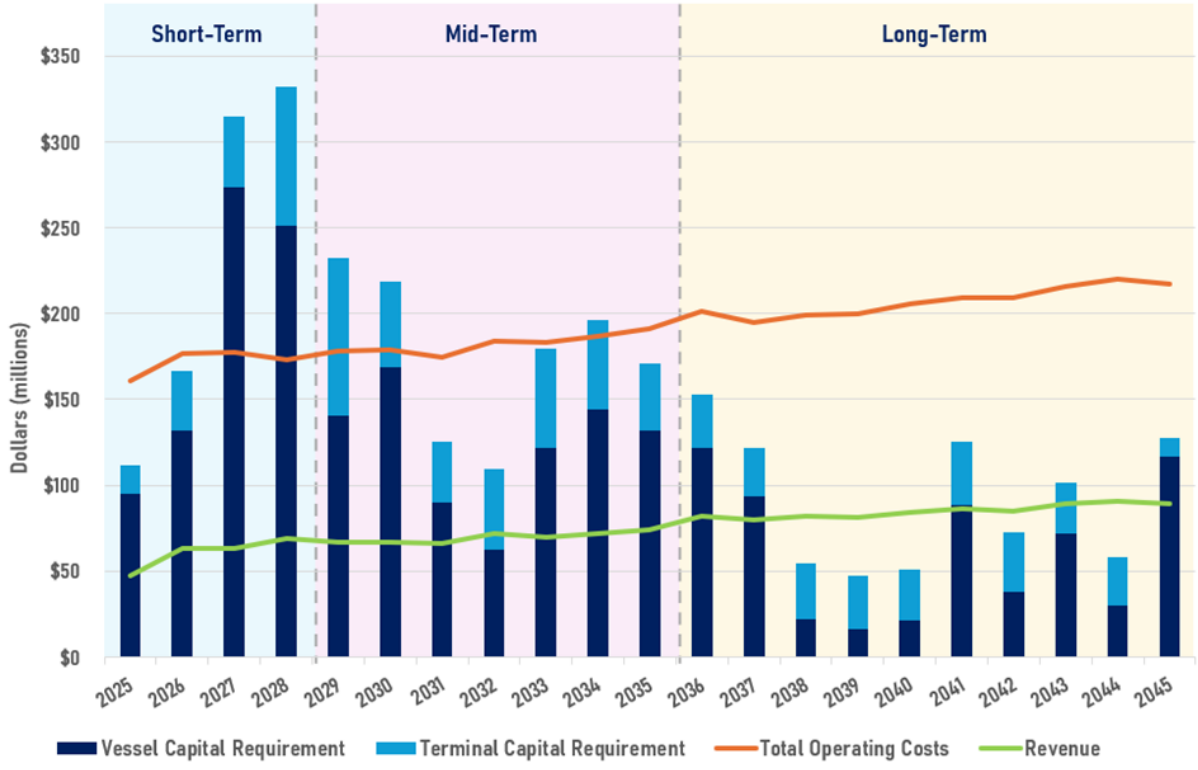


Figure 28: Plan Financial Summary

Planning Horizons

The section below summarizes key efforts and financial metrics by planning horizon.

Ongoing

The system will continue to collect data and analyze for informed financial decisions, setting up key metrics for reporting. Metrics and strategies to stabilize appropriation levels to meet rising costs of operations due to inflation and increasing service will continue to be explored such as fare adjustments.

Short-Term (2025 – 2028)

The short-term focus is on initiating major capital investments for vital terminal and vessel improvements. Completing these necessary early investments in the short-term will set the stage for successful construction and implementation in the mid- and long-terms. Maintaining farebox recovery will remain an underlying focus of this phase.

Mid-Term (2029 – 2035)

In the mid-term phase, AMHS and DOT&PF require continued capital investment to support fleet and terminal modernization. Improving farebox recovery compared to short-term levels will continue as a goal.

- Improving farebox recovery

Long-Term (2035 – 2045)

- Reliable service with a modern fleet
- Elevated fare box recovery

HOW DO WE GET THERE?

Implementation of this Plan will require constant monitoring of strategy progress within all focus area goals. Progress toward implementation will be reviewed on an annual basis, with a formal update published every five years. Ongoing data collection and community engagement will be key to this continued effort.

This section serves as a "playbook" for decision makers, guiding efforts across the three planning horizons. It outlines actions from each focus area by planning horizon, helping direct the focus of work in each phase.

SHORT-TERM OUTLOOK PERIOD OF VARIABILITY (2025 – 2028)

The short-term focus of the Plan is preparing for investments in vessels and infrastructure and continuing efforts to stabilize and expand the AMHS workforce. In this phase, replacement vessels are being designed and built, and terminal infrastructure changes are being identified. A focus is given to building the workforce to ensure that crew are being prepared for higher-level positions and new technologies to be implemented in upcoming phases. In the short-term, AMHS must begin making investments and focus on returning to stabilized service levels to provide a solid foundation to be built upon in future phases.

The sections below summarize projects per focus area in the short-term.

Service

- Review existing customer reservation system technology
- Implement advance release of schedules
- Install public Wi-Fi on board all vessels
- Introduce real-time vessel tracking technology for customer use

Fleet

- Establish internal AMHS roles dedicated to capital asset management and deployment.
  - Shipyard Planner position for development of advanced shipyard specifications
  - Continued development of Management of Change committee

VESSEL PROJECTS UNDERWAY:

- Alaska Class Ferry *Tazlina* Crew Quarters
- *Kennicott* generator replacement as required by regulatory
- Three new vessels in design
  - TRV
  - MRV I
  - Dayboat

VESSEL PROJECTS COMPLETED:

- High Efficiency Ferry I

Terminals

TOTAL NUMBER OF PROJECTS: 56

- Terminal Improvement Projects: 1
- Terminal Maintenance Projects: 43
- Terminal STIP Projects: 11
- 2045 Plan Scenario Projects: 1

See Table 3 on page 53 and Appendix E1 for more information on terminal projects.

Workforce

Continue all current recruitment and retention efforts and launch new strategies to grow operating crew and relief crew to enhance system reliability and stabilize employee retention. Grow the workforce to meet the fleet and service needs.

PROJECTS UNDERWAY:

- Alaska Hire: paying for in-state travel
- Alaska School Recruitment
- Community and tribal partnerships
- Continuing to leverage all existing resources to further recruitment
- Organizational Partners: Member of Women Offshore

Financial

Maintain current operating costs and revenue and focus on funding future investments in capital infrastructure. Continue to seek out current and new funding mechanisms and enhance financial reporting systems to make informed business decisions.

MID-TERM OUTLOOK INITIAL SUCCESSES (2029 – 2035)

The next seven years of the Plan focus on continuing to replace the system's vulnerable assets with replacement vessels continuing to be designed, constructed and entering operation. The growth of the system's workforce continues to be a priority. During this term, Plan investments begin to take hold with increased port calls to AMHS communities and enhanced reliability.

The sections below summarize projects per focus area in the short-term.

Service

- Implement customer reservation system app
- Improve scheduling software and processes

Fleet

VESSEL PROJECT UNDERWAY:

- Two new vessels in design
  - MRV II
  - High Efficiency Ferry II

VESSEL PROJECTS COMPLETED:

- TRV
- MRV I
- Dayboat

Terminal Infrastructure

TOTAL NUMBER OF PROJECTS: 72

- Terminal Improvement Projects: 26
- Terminal Maintenance Projects: 43
- Terminal STIP Projects: 3

See Table 3 on page 53 and Appendix E1 for more information on terminal projects.

Workforce

Efforts to promote a steady pool of interested and qualified crew members will be continued and expanded over the mid-term.

Financial

In the mid-term phase, AMHS requires continued capital investment to support modernized fleet and terminals. Improving farebox recovery compared to short-term levels will continue as a goal.

- Improving farebox recovery

LONG-TERM OUTLOOK RELIABLE EXPANSION (2036 – 2045)

The final years of the Plan focus on the regular maintenance of the assets, which are replaced in the near- and mid-term phases, as well as the addition of two new vessels. As the workforce is strengthened and maintained, service grows to meet the 2045 target service levels. As the average age of the fleet will be reduced to thirteen years, vessel maintenance needs will be routine and predictable. During this time, long-term service goals and reliability goals are met.

Fleet

PROJECTS COMPLETED:

- MRV II
- High Efficiency Ferry II

Terminals

TOTAL NUMBER OF PROJECTS: 126

- Terminal Improvement Projects: 40
- Terminal Maintenance Projects: 86 (2 for each terminal)

See Table 3 on page 53 and Appendix E1 for more information on terminal projects.

Workforce

Over the long-term period, AMHS aims to continue and expand efforts to promote a steady pool of interested and qualified crew members.

Financial

- Reliable service with a modern fleet
- Elevated fare box recovery

ONGOING EFFORTS

In addition to strategies and projects targeted to one of the three planning horizons, the Plan recommends ongoing strategies intended to be implemented on a continual basis. These practices should be introduced in the short-term and carried out as continued priorities going forward.

Ongoing strategies related to service are focused on providing a standard of transparency and communication between AMHS and its customers, ensuring that service schedules and routing continue to reflect the changing needs of communities. Additional ongoing strategies will focus on supporting the safety of AMHS service.

Routine capital asset maintenance practices that are introduced as a part of this Plan should be adopted in the short-term and continued throughout all project phases. These actions are intended to guide improved terminal facility management and design best practices. Keeping a regular schedule for maintenance and repairs will also ensure annual coordination of this Plan with other DOT&PF plans.

Service

- Provide opportunity for crew members to attend a yearly crew safety conference.
- Review and update the Safety Action Plan annually.
- Continuously engage with community members to stay in tune with current and evolving community needs.
- Maintain and improve lines of communication between AMHS communities and AMHS schedule planning to support:
    - Cultural and tribal events
    - Sporting events
    - School events
    - Other community events

Fleet

- Facilitate crew adherence with the updated SMS policies and procedures.
- Practice routine preventative vessel maintenance.
- Improve ADA compliance in operations and design of new vessels.
- Increase interoperability through vessel standardization efforts.

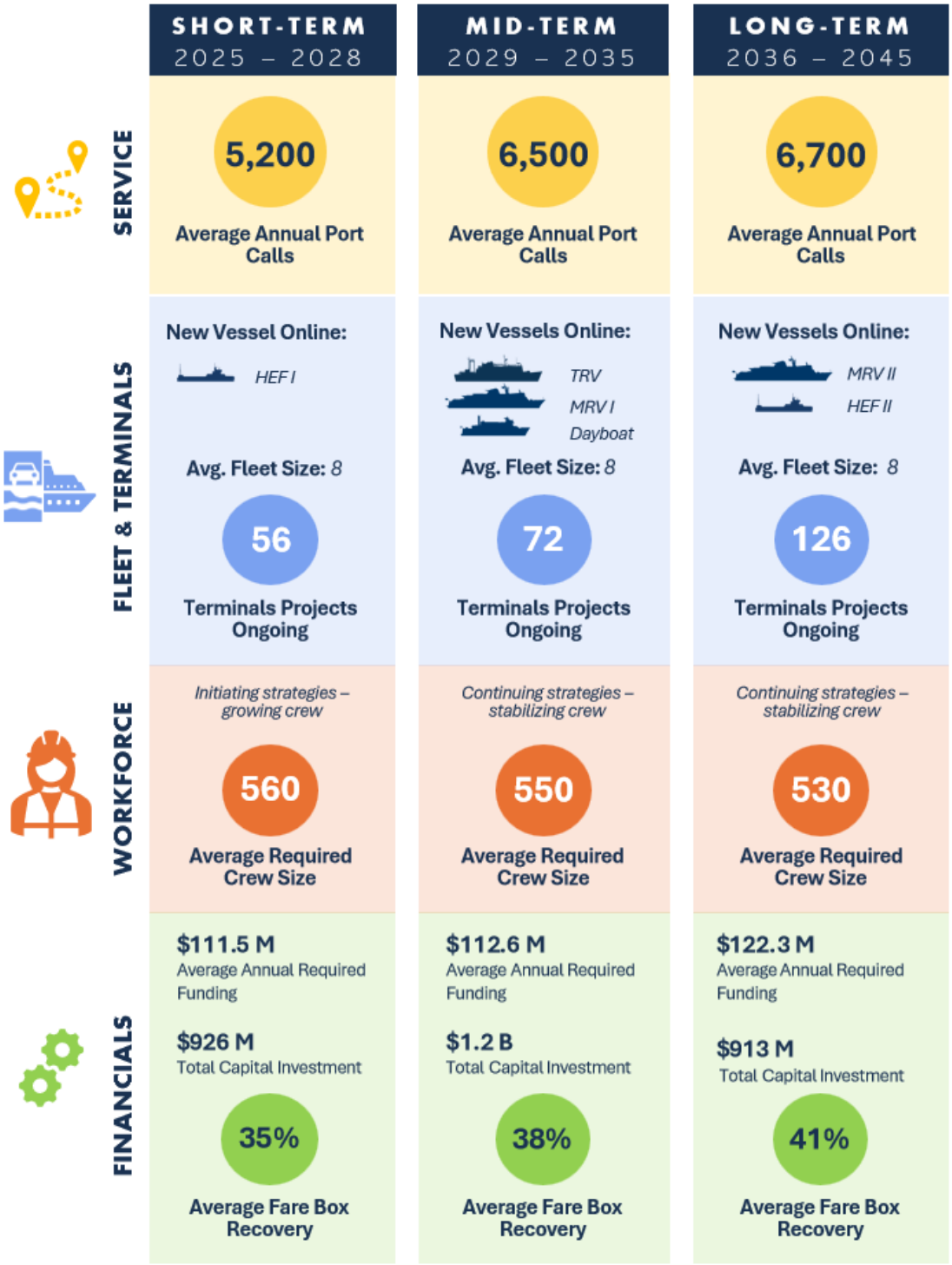
Terminals

- Complete routine preventative maintenance projects on a rolling five-year basis to provide a consistent budget.
- Complete terminal Condition Assessments and repair plans biennially with dedicated grant funding.
- Develop and adhere to a terminal design manual.
- Impart a progressive design-build project approach to include design, permitting, and construction into regional projects.
- Maintain an asset management system that tracks the condition of terminal infrastructure.
- Establish an internal role dedicated to capital asset management and deployment.
    - DOT&PF Terminals asset management

Financial

- Continue to collect and analyze data for informed financial decisions.
- Set up key metrics for reporting.
- Explore metrics and strategies for stabilized appropriation levels to meet rising costs of operations.

THE PLAN IN SUMMARY



Note 1: Vessel silhouettes are representations only, new vessels may be different.
Note 2: Annual required funding includes vessel overhaul costs.
Note 3: Farebox recovery rates are notional and based on an annual fare level escalation corresponding to an assumed rate of inflation. A fare study will be completed and will provide a recommendation on rate adjustments.

CONCLUSION

AMHS is a lifeline transportation service for the State of Alaska and an important connection to the United States Highway System. Investment in AMHS is required to maintain and enhance system connections, providing lifeline transportation to residents, communities, and businesses of coastal Alaska. AMHS provides critical connections for medical access, community exchange, and economic development.

The Plan has been developed in coordination and collaboration with the communities it serves, advisory boards, and internally with DOT&PF planning, terminal staff, and AMHS operating personnel. The Plan outlines a path toward increased service with an efficient and realistic outlook at fleet operations that serve the expansive geography of AMHS' coastal communities.

In addition to long-term service increases, service reliability will be reinforced with each capital investment into the fleet and terminal infrastructure. Continued focus on workforce initiatives for recruitment and retention will strengthen the workforce to meet Plan goals, while new vessel designs will provide crewing efficiencies, an attractive working environment, and an enhanced customer experience.

The goals and investments outlined in the Plan will serve as a guidebook for the next 20 years, with incremental updates occurring every five years and progress assessments occurring annually. The key performance metrics will strengthen the system’s decision-making and enhance transparency.

This Plan will inform discussions and decisions by lawmakers, citizens, the Governor's Office, DOT&PF, and AMHS management and staff. The key takeaways are as follows:

- The fleet and terminals must be modernized to improve reliability and achieve service goals.
- A combination of targeted policies and strategic incentives is essential to attract and retain a stable and qualified workforce.
- The system must receive a combination of State and Federal funding to support capital investments and operating support.

Transportation is a vital component to all other economic activity, part of the glue that holds society together and promotes the well-being of citizens. Planning is a tool to shape the future, minimize risk, and inform the public. This transportation plan is a significant step toward a strong future for Alaska and its coastal communities.

FINAL PAGE CONTENT

This publication was produced by Alaska DOT&PF.

Keep Alaska Moving

State of Alaska
Department of Transportation and Public Facilities
Office of the Commissioner
Version 4.0 (New) | October 2025
For more information, please contact
dot.commissioner@alaska.gov or
(907) 465-3900 or visit dot.alaska.gov/comm/

Alaska Marine Highway System
Office of the Marine Director
Version 4.0 (New) | October 2025
For more information, please contact
dot.amhs.comments@alaska.gov or
(907) 228-7250 or visit dot.alaska.gov/amhs

APPENDIX A1

LEGISLATIVE, REGULATORY, & UNION FACTORS

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Legislative, Regulatory, and Union Factors
Version: 4.0 (New)

PURPOSE

This memo documents elements of the Alaska Marine Highway System (AMHS) operating environment that the system does, or does not, control for context and background in understanding service and policy decisions. Elements include human resources, staff recruitment and retainment, labor relations, union relationships, legal services and agreements, and other features, constraints, and characteristics that impact how the Alaska Department of Transportation and Public Facilities (DOT&PF), and AMHS can influence progress toward achieving a 20-year vision and goals as set out in the AMHS 2045 Long-Range Plan.

BACKGROUND

AMHS is an integral part of Alaska's statewide transportation system and provides vital transportation services to connect areas of Southeast, Southcentral, and Southwest coastal Alaska where highways and bridges do not connect communities. These services benefit Alaska residents, businesses, and visitors.

In 1959, the first Alaska Legislature approved the Alaska Ferry Transportation Act, which established the State ferry system. In 1983, the Division of Marine Transportation was renamed the Alaska Marine Highway System and was restructured as a line agency within DOT&PF. The AMHS Marine Director is responsible for day-to-day operations. The Director reports to a DOT&PF Deputy Commissioner, who serves as a liaison with the legislature, the public, and other transportation modes within the department. Both positions are appointed and serve at the pleasure of the Governor. Labor relations are led by the Department of Administration (DOA).

The existing governance model has several strengths, including intradepartmental coordination with other public transportation modes and a commitment to safe and affordable transportation. Limitations include funding uncertainty which can contribute to schedule instability, lack of a unified management authority, frequent turnover in senior leadership positions, indirect labor negotiations, a tendency towards short-term planning horizons, cumbersome procurement processes, and exposure to political influence over operational decisions.

LEGISLATIVE ELEMENTS

AMHS currently operates under a number of administrative procedures required by statute to provide accountability, public control, and protect the public interest. These include:

- Executive Budget Act
- Administrative Procedures Act
- State Personnel Act
- State Procurement Act

EXECUTIVE BUDGET ACT

The Executive Budget Act (AS 37.07) governs the budget process used by the state of Alaska. Agencies submit a proposed budget to the Governor detailing their expected revenues and expenses each fiscal year. Proposals are considered for inclusion in the budget presented by the Governor to the legislature. Agencies are authorized to incur expenses and receive receipts only after legislative approval. . Public corporations subject to the Act must receive this budget approval regardless of the Corporation's funding sources, including cases in which no state general funds are appropriated to the organization.

ADMINISTRATIVE PROCEDURES ACT

The Administrative Procedure Act (AS 44.62) requires agencies to publish proposed rules and allow time for public comments. The Act establishes basic minimum procedural requirements for the adoption, amendment, or repeal of administrative regulations. When creating rules and regulations, agencies must follow this Act, which ensures that any regulation made by an agency is consistent with the statute and reasonably necessary to carry out the purpose of that statute.

STATE PERSONNEL ACT

Under the State Personnel Act (AS 39.25), the DOA Division of Personnel and Labor Relations provides human resources services to state agencies, including public corporations whose employees are members of the classified or partially exempt service. This includes administration of personnel and hiring systems and an "integrated salary program" based on the type of work performed. The Division also acts as the executive branch representative in negotiations of collective bargaining agreements between state agencies and organizations representing state employees.

STATE PROCUREMENT ACT

The State Procurement Act creates a centralized procurement procedure for all state agencies. DOA is empowered to provide procurement service for supplies, services, and professional services. DOT&PF is authorized to procure materials and services supporting the state equipment fleet and manages the construction of state facilities. State procurement adheres to competitive bidding practices and gives preference to resident bidders to promote the state's economic stability.

It should be noted that AMHS has no in-house legal expertise. All contracts, labor negotiations, procurements, and procedures are routed through the State Attorney General's Office for oversight and approval.

REGULATORY ELEMENTS

The operation of vessels carrying passengers for hire is a highly regulated enterprise. The U.S. Coast Guard (USCG) is the primary entity responsible for safety of the passenger, crew, and environment. The USCG sets requirements for the construction of the vessels and their equipment. They also mandate standards of training and licensing for the crew members. Every vessel is subject to regular inspections during initial construction and throughout the operating life of the vessel. The safety standards that back up the inspection are a combination of USCG requirements and third-party entities such as the American Bureau of Shipping (ABS), the National Fire Protection Association (NFPA), the American National Standards Institute (ANSI), and the Institute of Electrical and Electronics Engineers (IEEE), among others.

There are two classes of vessel regulations that apply to the AMHS fleet for design and construction. The *Lituya* is governed by 46 Code of Federal Regulations (CFR) Chapter I, Subchapter T, Small Passenger vessels of less than 100 gross tons that carry 150 or less passengers or have overnight accommodations for 49 or less passengers. The rest of the fleet is governed by 46 CFR Chapter I, Subchapter H, Large Passenger Vessels. Any vessels that travel to Prince Rupert are additionally governed by the Safety of Life at Sea (SOLAS) requirement promulgated by the International Maritime Organization (IMO).

The operation of the vessels is governed by 33 CFR, Navigation and Navigable Waters. The standards for licensing, training, and certification of shipboard personnel are found in 46 CFR Chapter I, Subchapter B, Merchant Marine Officers and Seamen.

Since most AMHS vessels operate on long routes, the regulations regarding work and rest hours are critical to vessel scheduling, crewing, and crew accommodations. The details of work-hour limits may be found in 46 US Code (U.S.C) 8104 and 46 CFR 15.1111. Generally, for a vessel less than 100 gross tons, a licensed individual is limited to 9 work hours in a 24-hour period while in port and to 12 hours in a 24-hour period while at sea. For vessels over 100 gross tons, the work hour requirements are 10 hours of rest in a 24-hour period and 77 hours of rest in a 7-day period. While at sea, the crew must be divided into three watches. These regulations apply to "Every person assigned duty as officer in charge of a navigational or engineering watch, or duty as ratings forming part of a navigational or engineering watch, or designated safety, prevention of pollution, and security duties onboard any vessel".[1]

[1] 46 CFR 15.1111

UNION FACTORS

Since 1962, the Alaska Marine Highway System vessels have been crewed by personnel represented by three unions for collective bargaining:

International Organization of Masters, Mates and Pilots (MMP) –Represents licensed deck officers.[2]

Marine Engineers' Beneficial Association, District #1 (MEBA) – Represents licensed engine room personnel.[3]

Inlandboatmen's Union of the Pacific, Alaska Region (IBU) – Represents unlicensed personnel onboard.[4]

The unions are on a three-year cycle of collective bargaining agreements with the current agreements covering the years 2022 to 2025. A joint labor-management committee is established to "facilitate communication between the parties and to promote a climate conducive to constructive Employer/employee relations."[5]

Shoreside employees of AMHS are represented by other unions such as the Alaska Public Employees Association and the Confidential Employees Association. The latter represents employees engaged in performing personnel/payroll functions and services.

Labor agreements are managed by the Alaska Department of Personnel and Labor Relations. The AMHS Marine Director does not directly participate in union negotiations.

[2] Masters, Mates and Pilots Bargaining Unit Profile as of 6/30/2024
[3] Marine Engineers Beneficial Association Bargaining Unit Profile as of 6/30/2024
[4] Inlandboatmen Bargaining Unit Profile as of 6/30/2024
[5] Collective Bargaining Agreement between the State of Alaska and the Inlandboatmen's Union of the Pacific, Alaska Region 2022-2025

APPENDIX B1

PUBLIC ENGAGEMENT

To: Alaska Marine Highway System (AMHS)
From: KPFF Consulting Engineers
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Public and Stakeholder Engagement
Version: 4.0 (New)

PURPOSE

This memo aims to summarize engagement activities and tools used throughout the development of the Alaska Marine Highway (AMHS) 2045 Long-Range Plan (LRP). Engagement efforts aimed to reach Alaskans across the state, with the following goals in mind:

1. Increase transparency and communication from AMHS to its customers on the 2045 LRP progress.
2. To center community needs in the planning process.

BACKGROUND

The AMHS service area is vast and serves diverse communities, each of which depends on AMHS in unique ways. Recognizing this, the planning team worked to bolster each project phase with community expertise, relying on system stakeholders to provide insight and feedback on project goals, community needs, and service level development.

APPROACH

Collaboration with a variety of stakeholder groups has informed the process of developing and reviewing the 2045 LRP. This engagement has occurred throughout all planning phases.

SUMMARY OF ACTIVITIES

Engagement findings are summarized below, including results from the 2023 Community Needs Survey and high-level insights from public comment facilitation.

ALASKA MARINE HIGHWAY OPERATIONS BOARD (AMHOB)

2023
July 14
August 25
December 1

2024
February 6
May 31
October 23

2025
April 25

VIRTUAL OPEN HOUSES

2023
September 25
October 24

2024
April 22

2025
March 19

FERRY FOCUS GROUPS

2023
May Workshops
September Workshops

2024
February Workshops
October Workshops
December Workshops

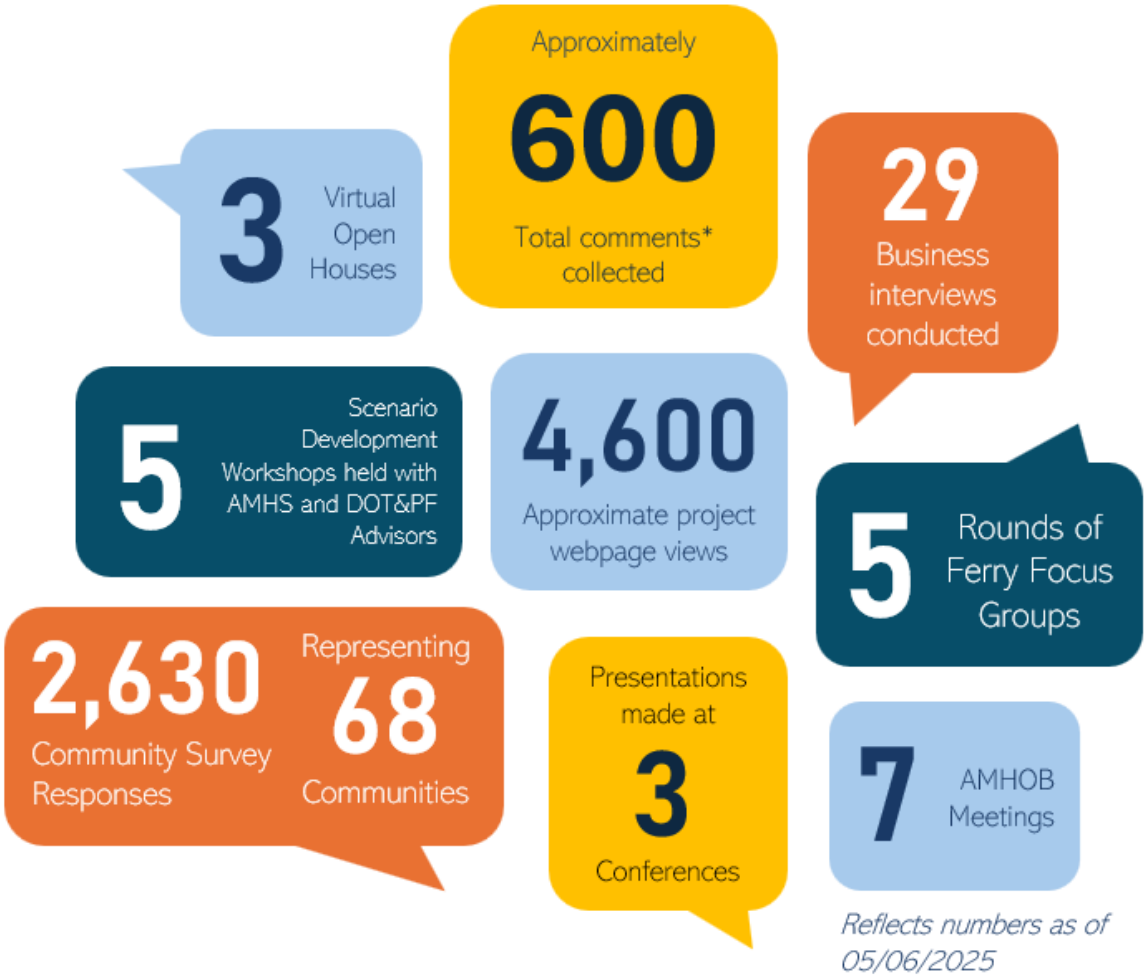


Figure 1: Summary of Engagement Efforts

STAKEHOLDER GROUPS

As part of the long-range planning process, AMHS consulted with ferry customers, planning organizations, agency stakeholders, and the public to inform each step of the plan. The groups can be classified into three categories of involvement: (1) guidance and leadership, (2) collaboration and consultation, and (3) input and awareness.

GUIDANCE AND LEADERSHIP	COLLABORATION & CONSULTATION	INPUT & AWARENESS
AMHS Leadership Team	Ferry Focus Groups	Community Stakeholders
AMHS Operations and Technical Advisory Team	AMHOB	Regional Planning and Economic Development Organizations
DOT&PF Advisory Team		Conferences
		AMHS Vessel Staff and Crew

Description of each stakeholder group and its role is outlined in the following pages in greater detail.

GUIDANCE AND LEADERSHIP

AGENCY ADVISORY GROUPS

AMHS and DOT&PF advisory groups provided initial feedback and ensured that the project remained in line with larger agency goals and existing initiatives.

- *AMHS Leadership Team:* Served as the core leadership team for the plan and provided direction for the broader planning team throughout the plan's development.
- *AMHS Operations and Technical Advisory Team:* Comprised of AMHS schedulers, dispatchers, port captains, and engineers. This group was consulted throughout plan development to ensure technical and operational feasibility of plan recommendations.
- *DOT&PF Advisory Team:* Included representatives from various DOT&PF departments to provide monthly oversight and assurance on the direction of the LRP. This group included DOT&PF representatives from the offices of Planning, Title VI, Communications, and Scheduling.

Key Feedback Themes

1. Internal Organization
2. Workforce Recruitment and Retention
3. Transparent Communications
4. Customer Experience

COLLABORATION AND CONSULTATION

ALASKA MARINE HIGHWAY OPERATIONS BOARD (AMHOB)

The LRP planning team reported to and sought input on the plan's progress from the Alaska Marine Highway Operations Board on a quarterly basis. The team presented both virtually and in-person, per the Board's direction. Each presentation made to the Board was livestreamed for public viewing, and recordings were published to the Board's webpage following each meeting.

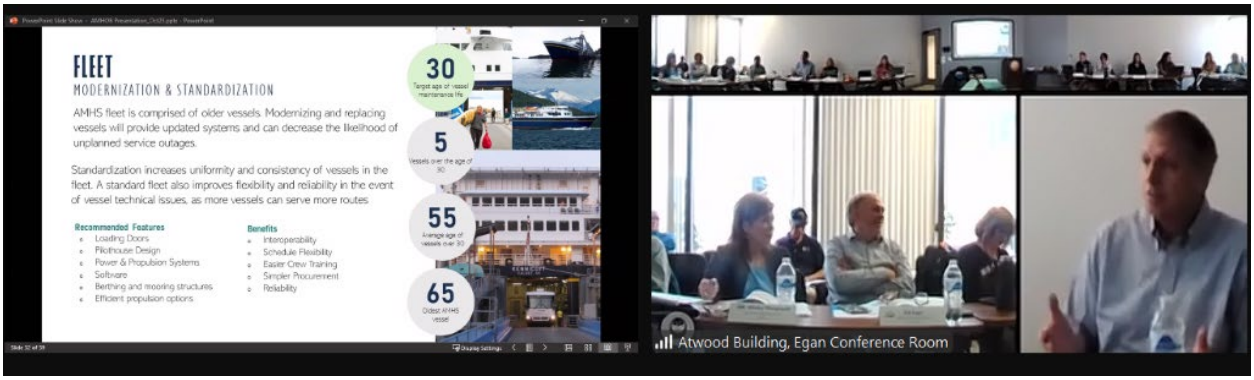


Figure 2: Marine Director Tornga presenting to the AMHOB Board in October

AMHOB is comprised of the deputy commissioner of DOT&PF assigned to AMHS and eight public members. AMHOB serves to provide recommendations on the Statewide Transportation Improvement Program (STIP), short- and long-term planning efforts, and on the operation and management of AMHS. AMHOB has been involved in several LRP workshops, during which they have reviewed LRP progress and offered feedback. AMHOB will be involved in future phases of the plan development.

The legislative mandate for AMHOB involvement in the development of this Plan is described below:

> *House Bill 63 (HB 63) was signed into law on August 16, 2021, repealing the Marine Transportation Advisory Board and establishing the Alaska Marine Highway Operations Board (AMHOB). AMHOB advises DOT&PF/AMHS on numerous initiatives. AMHOB is composed of a DOT&PF Deputy Commissioner and eight public members. One seat is from a recognized union representing AMHS employees; one represents Alaska Native organizations; two are appointed by the Governor; two by the Speaker of the House, and two by the Senate President. The members of the board, except for the DOT&PF Deputy Commissioner, serve staggered three-year terms. More information about this board can be found on the DOT&PF's AMHOB website.*
>
> *According to HB 63, in consultation with AMHOB, DOT&PF will prepare a comprehensive long-range plan that will consist of priorities and goals with a proposed strategic maintenance and vessel replacement plan.*
>
> *AMHOB is responsible for providing advice and recommendations to the Commissioner of Transportation and Public Facilities concerning the operation and management of AMHS. This includes advice and recommendations regarding business to enhance revenue and reduce costs, personnel management, projects to be entered into the Statewide Transportation Improvement Program (STIP), commercial service options, ship and terminal maintenance, construction, repair, fleet strategy, reliability, and regulatory compliance, and other service objectives. If the board determines that AMHS has deviated from a plan, policy, or procedure described in the short-term plan or comprehensive long-range plan, the board may prepare a report recommending corrective action. They may also recommend performance measures.*
>
> Link to Board webpage: Alaska Marine Highway Operations Board[1]

[1] Alaska Marine Highway Operations Board, https://dot.alaska.gov/amhob/index.shtml

Key Feedback Themes

1. Transparent Communications
2. Reliability
3. Standardization
4. Community Connections

FERRY FOCUS GROUPS

The planning team initiated a series of Ferry Focus Groups (FFGs) to engage directly with community leaders, notably in early project phases, to better understand community conditions and needs. Quarterly Ferry Focus Groups brought together local leaders from across each of Alaska's service areas, including city clerks, school administrators, tribal leaders, chambers of commerce, and legislators. These service area-specific groups were formed to gain local input on service schedules and frequency, supplemental service opportunities, and special event occurrences.

The planning team also relied on participants to act as liaisons of Plan information in several ways, such as sharing information learned at FFGs in newsletters to constituents and promoting LRP updates in local media outlets (newspapers, radio).

Key Feedback Themes

1. Community Connections
2. Reliability

INPUT AND AWARENESS

REGIONAL PLANNING AND ECONOMIC DEVELOPMENT ORGANIZATIONS BRIEFINGS

Throughout the process, the team engaged with regional planning and economic development organizations to share Plan progress and understand how the LRP can work to support existing community goals. Groups included:

- *Southeast Conference (SEC):* As the state and federally designated regional economic development organization for Southeast Alaska, SEC serves as the collective voice for advancing the region's economy. SEC has 180 member organizations representing 1,200 people from 32 regional communities.
- *Southwest Alaska Municipal Conference (SWAMC):* SWAMC is a non-profit regional economic development organization for Southwest Alaska. SWAMC serves three sub-regions of Southwest Alaska: the Aleutian/Pribilofs Islands, Bristol Bay, and Kodiak. SWAMC helps promote economic opportunities to improve quality of life and influences long-term responsible development.
- *Alaska Municipal League (AML):* The Alaska Municipal League (AML) is a nonprofit, nonpartisan, statewide membership organization of 165 cities, boroughs, and unified municipalities, representing over 97 percent of Alaska's residents. Originally organized in 1950, the League of Alaska Cities became the Alaska Municipal League in 1962 when boroughs joined the League.

Key Feedback Themes

1. Reliability
2. Community Connections
3. System Efficiency

CONFERENCES

The team attended several conferences across the state and shared updates on LRP progress with attendees. These conferences involved stakeholders with specific areas and industry interests. Conferences included:

- Southeast Conference Mid-Session Summit, February 5 and 6, 2024
- Sea Summit, April 9, 2024
- Southeast Conference Annual Meeting, October 24, 2024
- Southeast Conference Mid-Session Summit, February 11 and 13, 2025

Key Feedback Themes

1. Community Connections
2. System Efficiency

PUBLIC MEETINGS AND WORKSHOPS

Throughout the process, the team held four virtual public meetings to report on the Plan's development and open a forum for public comment. The topics for each meeting were as follows:

- September 25, 2023: Intro to the 2045 Long-Range Plan
- October 24, 2023: Phase 1 Review
- April 22, 2024: Progress Report and Service Level Introduction
- Q1 2025: Final Report Review

Key Feedback Themes

1. Transparent Communication
2. Community Connections

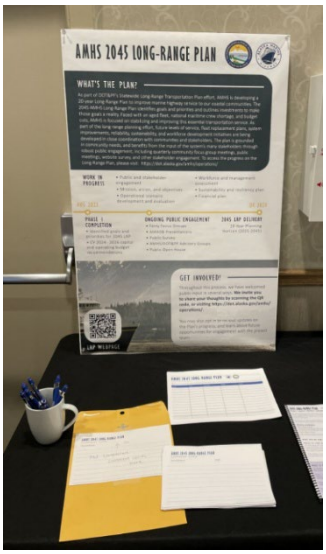


Figure 3: Poster Board and Comment Box at SEC Mid-Session Summit in February 2024

AMHS VESSEL STAFF AND CREW

The AMHS Leadership Team routinely visited AMHS staff and crew aboard vessels and at terminals. These visits were intended to facilitate casual conversations between the Marine Director and AMHS employees on a range of topics, including the LRP. The Marine Director aimed to visit each terminal once annually, and each vessel once quarterly.

Key Feedback Themes

1. Transparent Communication
2. System Efficiency

FEEDBACK METHODS AND TOOLS

The following tools were utilized to support the team's engagement efforts.

- *Project Web Page and Public Comment*. The project webpage hosts project updates, news on upcoming engagement opportunities, and project resources for reference and review.

Public comment was hosted on the project webpage and open throughout the duration of the project.

Link to webpage: [2045 AMHS Long-Range Plan](#)[2]

- ***Public Survey.*** The Community Needs Public Survey, described in the following section of this memo, was hosted and distributed virtually through the SurveyMonkey survey platform.
- ***ArcGIS StoryMap.*** The ArcGIS StoryMap was utilized to facilitate virtual public input on community conditions. The map included interactive pages with ten different community characteristics (population, grocery access, medical access, road access, air service, barge service, food security index, school access, vehicle repair access, and cost of living). Participants were encouraged to identify and/or verify the availability of various local resources and services. The site remains live and open for interaction.

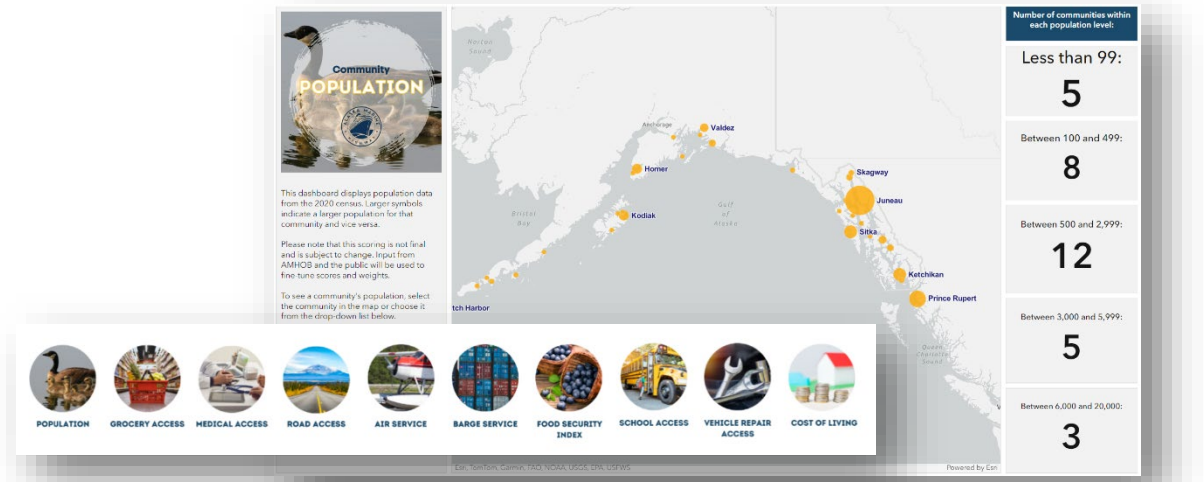


Figure 4: Screenshots of ArcGIS StoryMap

[2] AMHS 2045 Long-Range Plan, https://dot.alaska.gov/amhs/operations/

COMMUNITY NEEDS PUBLIC SURVEY

The Community Needs Public Survey sought to gain specific insight into the communities that the Alaska Marine Highway System serves as the LRP was developed. This feedback was one set of data that informed the development of future service levels that are aligned with each community's specific conditions and needs.

This survey was conducted between October 24, 2023, and November 7, 2023, and welcomed input from individuals and communities across Alaska. The survey received 2,630 total responses, representing 68 communities across Alaska and the lower 48. Some promotion methods included:

- Public meetings and conferences
- Local newspapers and radio stations
- Community and agency Facebook pages
- AMHS Webpage
- GovDelivery List-Serv

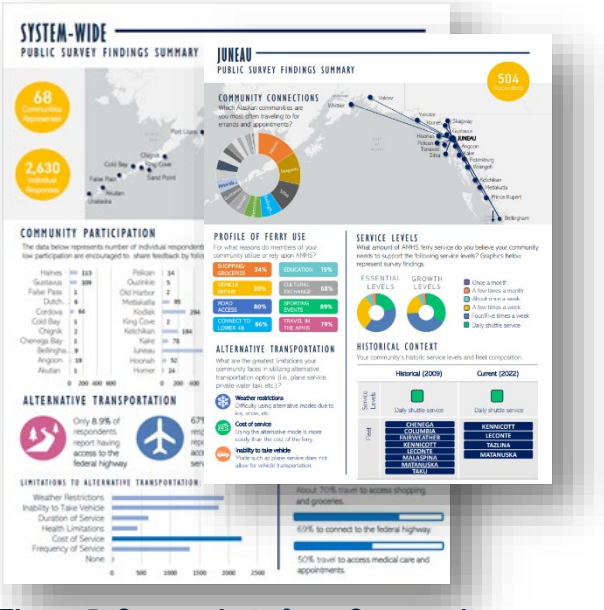


Figure 5: Screenshots from Community Needs Survey

Full Community Needs Summary Results are attached separately for additional reference.

PUBLIC COMMENT FACILITATION/SUMMARY

Comments were collected for the entire project duration, hosted on the project webpage starting in Fall 2023. Community members were welcome to provide public comments at any time through the Public Comment platform on the 2045 AMHS Long-Range Plan[3].

The project received roughly 600 comments over the course of the project. Of the many comments received, most can be categorized into seven general areas of focus:

- Need For Increased Service
- Tourism and Economic Development
- Intermodal Connections
- Cost
- Fleet Considerations

BUSINESS INTERVIEWS

Alaska's business community has long been a key user of AMHS service. Businesses and industries have been impacted over the last decade due to changes in AMHS service and reliability. The LRP

[3] AMHS 2045 Long-Range Plan, https://dot.alaska.gov/amhs/operations/

planning team conducted a series of executive interviews with businesses across AMHS-served communities to understand their use of the system and how AMHS can support their success.

Key comments can be summarized in the following statements:

1. Workforce should be supported to provide a more reliable service.
2. Vessels should be modernized to improve reliability.
3. Tourism should be explored more as a revenue source for the ferry and Alaskan communities.
4. Expensive terminal and road projects should be considered only after funding has been put into improving the ferry service.
5. Improvements should be made to ease connectivity between other modes of transport including bike infrastructure, kayak/paddle board accommodations, freight, and road connections.
6. The service is cost prohibitive for small communities and deems the trip out of reach for many customers.
7. Frequency of service needs to increase to meet the needs of Alaskan communities.

ATTACHMENTS

- 2023 Community Needs Survey Results
- NADO Business Interview Summary Report

2045 LONG-RANGE PLAN

PUBLIC SURVEY FINDINGS SUMMARY

The 2045 Long-Range Plan (LRP) Public Survey sought to gain specific insight into the communities that the Alaska Marine Highway System serves as we continue to develop the LRP. This feedback, along with the many other data points referenced in this project, we are working to develop future service levels that suit each community's specific conditions and needs.

This survey was open between October 24th and November 7th and welcomed input from individuals and communities across Alaska. Some promotion methods included:

SPECIFIC OUTREACH

Ferry Focus Group
Cross Gulf, Homer/Kodiak, PWS, Southern SE, Northern SE, SW/Aleutian Chain

Public Open House

SEC Transportation Committee

LOCAL DISTRIBUTION

Newspapers
Kodiak Daily Mirror, Ketchikan Daily News, Juneau Empire, Alaska Public Media, Wrangell Sentinel

Local Radio Broadcast (KRBD)

Community Facebook Pages

AGENCY-LED PROMOTION

AMHS Webpages

AMHS/DOT&PF Facebook Pages

E-Blast GovDelivery

WHAT DID WE ASK?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon the Alaska Marine Highway ferry system to provide?

Which Alaskan communities are you most often traveling to?

ALTERNATIVE TRANSPORTATION

What alternative transportation (non-ferry) modes are available to your community?

Are there any limitations to the alternative transportation modes available in your community?

SERVICE LEVELS

What amount of AMHS ferry service do you believe is essential for your community?

What amount of AMHS ferry service do you believe your community needs to support economic growth?

WHAT IS THE AMHS 2045 LONG-RANGE PLAN?

The AMHS Long-Range Plan sets out to guide the operation and management of AMHS fleet and terminal infrastructure for the next 20 years.

Phase 1 of this effort began in the Spring of 2023 and concluded in August of 2023. Preview the Phase 1 Draft, which provides recommendations for a three-year Capital and Operational Budget through Fiscal Year 2026.

Scan to visit the LRP Project page

Phase 2 is underway and will take place through 2024, which will forecast out 20 years, with operational, budget, sustainability, and resiliency recommendations through 2045.

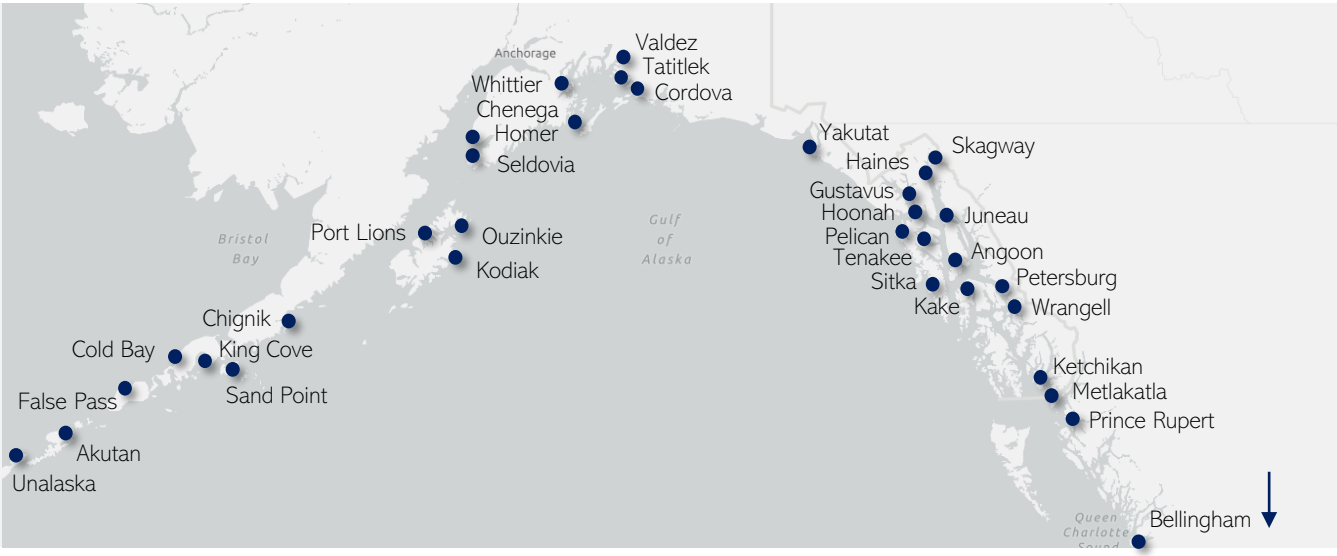
There are plenty of opportunities for public involvement through each phase of this process - in fact, we couldn't do it without you! Whether you're interested in attending public meetings, sharing your input online, or just want to stay up do date on our website, your participation and interest is greatly valued.

SYSTEM-WIDE

PUBLIC SURVEY FINDINGS SUMMARY

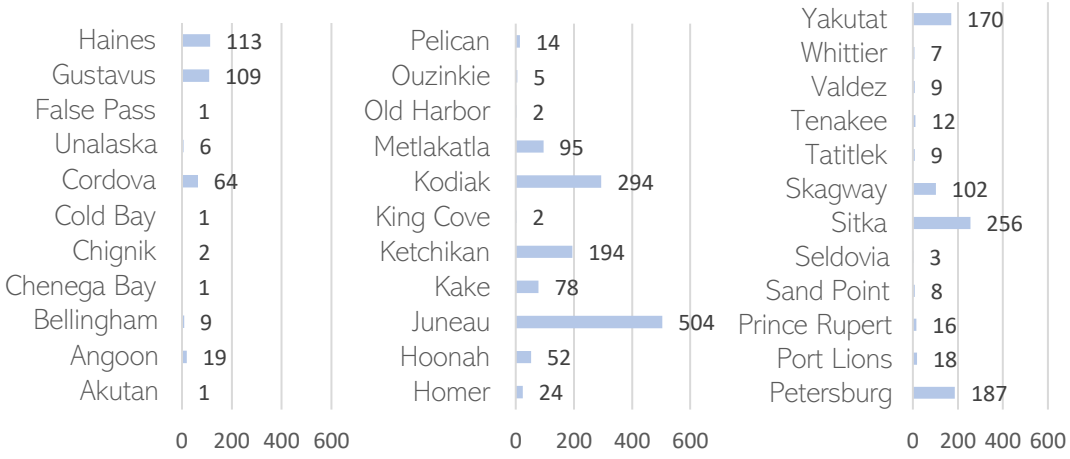
68 Communities Represented

2,630 Individual Responses



COMMUNITY PARTICIPATION

The data below represents number of individual respondents per community. Communities with low participation are encouraged to share feedback by following the link on the LRP website.



INCLUDING FEEDBACK FROM:

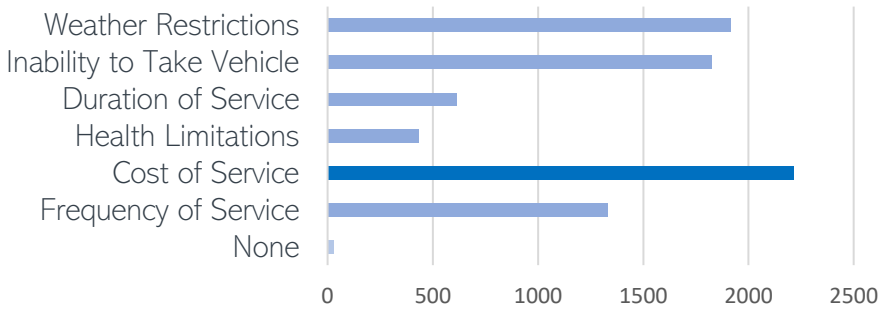
Anchorage
Kupreanof
Seattle
Saint Paul Island
Eagle River
Prince of Wales
Big Lake
Akhiok
Kenai
Klawok
Kasaan
Thorne Bay
Seward
Sterling
Iskut
Dillingham
Fairbanks
British Columbia
Hydaburg
Alitak
Chiniak
Elfin Cove
Palmer
Naukati Bay
Hollis
Douglas
Mat-Su
Wasilla
Craig
Moose Pass
Kennecott
Inglis
Houston
Portland, OR
Finleyville, PA

ALTERNATIVE TRANSPORTATION

Only **8.9%** of respondents report having **access to the federal highway**

67% of respondents report having **access to plane service**

LIMITATIONS TO ALTERNATIVE TRANSPORTATION:



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

79% **to connect to the Lower 48.**

About 70% travel **to access shopping and groceries.**

69% **to connect to the federal highway.**

50% travel **to access medical care and appointments.**

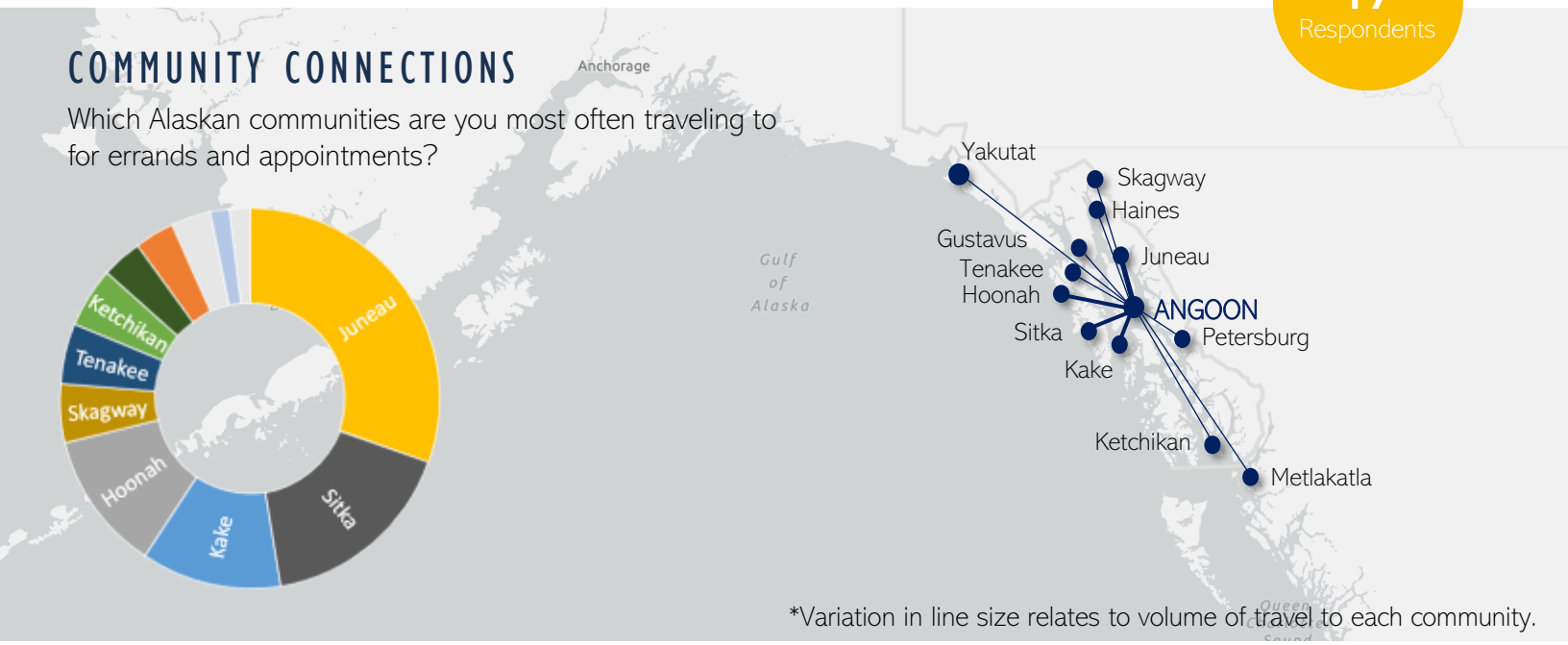
ANGOON

PUBLIC SURVEY FINDINGS SUMMARY

19
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



*Variation in line size relates to volume of travel to each community.

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	15%
VEHICLE REPAIR	84%	CULTURAL EXCHANGE	68%
ROAD ACCESS	37%	SPORTING EVENTS	89%
CONNECT TO LOWER 48	47%	TRAVEL IN THE AMHS	79%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

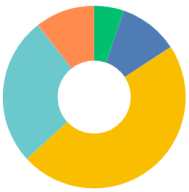
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

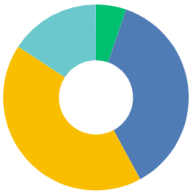
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Historical and current service levels and fleet composition are represented below, with reference to the key above.

	Historical (2009)	Current (2022)
Service Levels	A few times a week	About once a week
Fleet	LECONTE	LECONTE TAZLINA

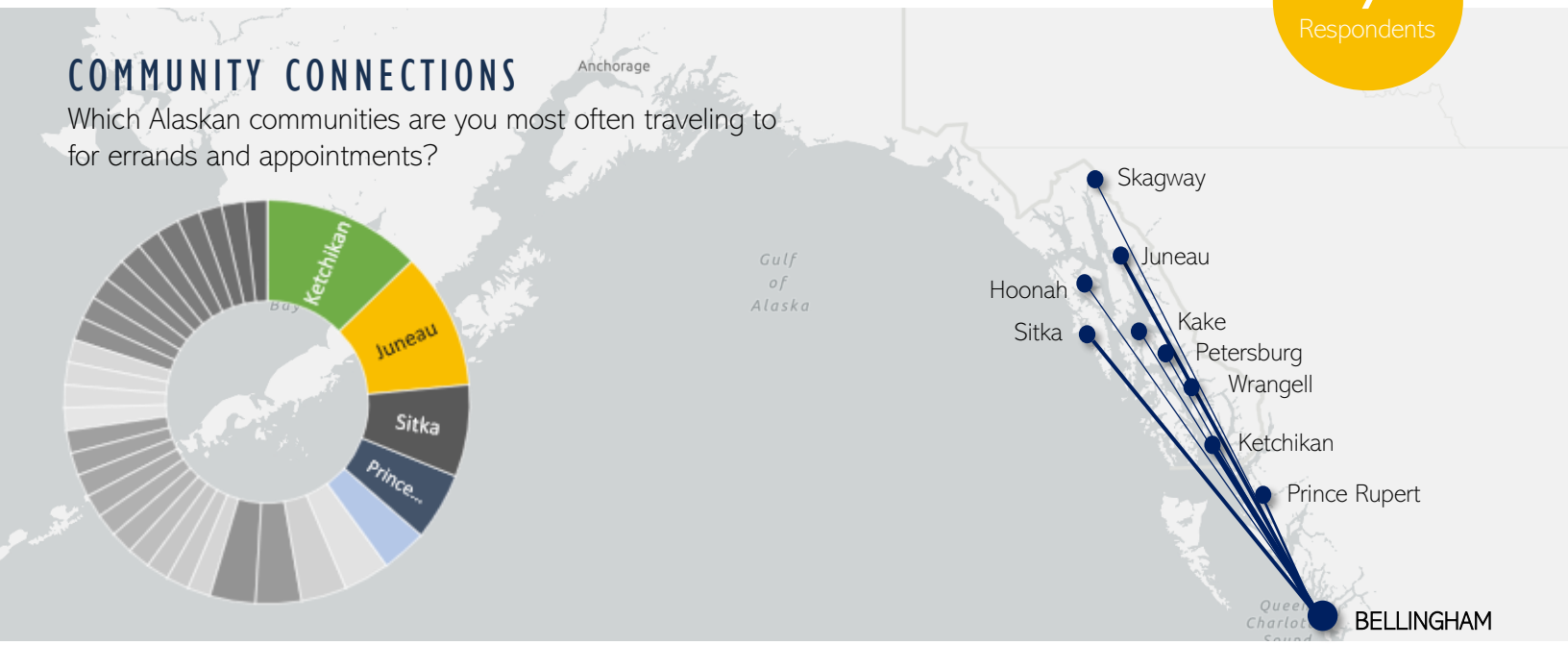
BELLINGHAM

PUBLIC SURVEY FINDINGS SUMMARY

9
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	33%	EDUCATION	-
VEHICLE REPAIR	-	CULTURAL EXCHANGE	50%
ROAD ACCESS	-	SPORTING EVENTS	-
CONNECT TO LOWER 48	66%	TRAVEL IN THE AMHS	100%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

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ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Historical and current service levels and fleet composition are represented below, with reference to the key above.

	Historical (2009)	Current (2022)
Service Levels	About once a week	About once a week
Fleet	MALASPINA, COLUMBIA	MATANUSKA, KENNICOTT

GUSTAVUS

PUBLIC SURVEY FINDINGS SUMMARY

109 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 95%	EDUCATION 20%
VEHICLE REPAIR 82%	CULTURAL EXCHANGE 56%
ROAD ACCESS 66%	SPORTING EVENTS 47%
CONNECT TO LOWER 48 84%	TRAVEL IN THE AMHS 91%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
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Mode such as plane service does not allow for vehicle transportation.

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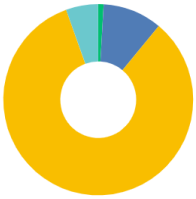
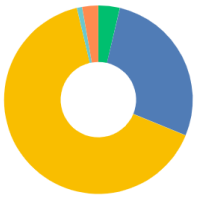
What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	-	A few times a week
Fleet	AMHS Service not provided to Gustavus in 2009	TAZLINA LECONTE

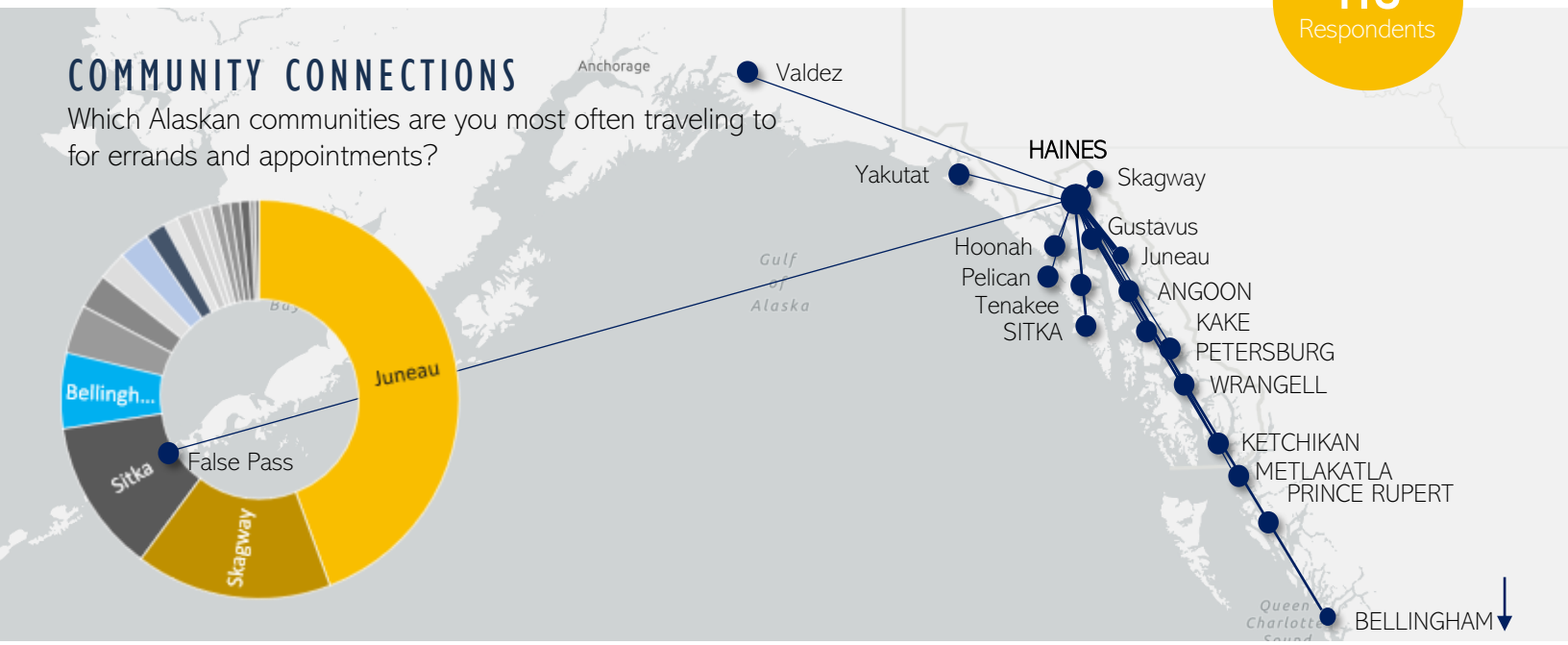
HAINES

PUBLIC SURVEY FINDINGS SUMMARY

113
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	76%	EDUCATION	11%
VEHICLE REPAIR	80%	CULTURAL EXCHANGE	53%
ROAD ACCESS	23%	SPORTING EVENTS	57%
CONNECT TO LOWER 48	63%	TRAVEL IN THE AMHS	86%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

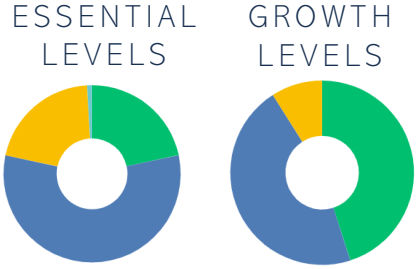
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	Daily service
Fleet	CHENEGA, COLUMBIA, FAIRWEATHER, KENNICOTT, LECONTE, MALASPINA, MATANUSKA, TAKU	KENNICOTT, LECONTE, TAZLINA, MATANUSKA

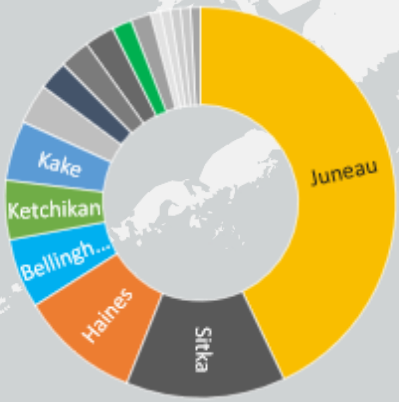
HOONAH

PUBLIC SURVEY FINDINGS SUMMARY

52
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	12%
VEHICLE REPAIR	83%	CULTURAL EXCHANGE	54%
ROAD ACCESS	60%	SPORTING EVENTS	58%
CONNECT TO LOWER 48	67%	TRAVEL IN THE AMHS	77%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

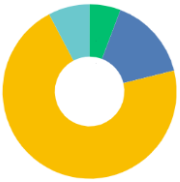
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	A few times a week
Fleet	AURORA, LECONTE, MALASPINA, MATANUSKA, TAKU	LECONTE, MATANUSKA, TAZLINA

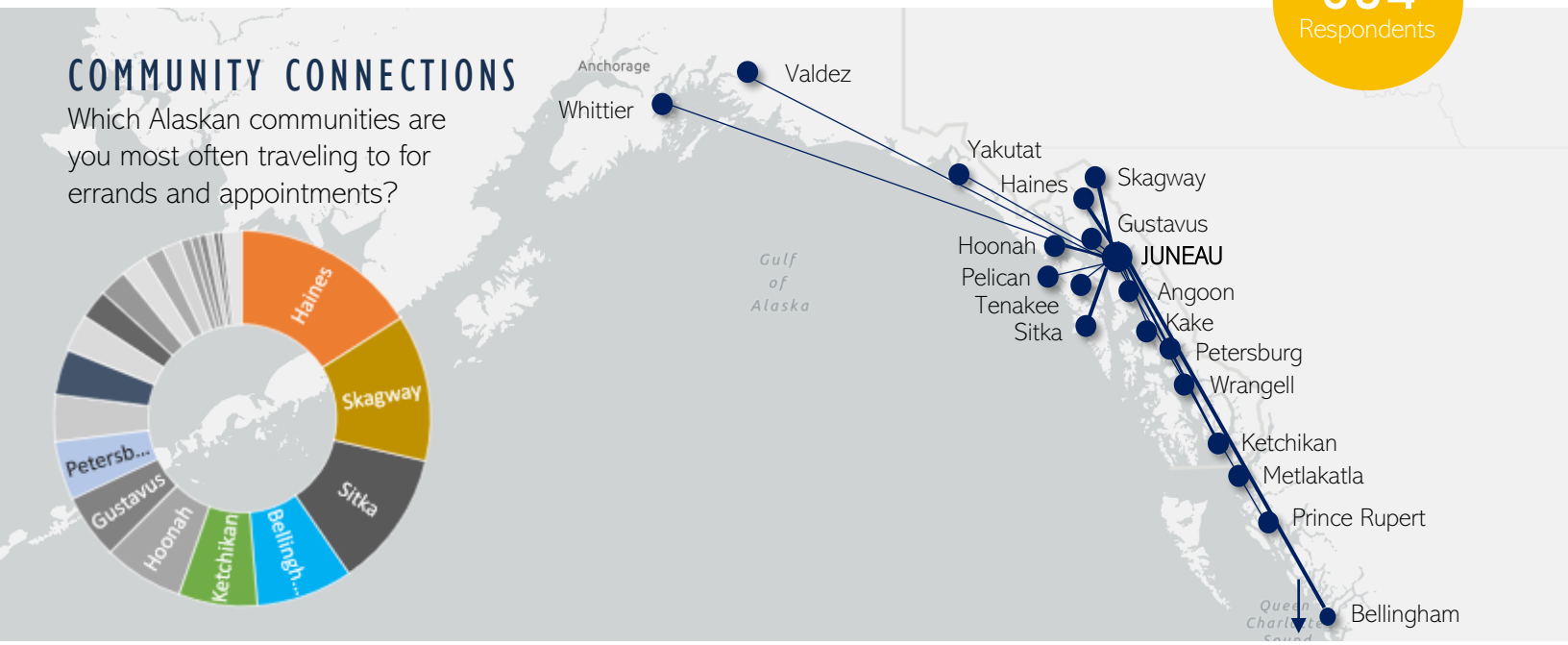
JUNEAU

PUBLIC SURVEY FINDINGS SUMMARY

504 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 34%	EDUCATION 15%
VEHICLE REPAIR 30%	CULTURAL EXCHANGE 68%
ROAD ACCESS 80%	SPORTING EVENTS 89%
CONNECT TO LOWER 48 86%	TRAVEL IN THE AMHS 79%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

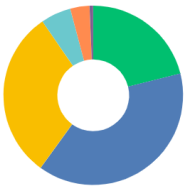
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

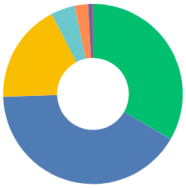
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	Daily service
Fleet	CHENEGA, COLUMBIA, FAIRWEATHER, KENNICOTT, LECONTE, MALASPINA, MATANUSKA, TAKU	KENNICOTT, LECONTE, TAZLINA, MATANUSKA

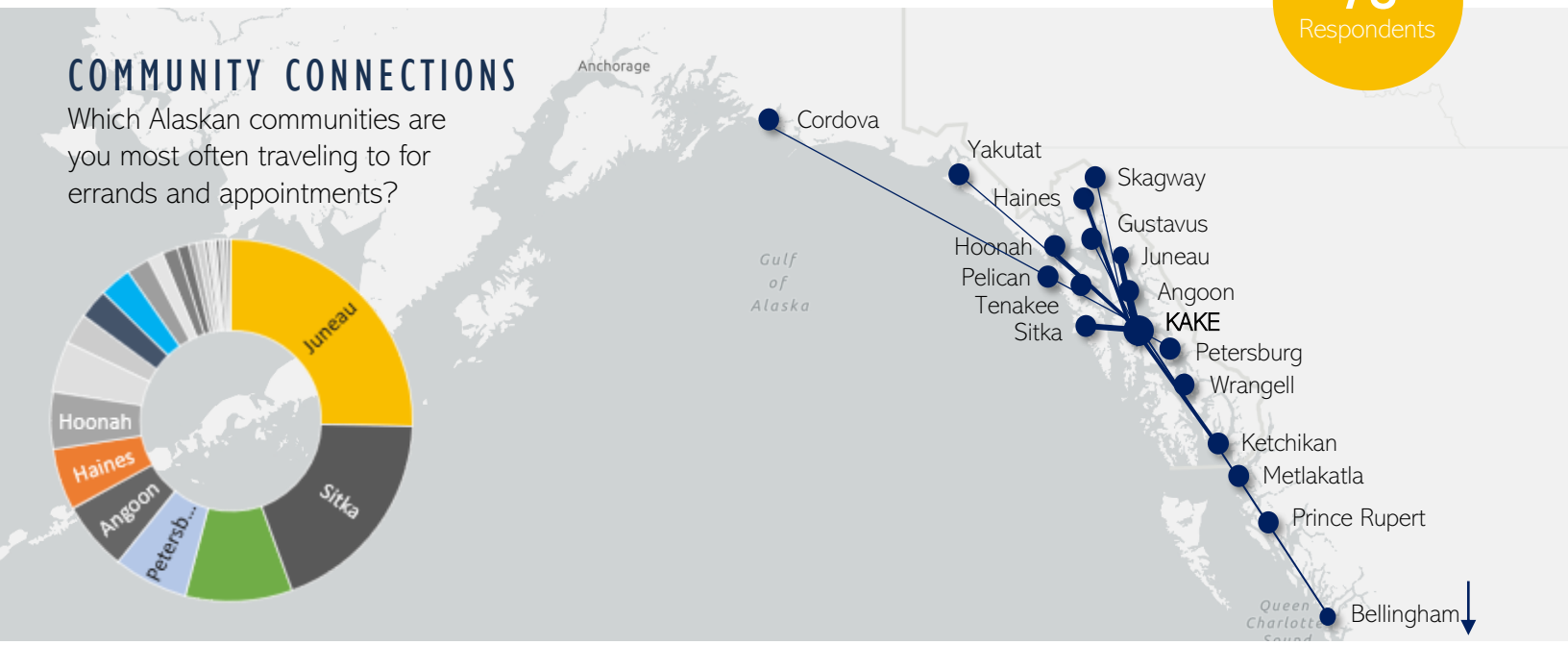
KAKE

PUBLIC SURVEY FINDINGS SUMMARY

78
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	89%	EDUCATION	22%
VEHICLE REPAIR	89%	CULTURAL EXCHANGE	58%
ROAD ACCESS	56%	SPORTING EVENTS	70%
CONNECT TO LOWER 48	58%	TRAVEL IN THE AMHS	91%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

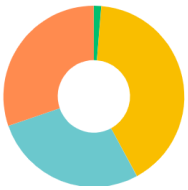
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

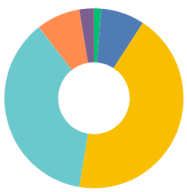
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	A few times a week	About once a week
Fleet	MALASPINA, MATANUSKA, TAKU	MATANUSKA, LECONTE

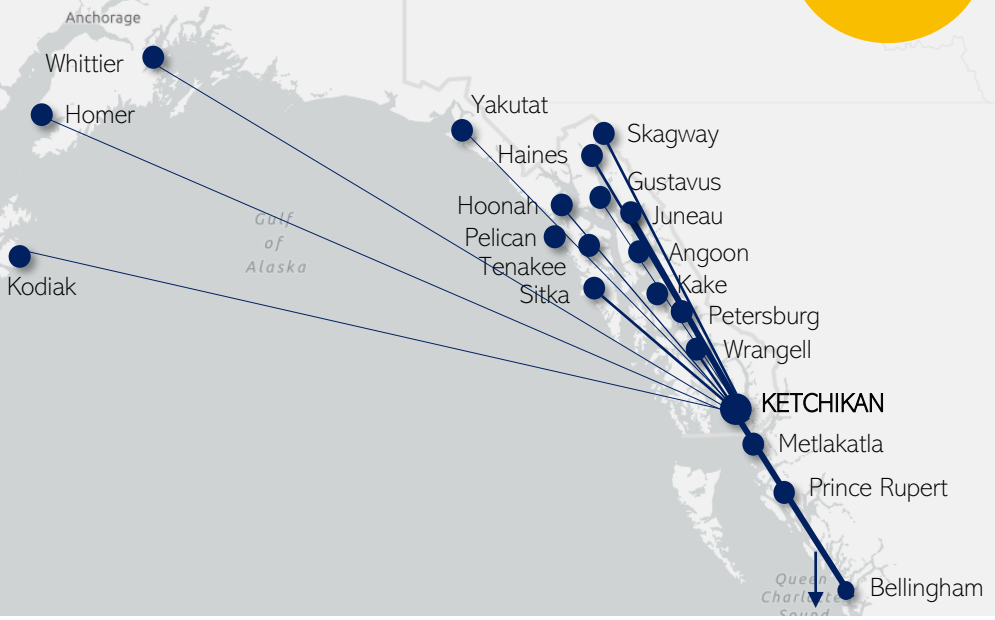
KETCHIKAN

PUBLIC SURVEY FINDINGS SUMMARY

194
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 45.6%	EDUCATION 32%
VEHICLE REPAIR 59%	CULTURAL EXCHANGE 56%
ROAD ACCESS 74%	SPORTING EVENTS 64%
CONNECT TO LOWER 48 94%	TRAVEL IN THE AMHS 90%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

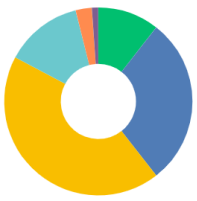
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

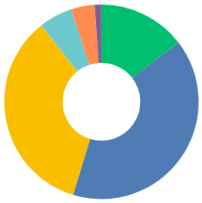
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	Daily service
Fleet	COLUMBIA, LITUYA, KENNICOTT, TAKU, MALASPINA, MATANUSKA	KENNICOTT, LITUYA, MATANUSKA

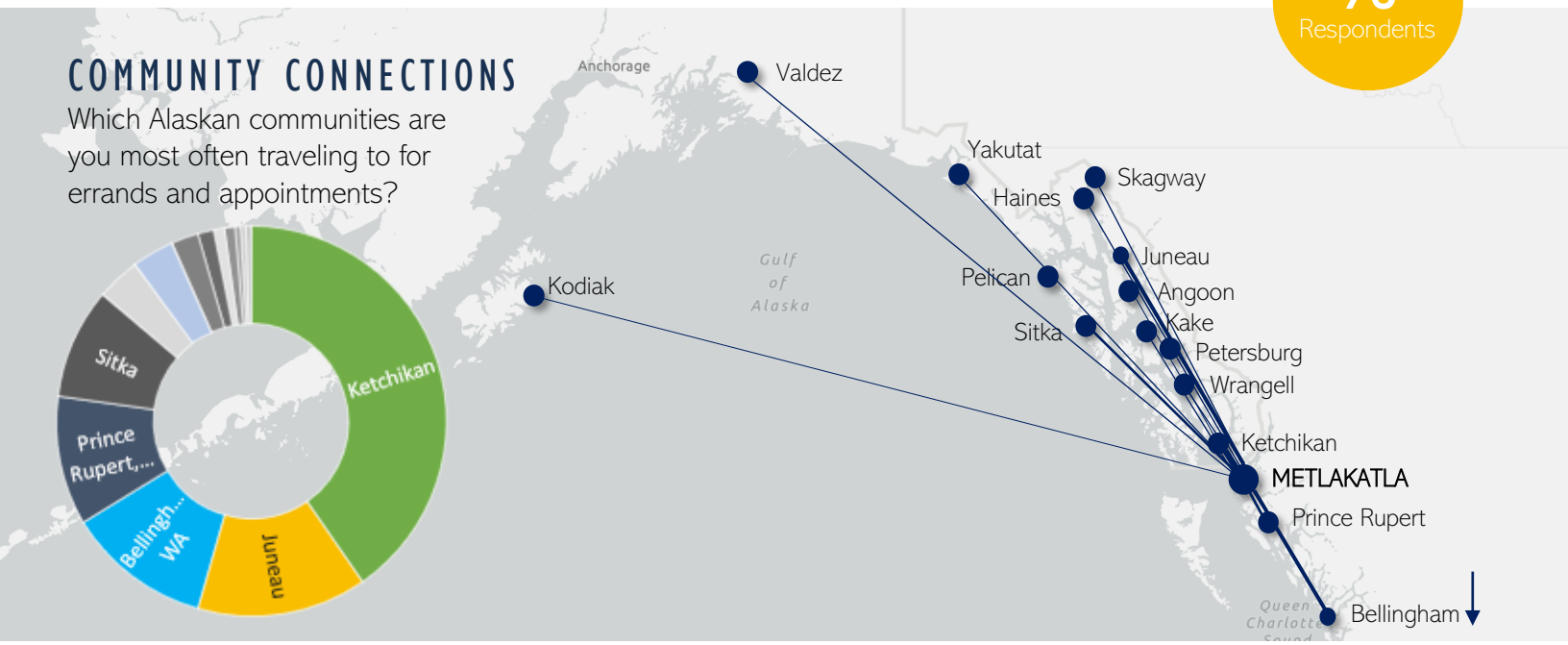
METLAKATLA

PUBLIC SURVEY FINDINGS SUMMARY

95 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 46%	EDUCATION 11%
VEHICLE REPAIR 59%	CULTURAL EXCHANGE 56%
ROAD ACCESS 74%	SPORTING EVENTS 64%
CONNECT TO LOWER 48 94%	TRAVEL IN THE AMHS 90%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

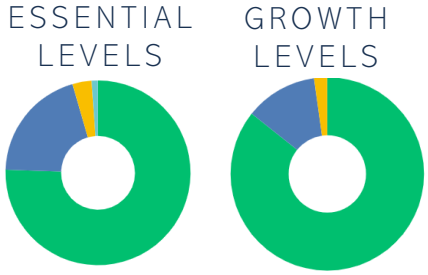
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	Daily service
Fleet	LITUYA	LITUYA

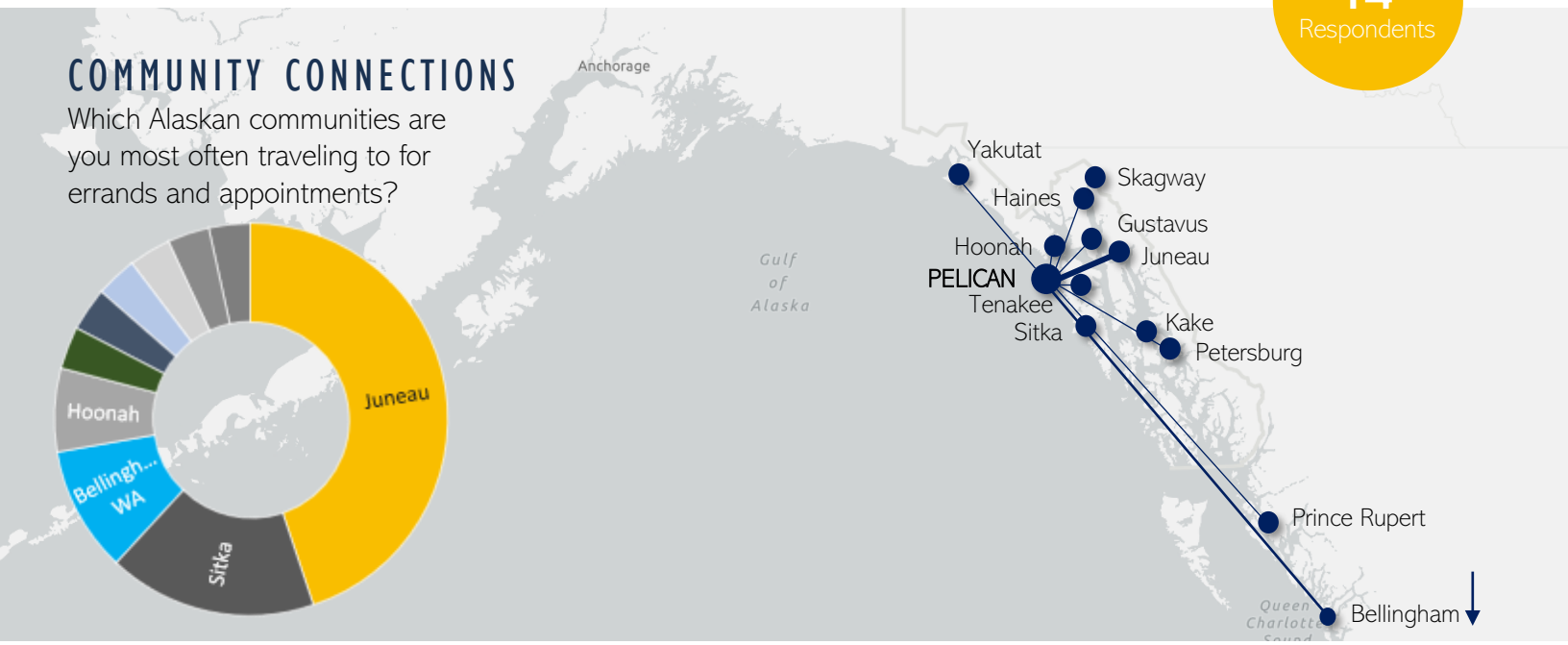
PELICAN

PUBLIC SURVEY FINDINGS SUMMARY

14
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 100%	EDUCATION 25%
VEHICLE REPAIR 64%	CULTURAL EXCHANGE 57%
ROAD ACCESS 64%	SPORTING EVENTS 43%
CONNECT TO LOWER 48 79%	TRAVEL IN THE AMHS 64%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	A few times a month	Once a month
Fleet	LECONTE	LECONTE

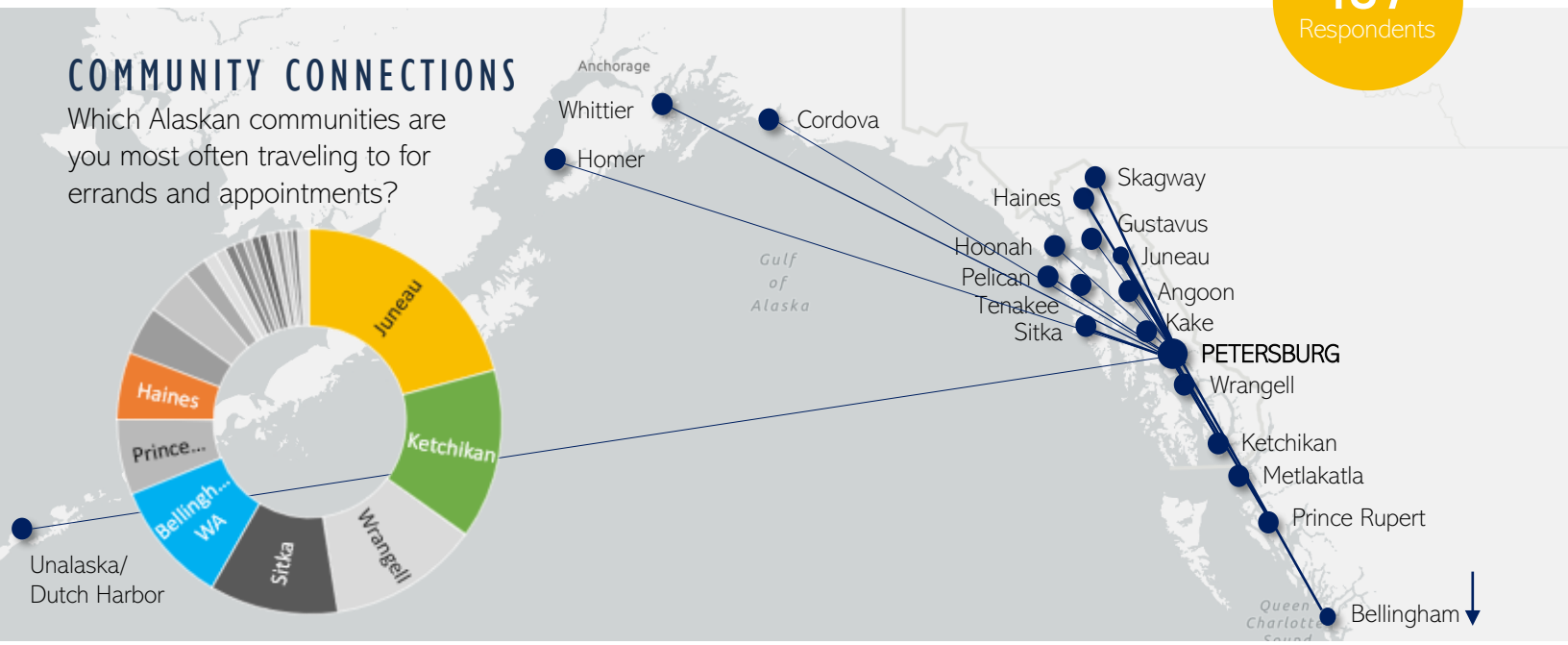
PETERSBURG

PUBLIC SURVEY FINDINGS SUMMARY

187 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 70%	EDUCATION 12%
VEHICLE REPAIR 88%	CULTURAL EXCHANGE 55%
ROAD ACCESS 81%	SPORTING EVENTS 66%
CONNECT TO LOWER 48 90%	TRAVEL IN THE AMHS 92%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

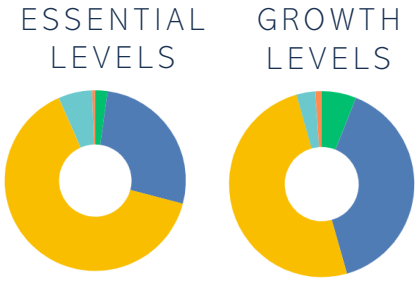
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	A few times a week
Fleet	CHENEGA, COLUMBIA, FAIRWEATHER, KENNICOTT, TAKU, MALASPINA, MATANUSKA	MATANUSKA, KENNICOTT

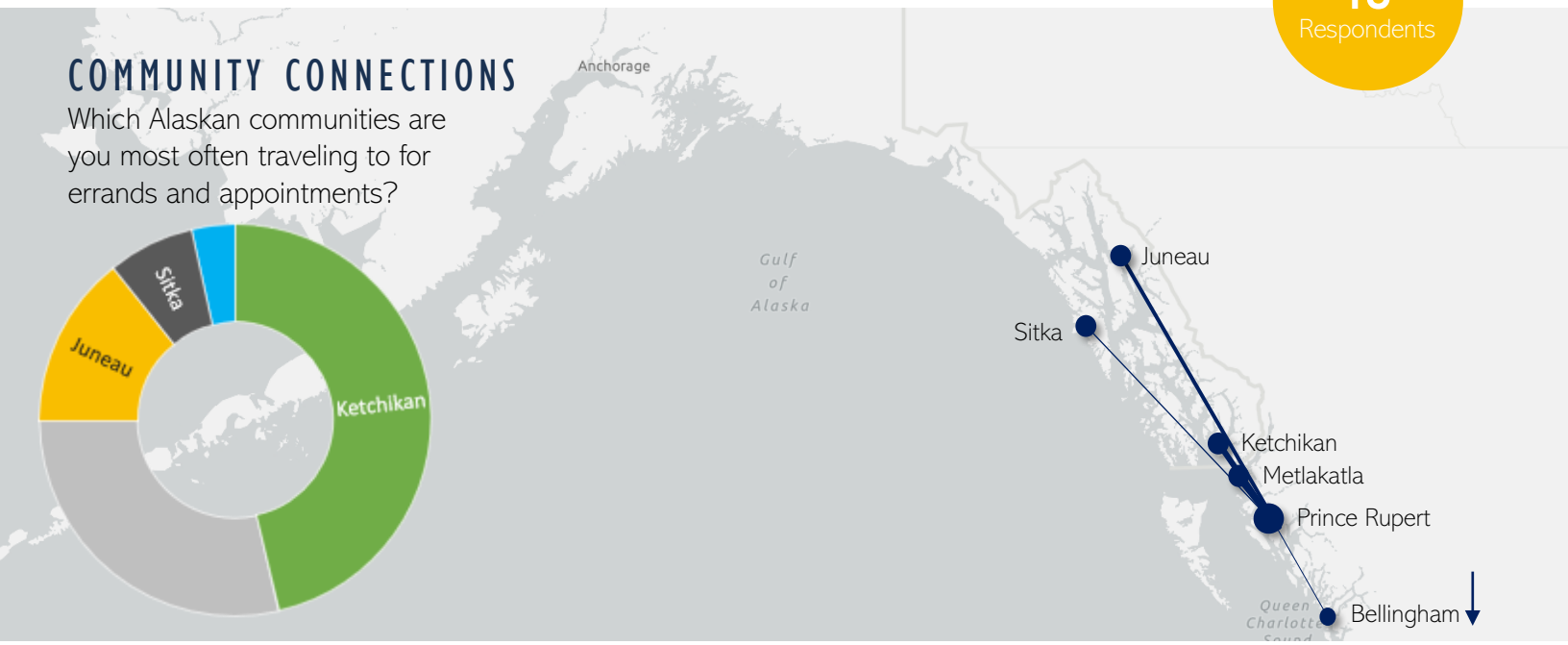
PRINCE RUPERT

PUBLIC SURVEY FINDINGS SUMMARY

16 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 10%	EDUCATION 13%
VEHICLE REPAIR 7%	CULTURAL EXCHANGE 80%
ROAD ACCESS 27%	SPORTING EVENTS 53%
CONNECT TO LOWER 48 13%	TRAVEL IN THE AMHS 93%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	A few times a week	A few times a month
Fleet	KENNICOTT, TAKU, MALASPINA, MATANUSKA	KENNICOTT

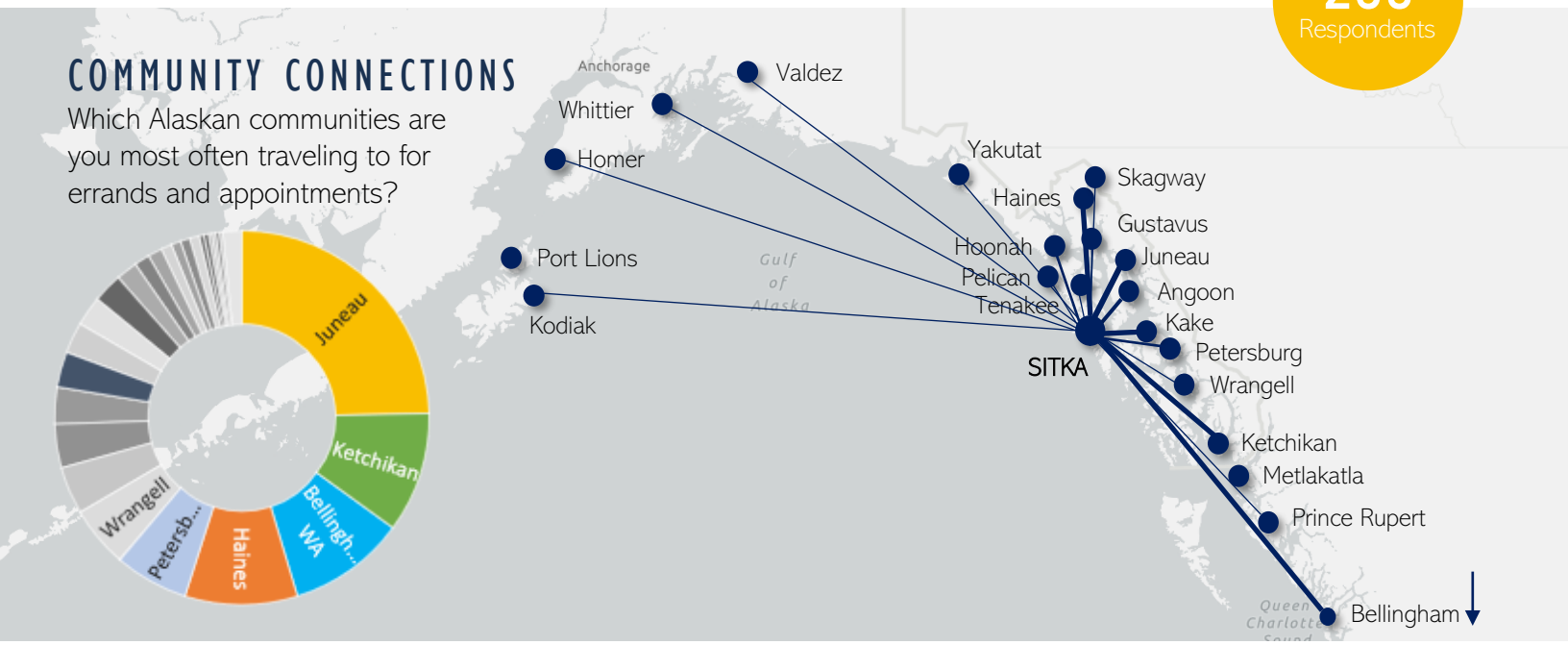
SITKA

PUBLIC SURVEY FINDINGS SUMMARY

256
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	79%	EDUCATION	10%
VEHICLE REPAIR	76%	CULTURAL EXCHANGE	57%
ROAD ACCESS	72%	SPORTING EVENTS	65%
CONNECT TO LOWER 48	81%	TRAVEL IN THE AMHS	88%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

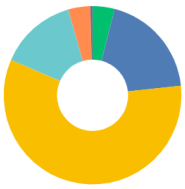
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

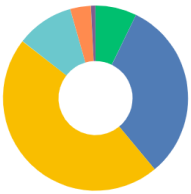
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	A few times a week
Fleet	CHENEGA COLUMBIA FAIRWEATHER KENNICOTT LECONTE MALASPINA MATANUSKA TAKU	LECONTE MATANUSKA KENNICOTT

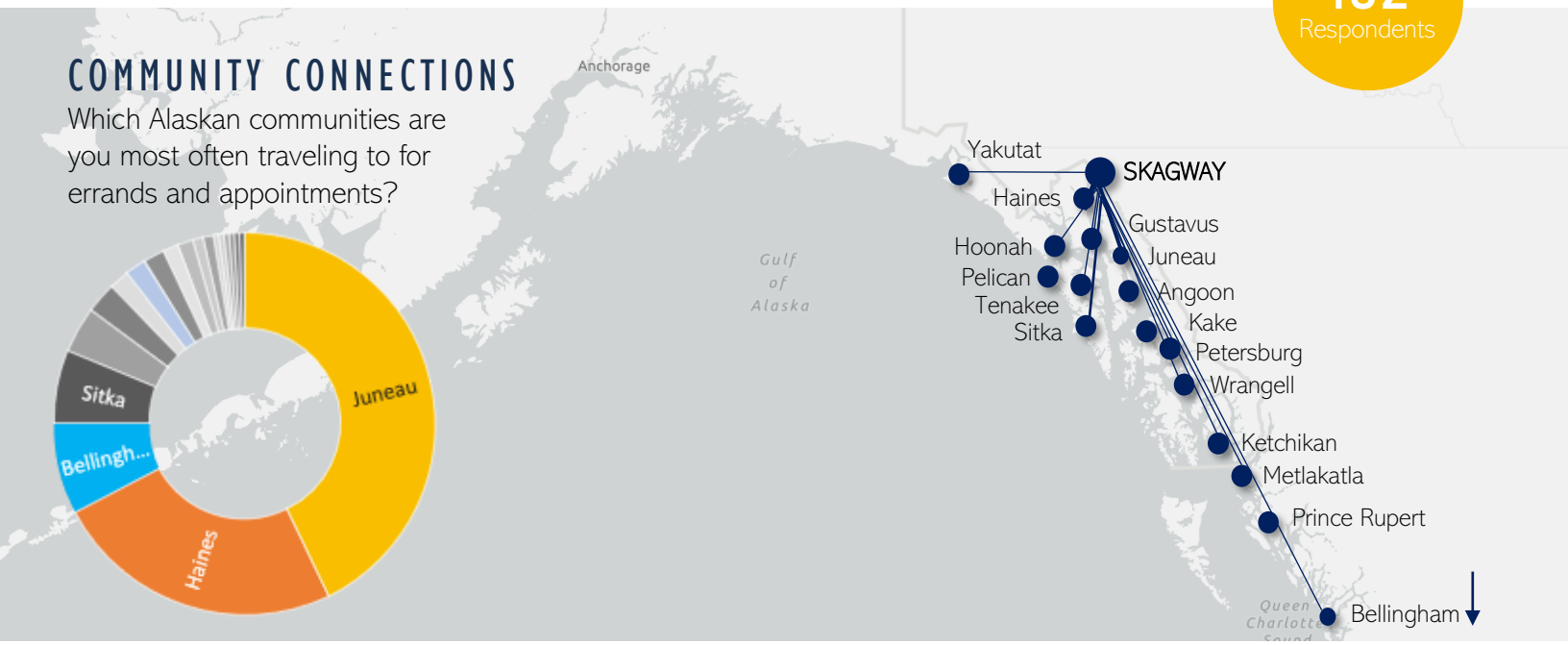
SKAGWAY

PUBLIC SURVEY FINDINGS SUMMARY

102 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	73%	EDUCATION	11%
VEHICLE REPAIR	79%	CULTURAL EXCHANGE	46%
ROAD ACCESS	31%	SPORTING EVENTS	59%
CONNECT TO LOWER 48	73%	TRAVEL IN THE AMHS	85%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

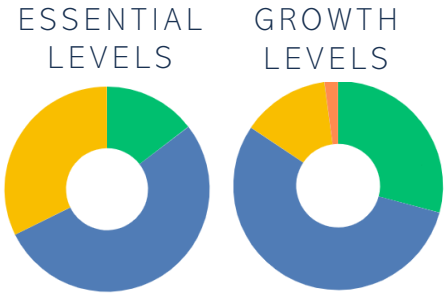
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	Four/five times a week
Fleet	CHENEGA, COLUMBIA, FAIRWEATHER, KENNICOTT, LECONTE, MALASPINA, MATANUSKA, TAKU	LECONTE, MATANUSKA, KENNICOTT, TAZLINA

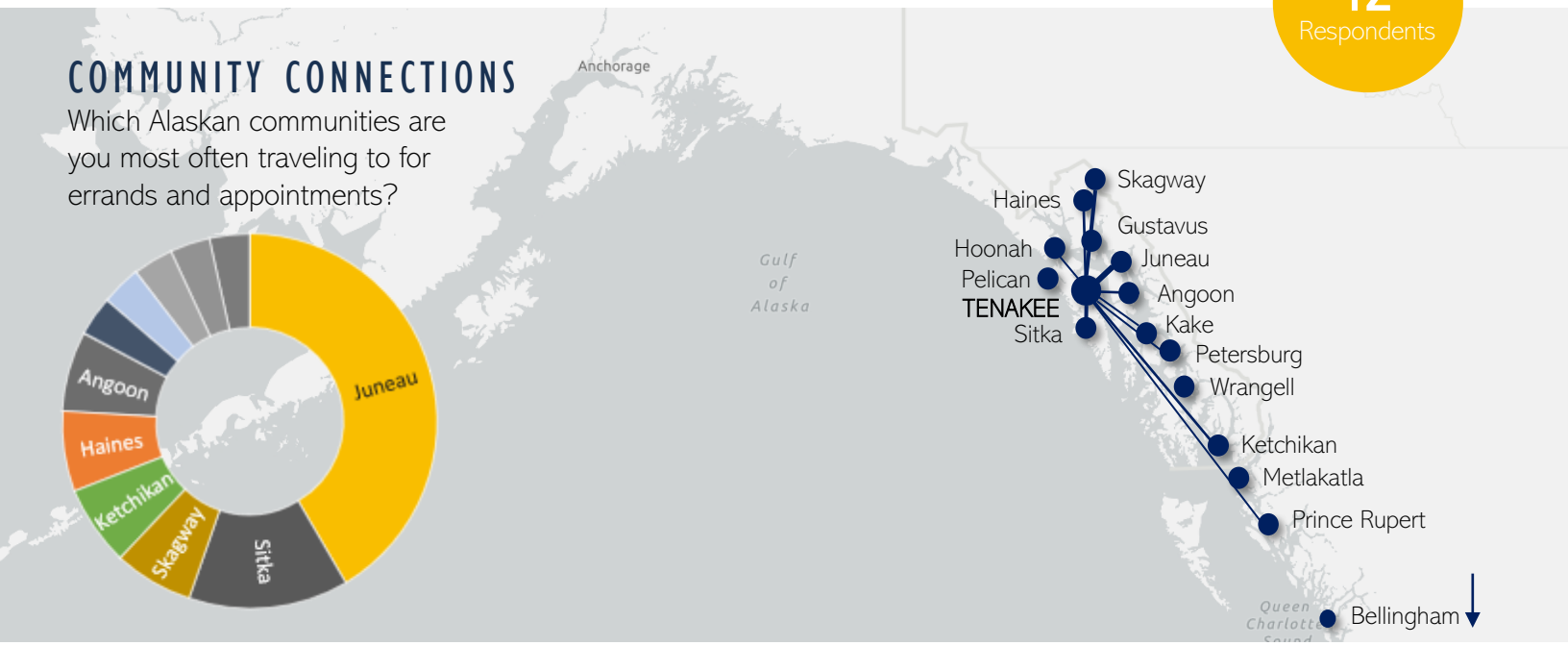
TENAKEE

PUBLIC SURVEY FINDINGS SUMMARY

12
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 100%	EDUCATION 25%
VEHICLE REPAIR 8%	CULTURAL EXCHANGE 50%
ROAD ACCESS 67%	SPORTING EVENTS 25%
CONNECT TO LOWER 48 83%	TRAVEL IN THE AMHS 92%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

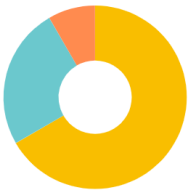
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	A few times a week	About once a week
Fleet	LECONTE	LECONTE

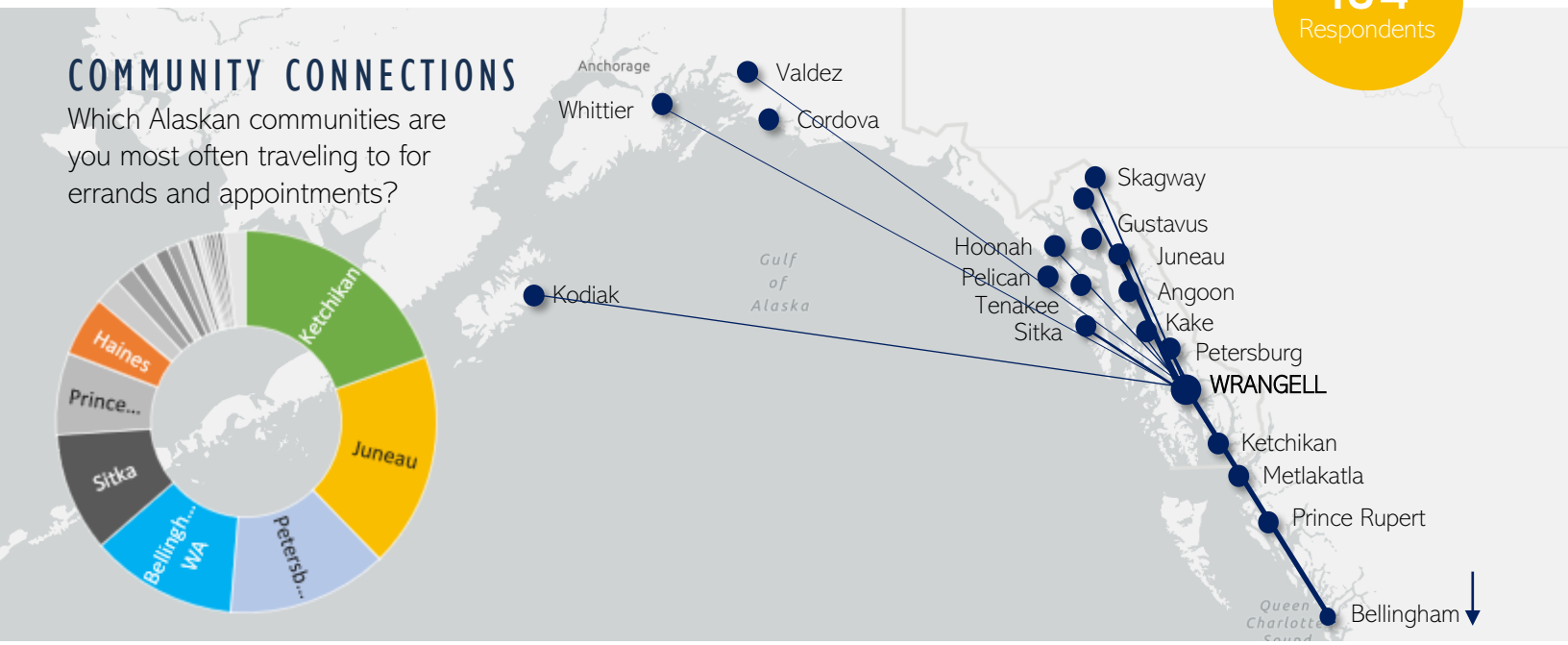
WRANGELL

PUBLIC SURVEY FINDINGS SUMMARY

134
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 63%	EDUCATION 16%
VEHICLE REPAIR 84%	CULTURAL EXCHANGE 58%
ROAD ACCESS 67%	SPORTING EVENTS 64%
CONNECT TO LOWER 48 89%	TRAVEL IN THE AMHS 95%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

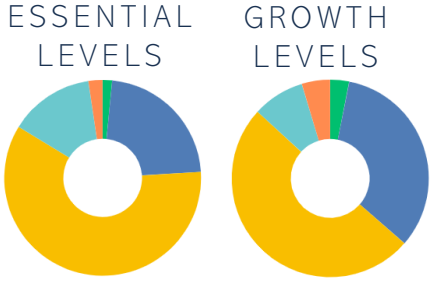
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	A few times a week
Fleet	TAKU, COLUMBIA, MALASPINA, KENNICOTT, MATANUSKA	KENNICOTT

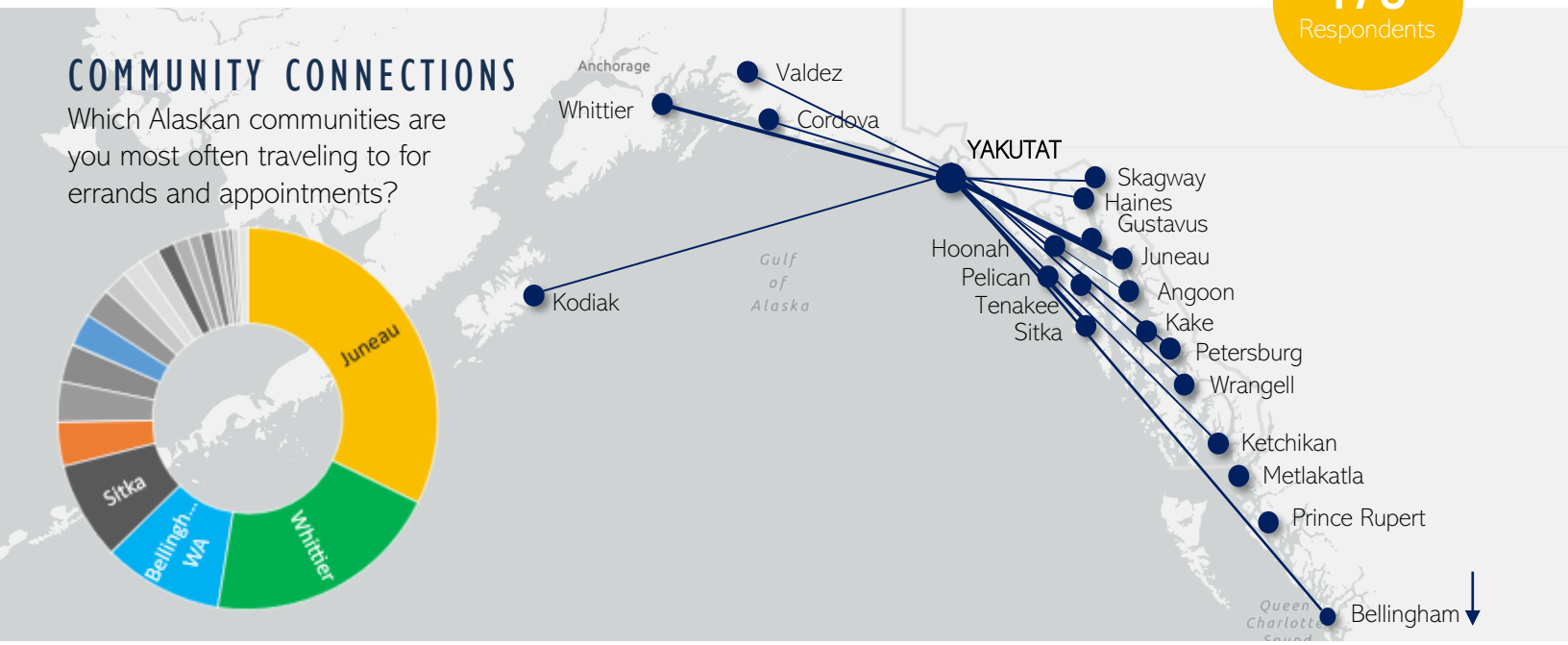
YAKUTAT

PUBLIC SURVEY FINDINGS SUMMARY

170
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 81%	EDUCATION 15%
VEHICLE REPAIR 95%	CULTURAL EXCHANGE 51%
ROAD ACCESS 75%	SPORTING EVENTS 45%
CONNECT TO LOWER 48 74%	TRAVEL IN THE AMHS 73%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

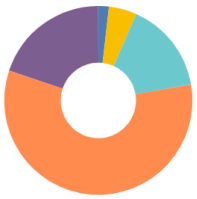
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

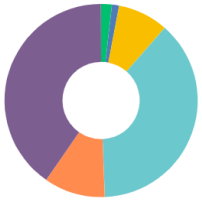
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	A few times a month
Fleet	KENNICOTT	KENNICOTT

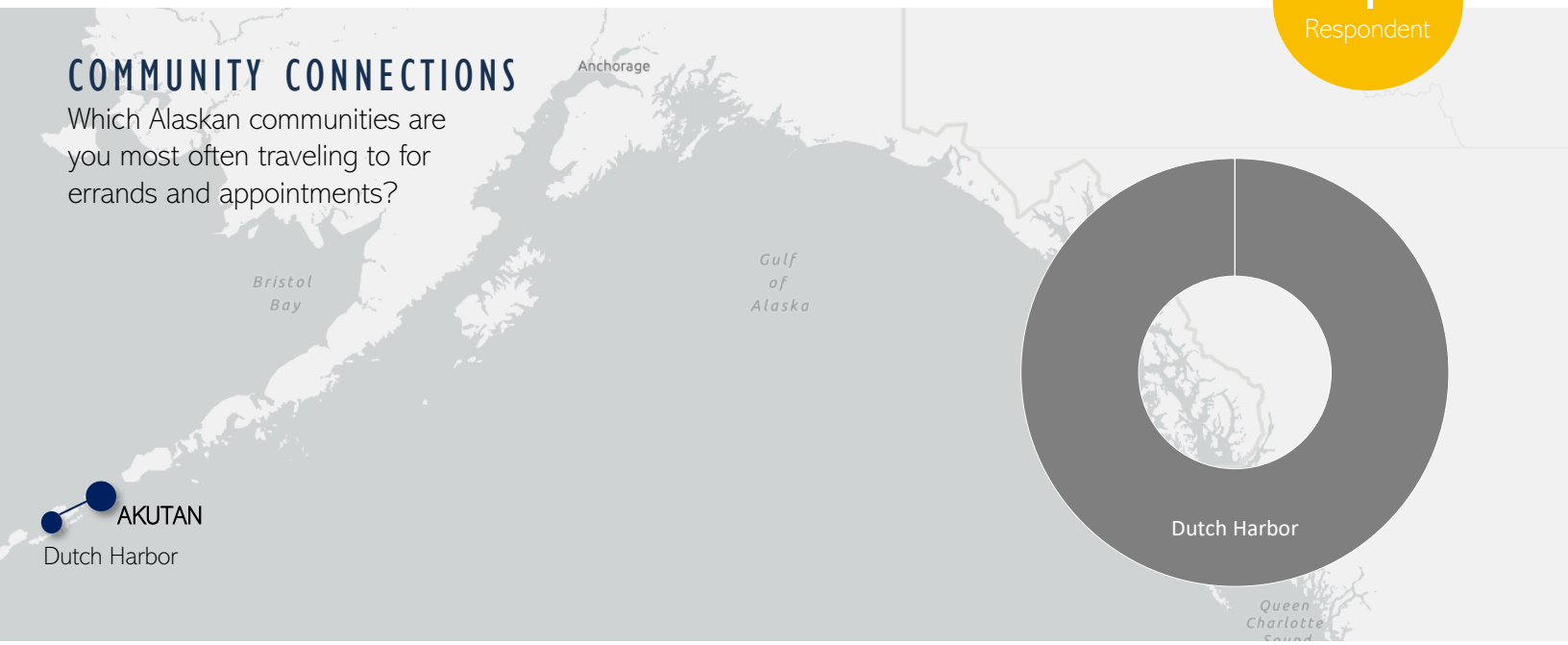
AKUTAN

PUBLIC SURVEY FINDINGS SUMMARY

1
Respondent

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	100%
VEHICLE REPAIR	100%	CULTURAL EXCHANGE	100%
ROAD ACCESS	-	SPORTING EVENTS	-
CONNECT TO LOWER 48	-	TRAVEL IN THE AMHS	100%

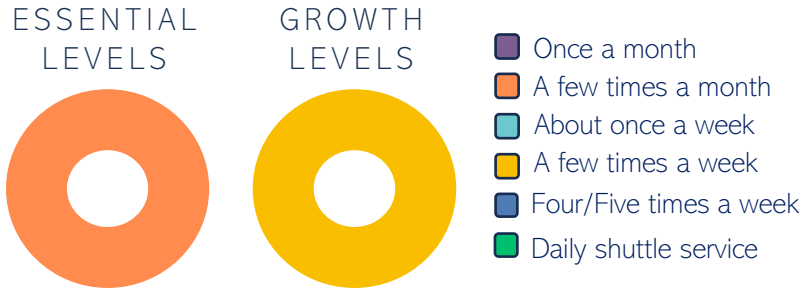
ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	Once a month
Fleet	TUSTUMENA	TUSTUMENA

CHENEGA

PUBLIC SURVEY FINDINGS SUMMARY

2
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 100%	EDUCATION 100%
VEHICLE REPAIR 100%	CULTURAL EXCHANGE 100%
ROAD ACCESS 100%	SPORTING EVENTS 100%
CONNECT TO LOWER 48 100%	TRAVEL IN THE AMHS 100%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options?

- **Weather restrictions:** Difficulty using alternative modes due to ice, snow, etc.
- **Cost of service:** Using the alternative mode is more costly than the cost of the ferry.
- **Inability to take vehicle:** Mode does not allow for vehicle transportation.
- **Frequency of service:** Mode does not run as often as ferry service.
- **Duration of service:** Using the alternative mode takes longer than a ferry trip would.
- **Health limitations:** Personal health concerns may prevent the use of plane service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	A few times a month
Fleet	AURORA, KENNICOTT	AURORA, KENNICOTT

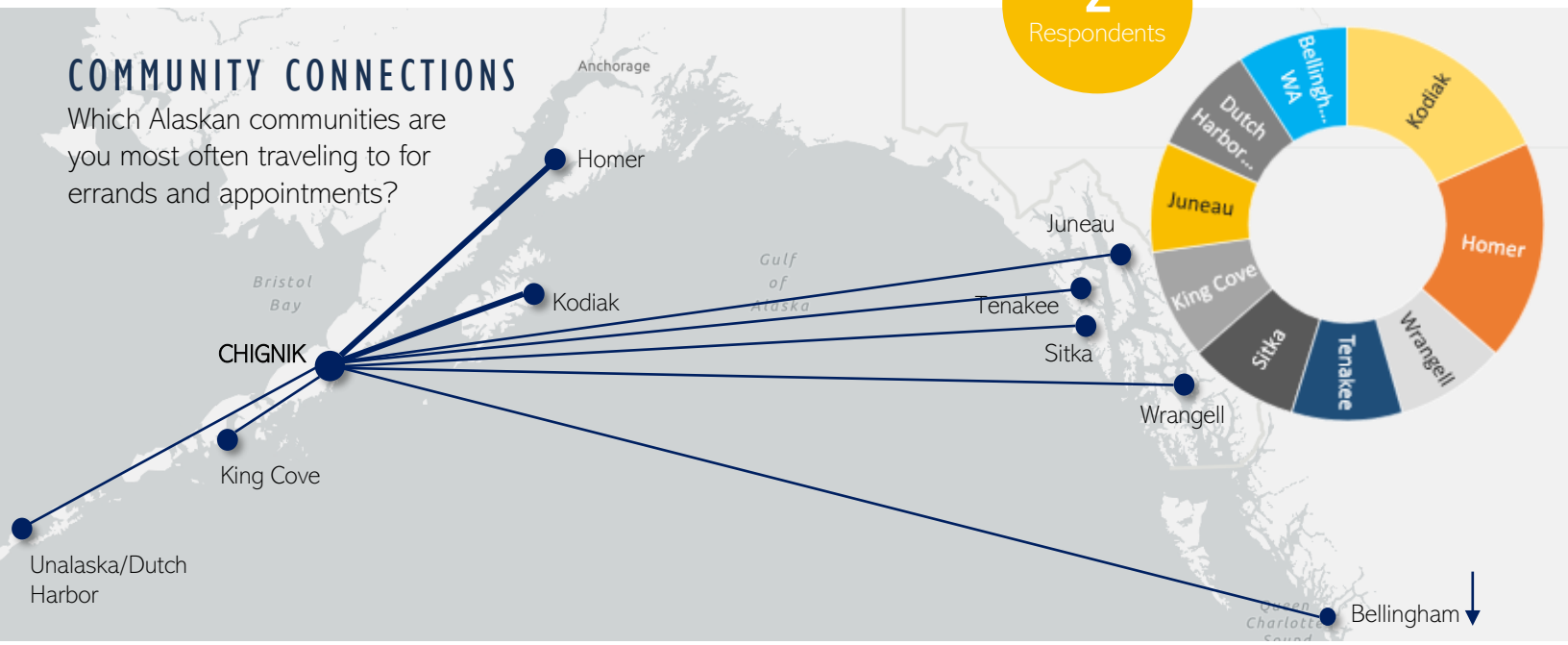
CHIGNIK

PUBLIC SURVEY FINDINGS SUMMARY

2
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	50%
VEHICLE REPAIR	100%	CULTURAL EXCHANGE	100%
ROAD ACCESS	100%	SPORTING EVENTS	50%
CONNECT TO LOWER 48	100%	TRAVEL IN THE AMHS	100%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	A few times a month
Fleet	TUSTUMENA	TUSTUMENA KENNICOTT

COLD BAY

PUBLIC SURVEY FINDINGS SUMMARY

1 Respondent

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	-
VEHICLE REPAIR	-	CULTURAL EXCHANGE	100%
ROAD ACCESS	-	SPORTING EVENTS	-
CONNECT TO LOWER 48	-	TRAVEL IN THE AMHS	100%

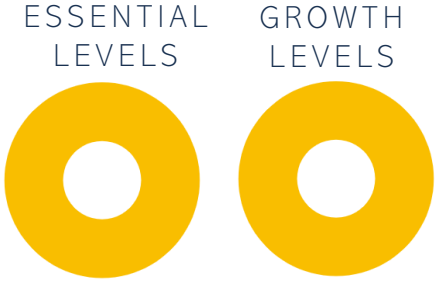
ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	A few times a month
Fleet	TUSTUMENA	TUSTUMENA KENNICOTT

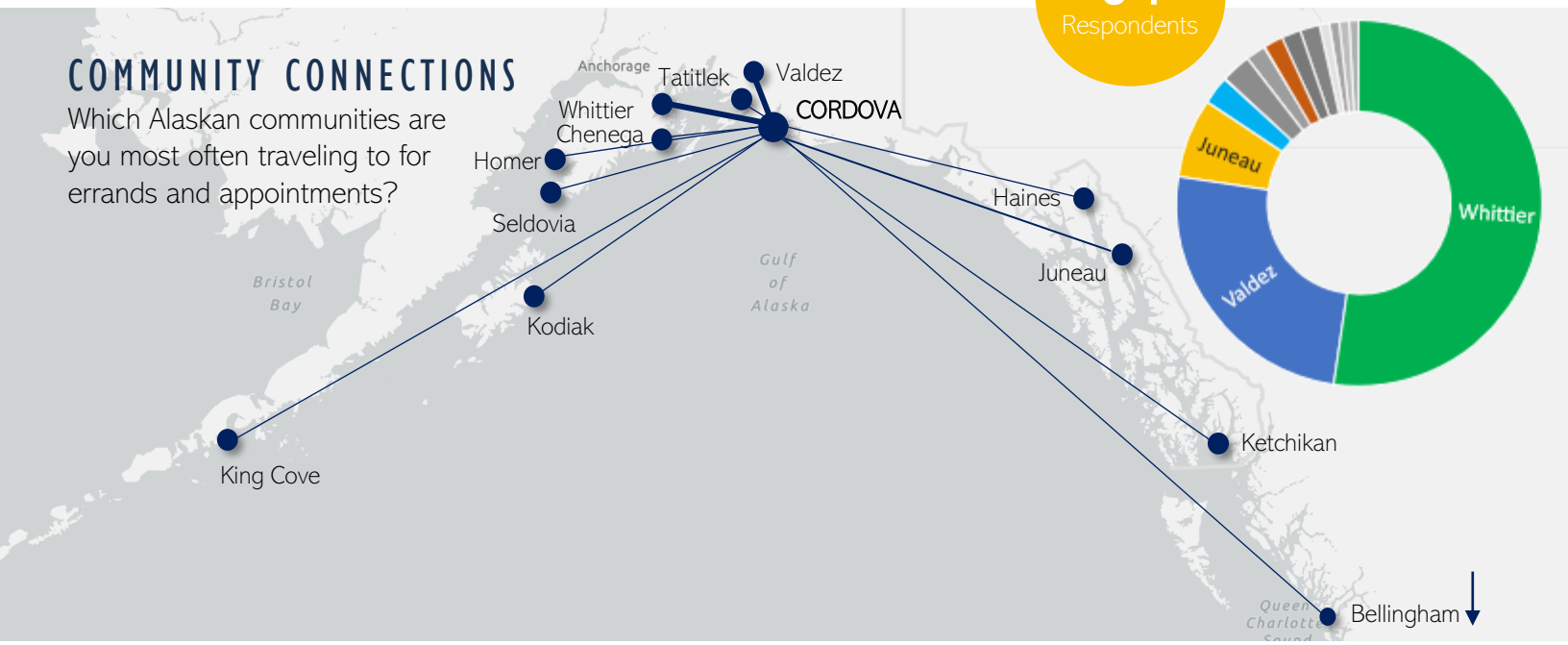
CORDOVA

PUBLIC SURVEY FINDINGS SUMMARY

64
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	95%	EDUCATION	12%
VEHICLE REPAIR	87%	CULTURAL EXCHANGE	60%
ROAD ACCESS	87%	SPORTING EVENTS	68%
CONNECT TO LOWER 48	67%	TRAVEL IN THE AMHS	89%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

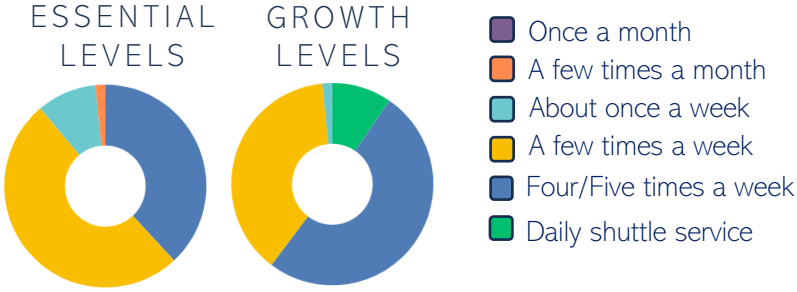
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

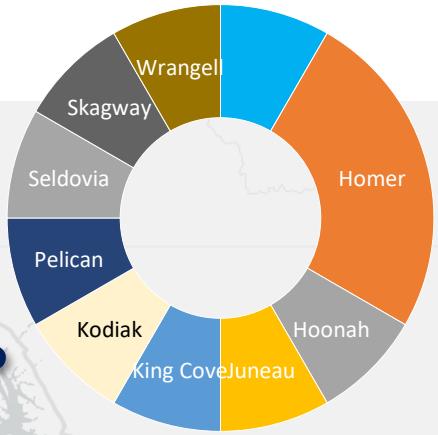
Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	Four/five times a week
Fleet	AURORA, CHENEGA, KENNICOTT	TUSTUMENA, AURORA

DUTCH HARBOR

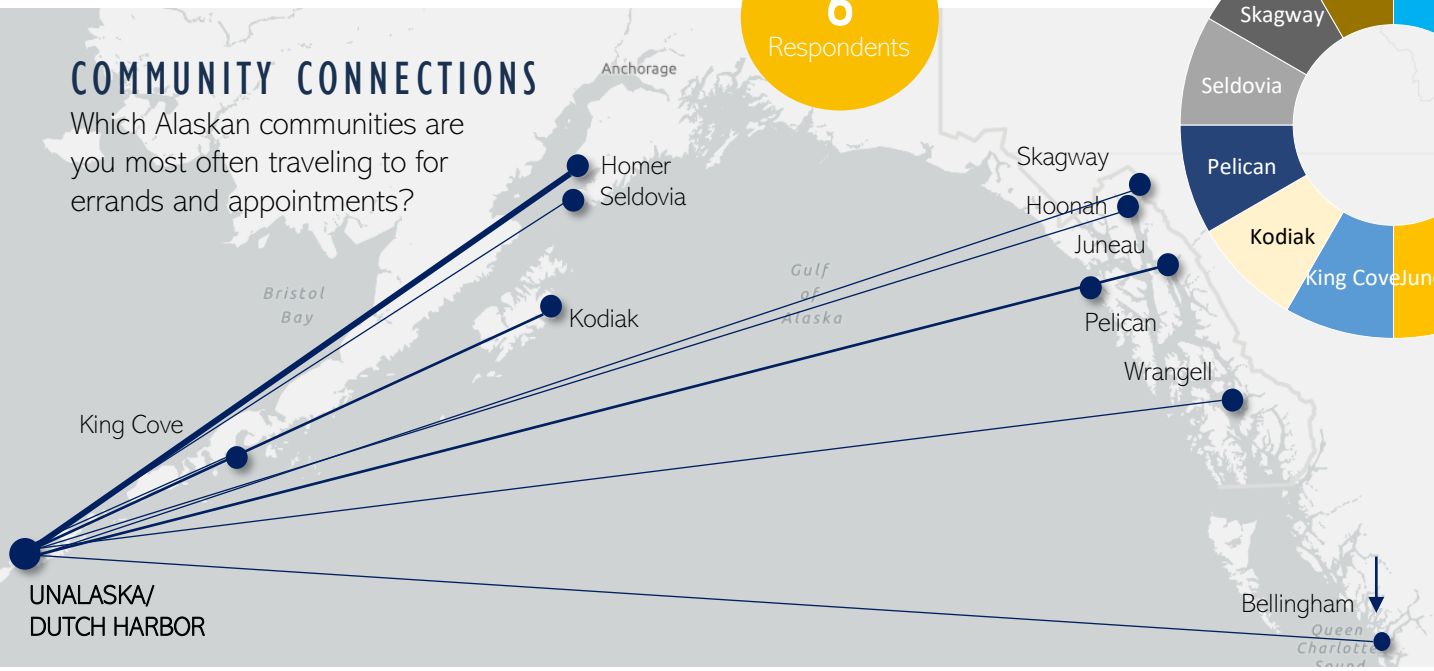
PUBLIC SURVEY FINDINGS SUMMARY

6
Respondents



COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 25%	EDUCATION 33%
VEHICLE REPAIR 67%	CULTURAL EXCHANGE 50%
ROAD ACCESS 100%	SPORTING EVENTS 50%
CONNECT TO LOWER 48 100%	TRAVEL IN THE AMHS 83%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

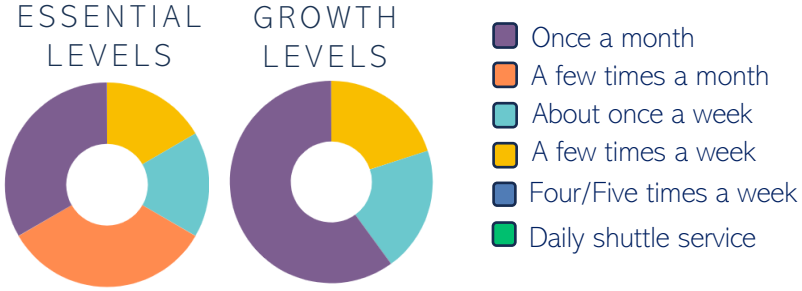
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Once a month	Once a month
Fleet	TUSTUMENA	TUSTUMENA

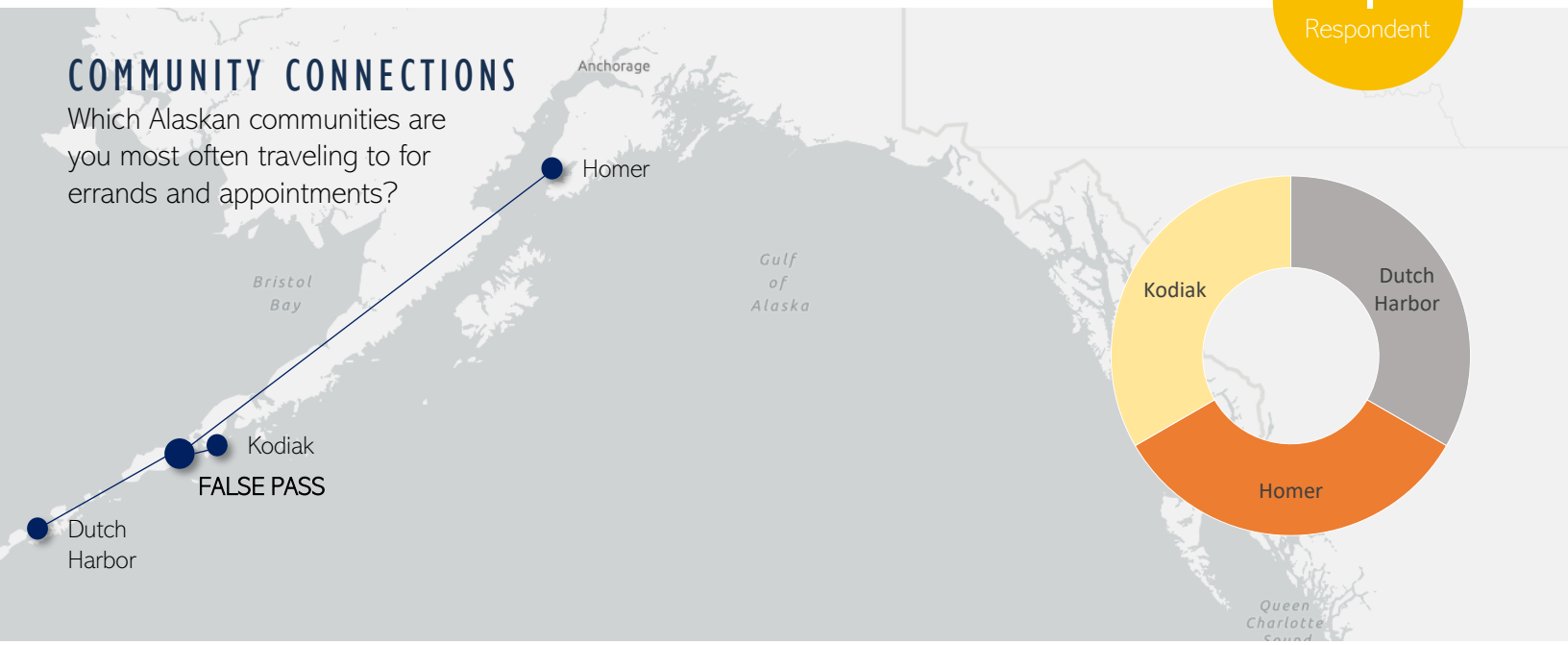
FALSE PASS

PUBLIC SURVEY FINDINGS SUMMARY

1 Respondent

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	-
VEHICLE REPAIR	100%	CULTURAL EXCHANGE	100%
ROAD ACCESS	100%	SPORTING EVENTS	100%
CONNECT TO LOWER 48	100%	TRAVEL IN THE AMHS	100%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

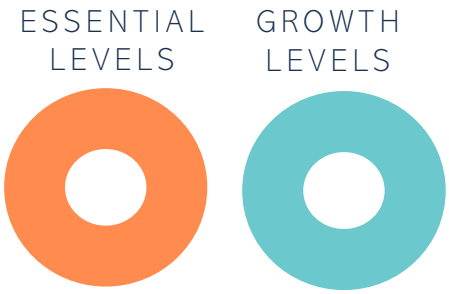
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	Once a month
Fleet	TUSTUMENA	TUSTUMENA

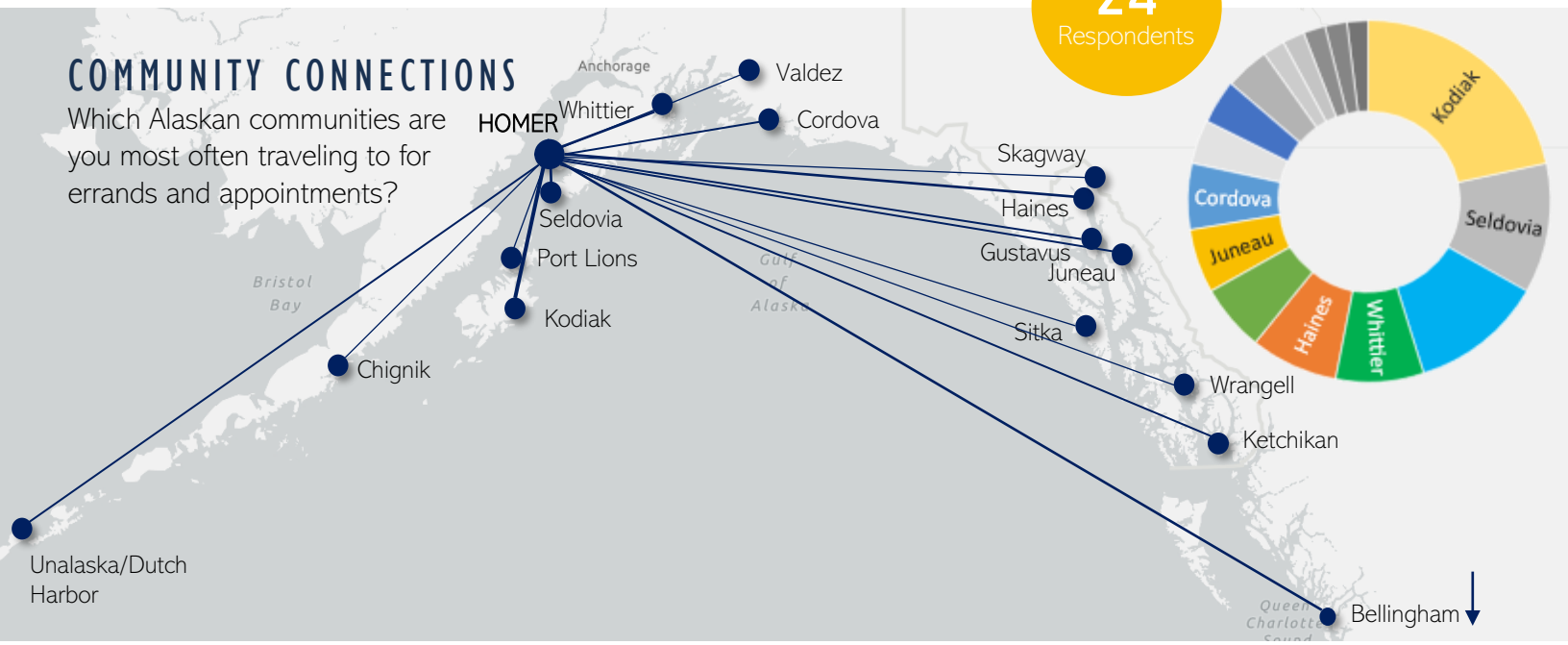
HOMER

PUBLIC SURVEY FINDINGS SUMMARY

24
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	9%	EDUCATION	6%
VEHICLE REPAIR	19%	CULTURAL EXCHANGE	38%
ROAD ACCESS	50%	SPORTING EVENTS	38%
CONNECT TO LOWER 48	56%	TRAVEL IN THE AMHS	69%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

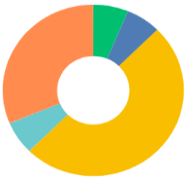
Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	A few times a week
Fleet	TUSTUMENA, KENNICOTT	TUSTUMENA, KENNICOTT

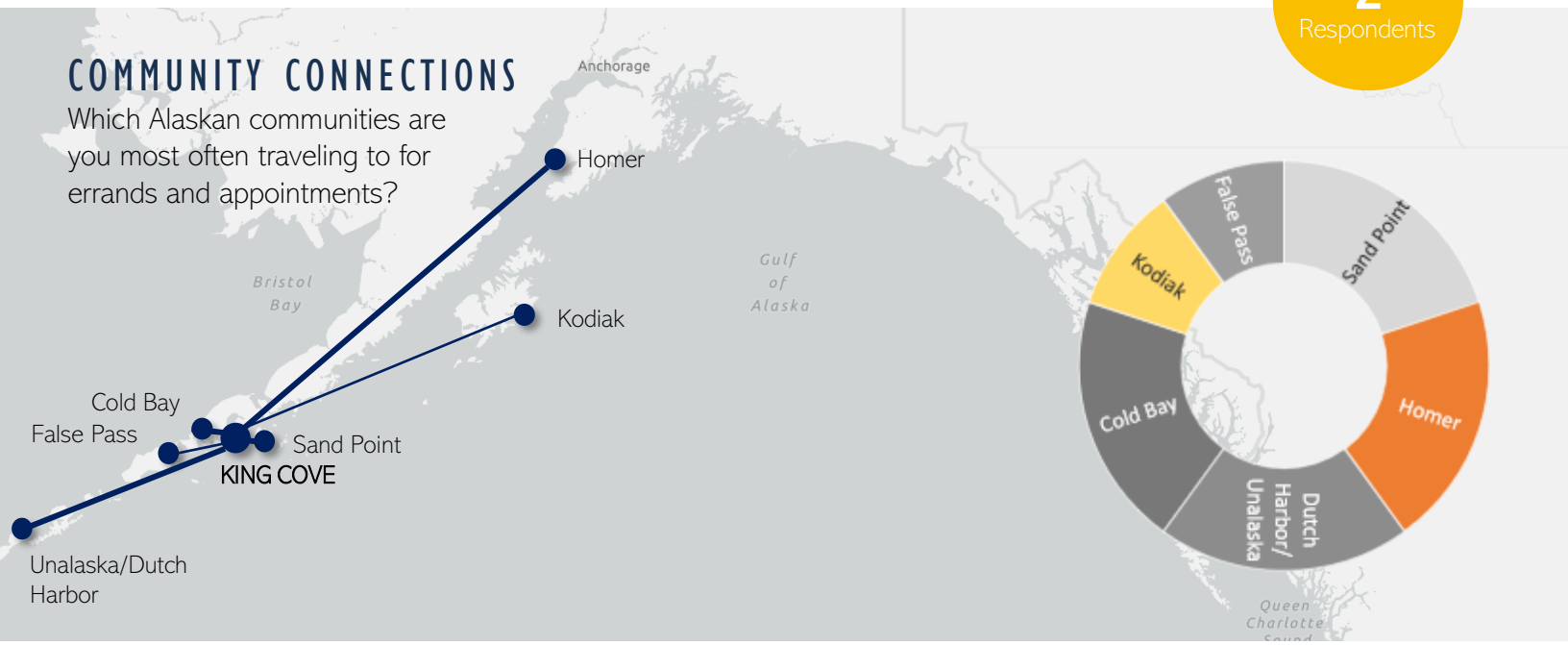
KING COVE

PUBLIC SURVEY FINDINGS SUMMARY

2
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	50%
VEHICLE REPAIR	100%	CULTURAL EXCHANGE	50%
ROAD ACCESS	100%	SPORTING EVENTS	100%
CONNECT TO LOWER 48	0%	TRAVEL IN THE AMHS	100%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

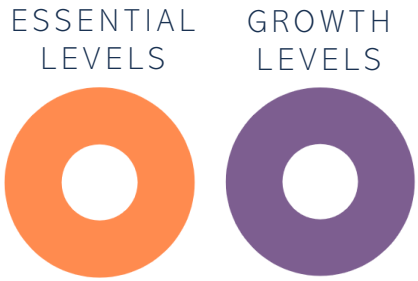
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Duration of service
Using the alternative mode takes longer than a ferry trip would.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	A few times a month
Fleet	TUSTUMENA	TUSTUMENA KENNICOTT

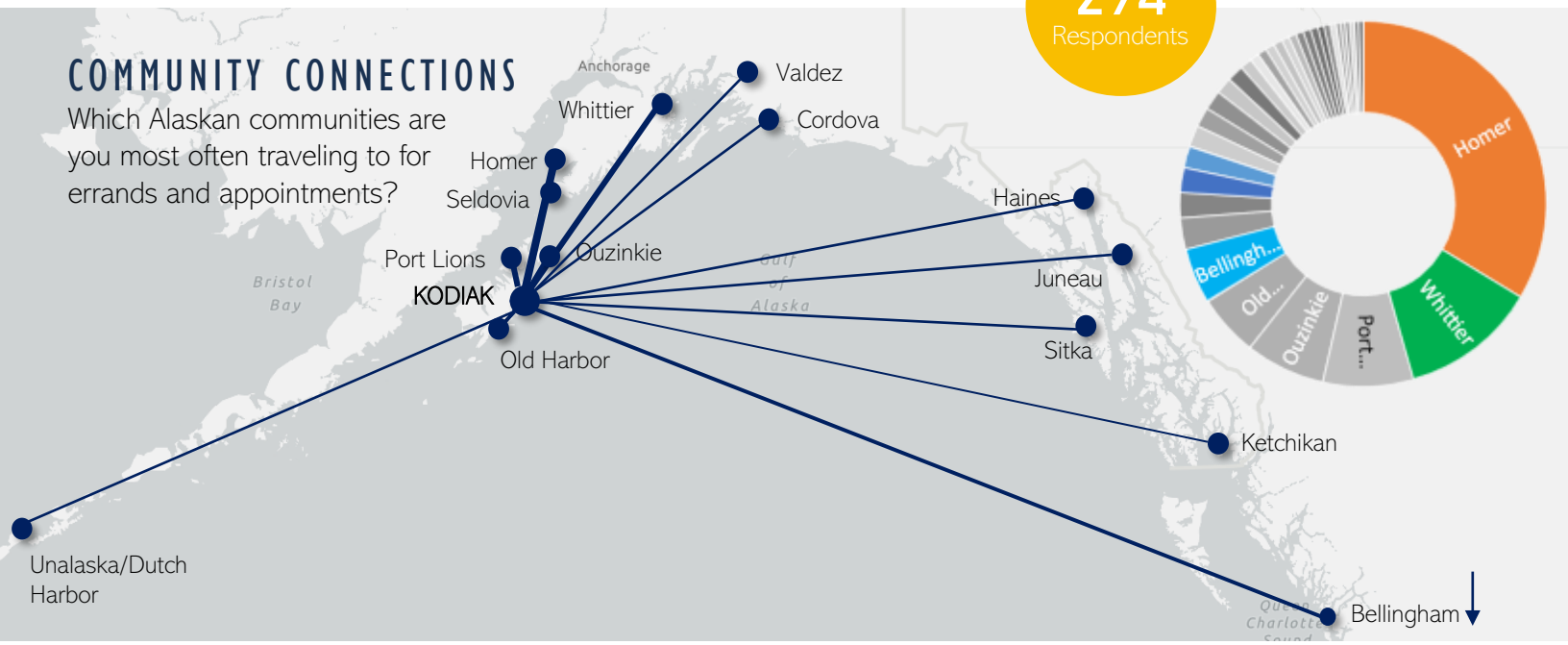
KODIAK

PUBLIC SURVEY FINDINGS SUMMARY

294
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	78%	EDUCATION	13%
VEHICLE REPAIR	87%	CULTURAL EXCHANGE	51%
ROAD ACCESS	86%	SPORTING EVENTS	64%
CONNECT TO LOWER 48	84%	TRAVEL IN THE AMHS	90%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

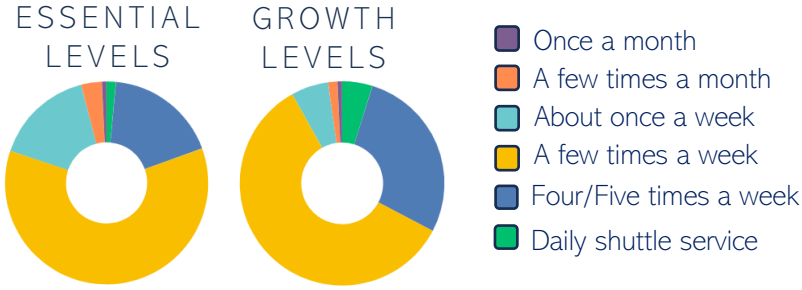
Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.



HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	A few times a week
Fleet	TUSTUMENA	TUSTUMENA KENNICOTT

OLD HARBOR

PUBLIC SURVEY FINDINGS SUMMARY

2
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	-
VEHICLE REPAIR	100%	CULTURAL EXCHANGE	-
ROAD ACCESS	50%	SPORTING EVENTS	-
CONNECT TO LOWER 48	50%	TRAVEL IN THE AMHS	50%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	-	-
Fleet	AMHS Service not provided to Old Harbor in 2009	AMHS Service not provided to Old Harbor in 2009

OUZINKIE

PUBLIC SURVEY FINDINGS SUMMARY

5
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	-
VEHICLE REPAIR	100%	CULTURAL EXCHANGE	60%
ROAD ACCESS	60%	SPORTING EVENTS	40%
CONNECT TO LOWER 48	20%	TRAVEL IN THE AMHS	80%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

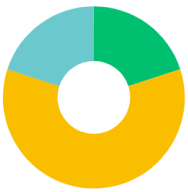
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

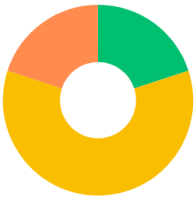
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	-	A few times a week
Fleet	AMHS Service not provided to Old Harbor in 2009	TUSTUMENA KENNICOTT

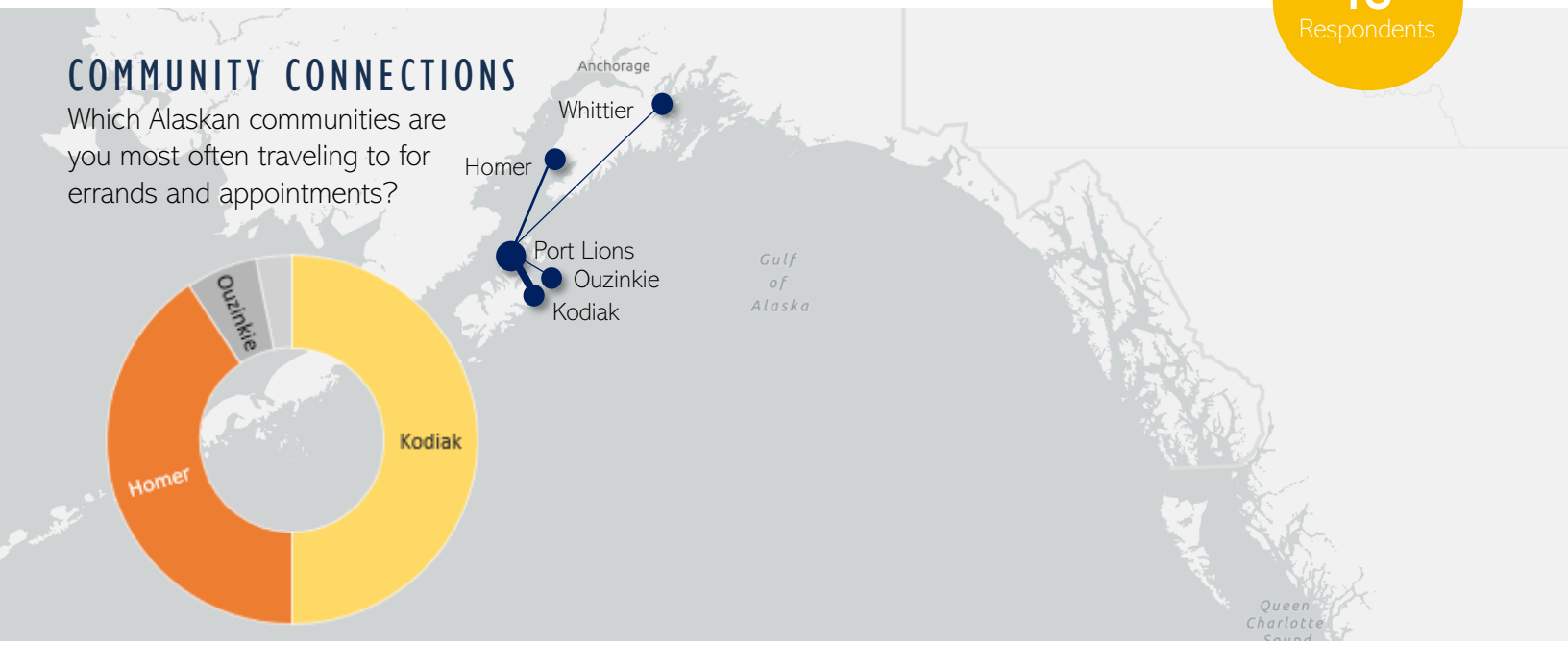
PORT LIONS

PUBLIC SURVEY FINDINGS SUMMARY

18
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	94%	EDUCATION	9%
VEHICLE REPAIR	94%	CULTURAL EXCHANGE	41%
ROAD ACCESS	71%	SPORTING EVENTS	47%
CONNECT TO LOWER 48	53%	TRAVEL IN THE AMHS	76%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

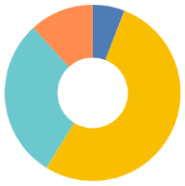
Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

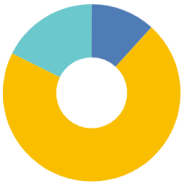
SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS



GROWTH LEVELS



- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

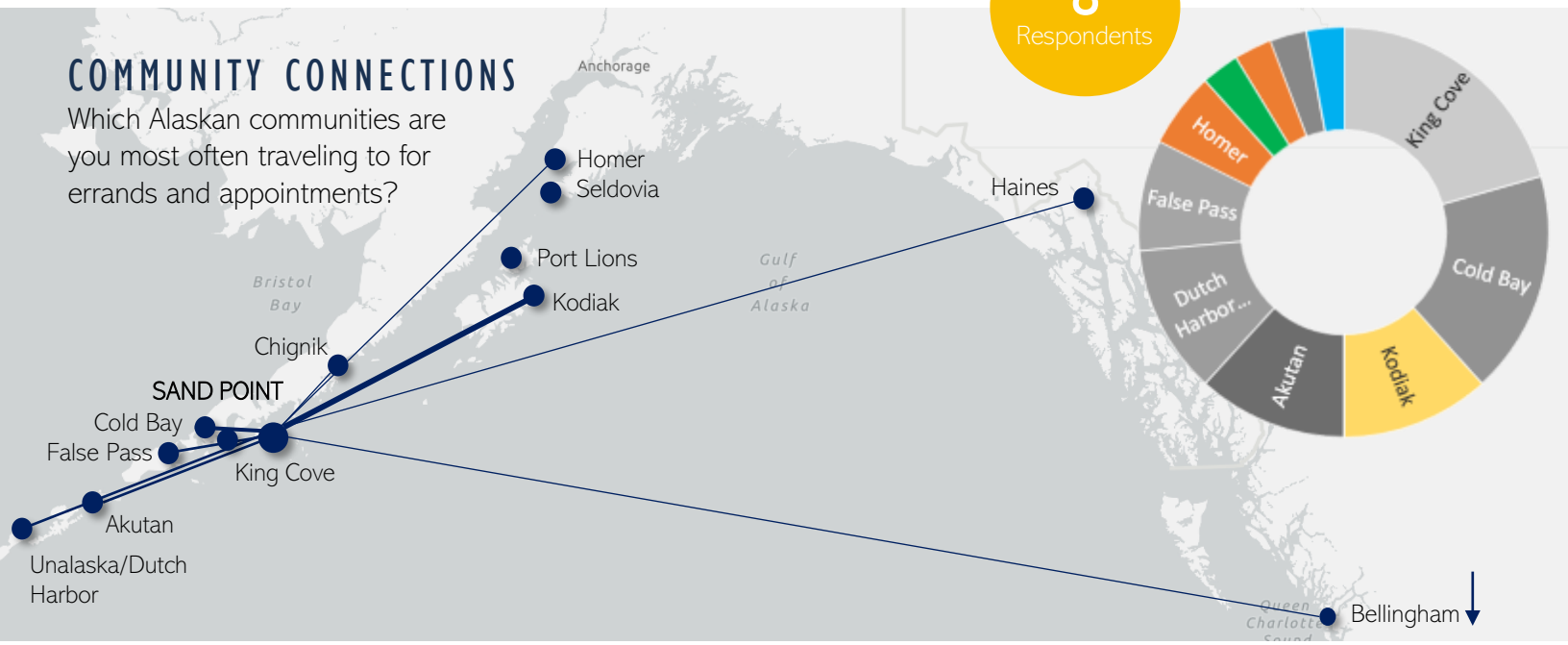
	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	Four/five times a week
Fleet	TUSTUMENA	TUSTUMENA KENNICOTT

SAND POINT

PUBLIC SURVEY FINDINGS SUMMARY

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



8 Respondents

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES 68%	EDUCATION 42%
VEHICLE REPAIR 100%	CULTURAL EXCHANGE 100%
ROAD ACCESS 75%	SPORTING EVENTS 88%
CONNECT TO LOWER 48 100%	TRAVEL IN THE AMHS 88%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Four/five times a week	A few times a week
Fleet	TUSTUMENA	TUSTUMENA KENNICOTT

SELDOVIA

PUBLIC SURVEY FINDINGS SUMMARY

3
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	100%	EDUCATION	-
VEHICLE REPAIR	67%	CULTURAL EXCHANGE	33%
ROAD ACCESS	67%	SPORTING EVENTS	33%
CONNECT TO LOWER 48	67%	TRAVEL IN THE AMHS	33%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	A few times a week	About once a week
Fleet	TUSTUMENA, KENNICOTT	TUSTUMENA, KENNICOTT

TATITLEK

PUBLIC SURVEY FINDINGS SUMMARY

9
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?

PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	44%	EDUCATION	-
VEHICLE REPAIR	89%	CULTURAL EXCHANGE	33%
ROAD ACCESS	78%	SPORTING EVENTS	11%
CONNECT TO LOWER 48	56%	TRAVEL IN THE AMHS	89%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Inability to take vehicle
Mode such as plane service does not allow for vehicle transportation.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	About once a week	About once a week
Fleet	AURORA	AURORA

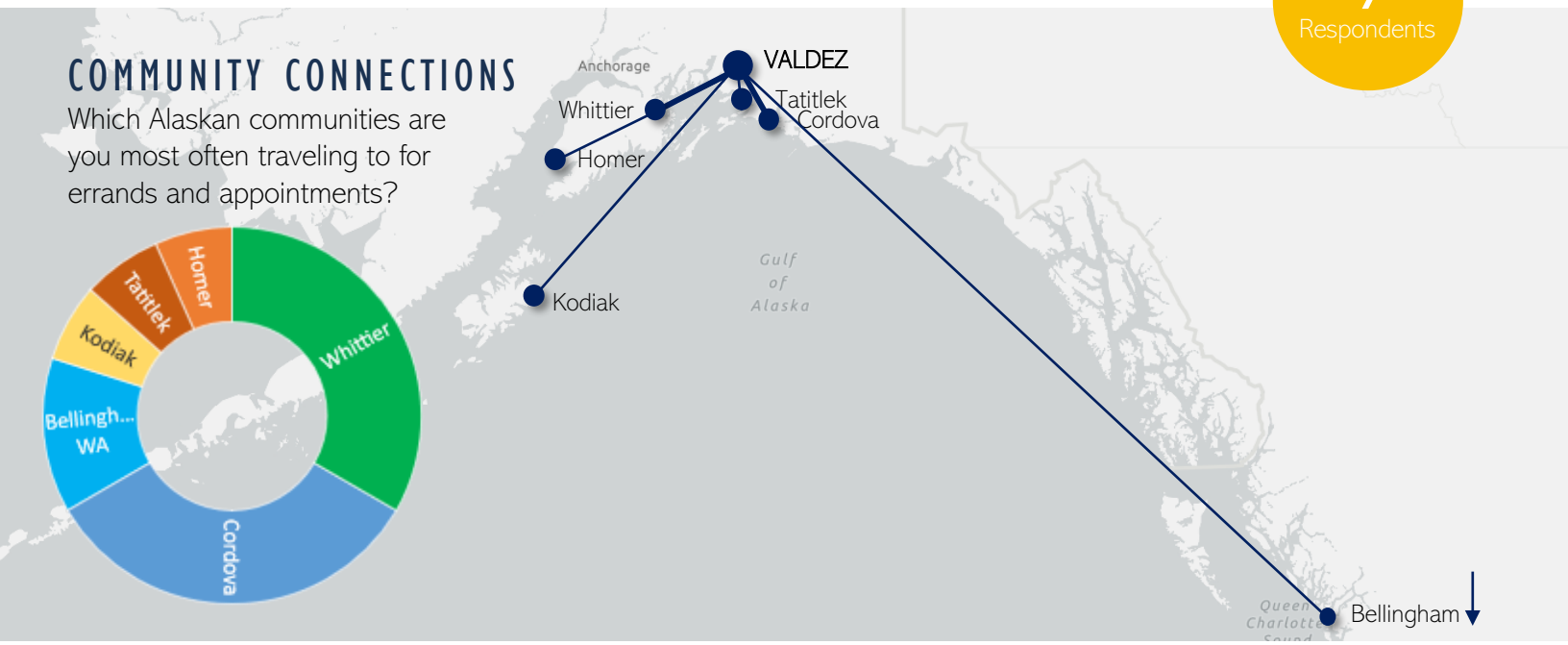
VALDEZ

PUBLIC SURVEY FINDINGS SUMMARY

9
Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	38%	EDUCATION	19%
VEHICLE REPAIR	25%	CULTURAL EXCHANGE	63%
ROAD ACCESS	63%	SPORTING EVENTS	88%
CONNECT TO LOWER 48	50%	TRAVEL IN THE AMHS	100%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	A few times a week
Fleet	AURORA, CHENEGA, KENNICOTT	TUSTUMENA, AURORA

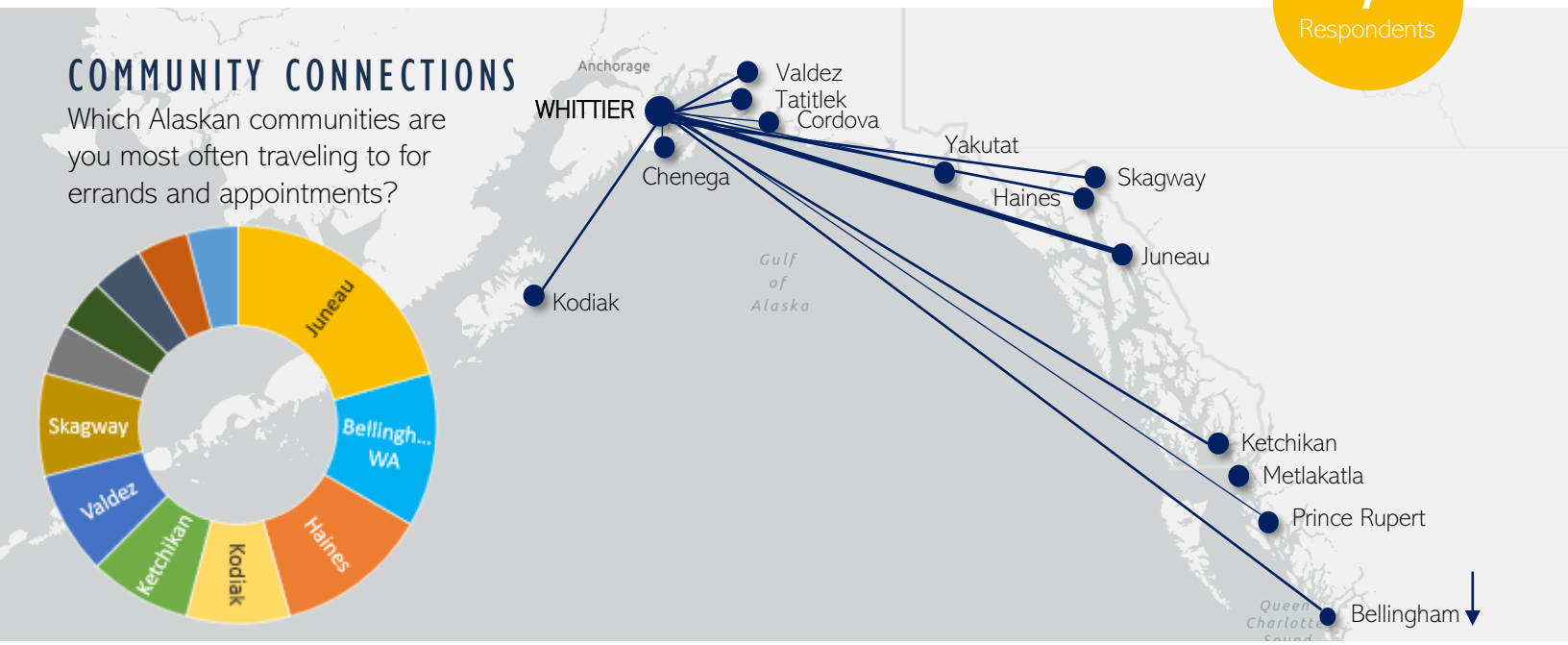
WHITTIER

PUBLIC SURVEY FINDINGS SUMMARY

7 Respondents

COMMUNITY CONNECTIONS

Which Alaskan communities are you most often traveling to for errands and appointments?



PROFILE OF FERRY USE

For what reasons do members of your community utilize or rely upon AMHS?

SHOPPING/ GROCERIES	29%	EDUCATION	14%
VEHICLE REPAIR	29%	CULTURAL EXCHANGE	43%
ROAD ACCESS	57%	SPORTING EVENTS	43%
CONNECT TO LOWER 48	100%	TRAVEL IN THE AMHS	86%

ALTERNATIVE TRANSPORTATION

What are the greatest limitations your community faces in utilizing alternative transportation options (i.e., plane service, private water taxi, etc.)?

Weather restrictions
Difficulty using alternative modes due to ice, snow, etc.

Cost of service
Using the alternative mode is more costly than the cost of the ferry.

Frequency of service
Alternative transportation mode does not run as often as necessary to substitute for ferry service.

SERVICE LEVELS

What amount of AMHS ferry service do you believe your community needs to support the following service levels? Graphics below represent survey findings.

ESSENTIAL LEVELS

GROWTH LEVELS

- Once a month
- A few times a month
- About once a week
- A few times a week
- Four/Five times a week
- Daily shuttle service

HISTORICAL CONTEXT

Your community's historic service levels and fleet composition.

	Historical (2009)	Current (2022)
Service Levels	Daily service	A few times a week
Fleet	AURORA, CHENEGA, KENNICOTT	KENNICOTT, AURORA

SOUTHEAST CONFERENCE

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SOUTHEAST ALASKA REGIONAL DEVELOPMENT ORGANIZATION

January 24, 2024

Dear Reader:

Southeast Conference (SEC) is pleased to present the attached report "AMHS Business Impact Study". The report is based on a survey of businesses within the Alaska Marine Highway System's (AMHS) service area across multiple sectors.

As the state and federally designated regional economic development organization for Southeast Alaska, SEC serves as the collective voice for improving the region's economy and works to advance the unique economic opportunities in the region and improve the overall quality of life. Formed in 1958, SEC's original mission was to advocate for the creation of AMHS, which followed a couple of years later. Since then, SEC has been a champion for the success of AMHS, and the ability of this critical transportation system to meet the needs of our communities.

Throughout the last decade, as ferry service has diminished, it has been observed that many communities and businesses have seen increased costs or have been unable to conduct business activities only possible when there was regular and reliable ferry service. The negative impacts these losses of operations have on communities are far reaching, extending to other industry sectors and a community's tax base. To further the understanding of the importance of ferry service to communities in the AMHS Long-Range Plan, with funding by the US Department of Agriculture Rural Development program, SEC and AMHS partnered with the National Association of Development Organizations to conduct a survey on the impacts the ferry system has on local businesses.

The survey results show that private sector entities face hardship and loss of opportunity as AMHS service is reduced, while also showing that increasing service levels in the future will likely spur growth in private sector activity and investment. The hardships reported were common between various commercial sectors: loss of transportation options; increased transport costs; delays in service delivery; the expense of chartering private vessels; and missed opportunities for commercial growth.

On a positive note, survey respondents also share a favorable outlook that despite decreasing service levels in recent years, the potential remains high for beneficial economic growth that would accompany improved AMHS service levels. Further, that positive outlook dovetails nicely with service levels proposed in the draft AMHS Long-Range Plan; the plan puts AMHS on a path to increase service frequency and reliability through improvements to vessel reliability, compatibility with docking facilities, and crew recruitment and retention efforts. As the Business Impact Study's executive summary states, those surveyed "express a strong desire for increased reliability and frequency of service, hoping that these improvements will help their businesses succeed."

We are grateful for the partnerships and collaboration between Alaska DOT&PF, AMHS and AMHS communities and look forward to seeing a strong, modernized ferry system once again.

Sincerely,

Robert Venables
Executive Director

AMHS BUSINESS IMPACT STUDY

SUMMARY OF FINDINGS

Prepared for: NADO | Washington, DC

Ref: 24045-100-045-0

Rev. -

January 24, 2025

PREPARED BY

ELLIOTT BAY DESIGN GROUP
PO BOX 45790
SEATTLE, WA 98145

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
-	Initial Issue	01/24/2025	EMC

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

Alaska's business community has long been a key user of Alaska Marine Highway System (AMHS) service. Businesses and industries have been impacted over the last decade by changes in AMHS service levels and service reliability. In partnership with USDA Rural Development, the National Association of Development Organizations (NADO) and Southeast Conference (SEC), this effort is intended to supplement stakeholder outreach conducted for the AMHS 2045 Long-Range Plan (LRP) through a series of executive interviews with businesses across the extent of the AMHS service area.

To gain insight into the unique needs, challenges, and opportunities of Alaska's diverse businesses and regions, this study involved interviews with businesses across various industries and geographic areas. The sample was intended to include a proportionate representation of coastal Alaska based on current distribution of AMHS sailings, with 76% of the participating businesses located in Southeast Alaska, 14% in Southwest Alaska, and 10% in the Southcentral region.

Businesses reached in the study included a diverse range of sector and geography and included:

- Retail/grocery
- Construction/Utilities
- Hospitality/Tourism
- Healthcare
- Seafood
- Marine Support
- Automotive/Transportation
- Alaska Native Claims Settlement Act (ANCSA) Corporations

The interviews conducted provided insight into the influence and impact of AMHS service on workforce, revenue, and quality of life for businesses, customers, and employees. AMHS provides a service that has become integral to the business operations of much of coastal Alaska. Of the 29 businesses interviewed, 22 reported they currently use the ferry service while seven do not. Among the seven that do not currently use AMHS, two reported that they had previously used AMHS before but no longer used the service as they perceived it had deteriorated in recent years. While some communities have alternative transportation services, such as air and barge, the cost or functionality of these may not align with business needs.

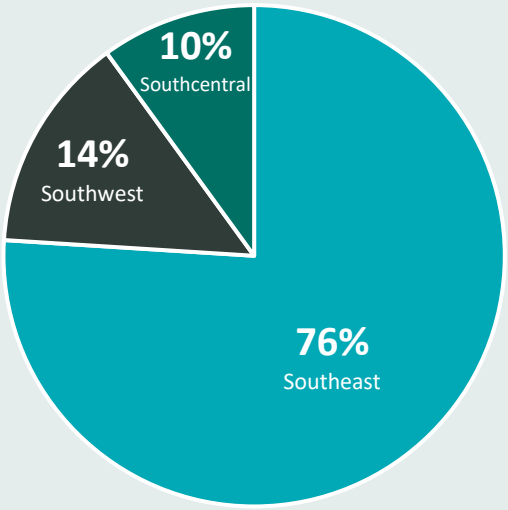
Across all industries and regions, businesses reported that the reliability of service was the most critical factor in their ability to utilize AMHS for operations. The frequency of service was identified as the second most important factor, directly affecting the delivery and supply of goods.

Both current and former business users of AMHS expressed a strong desire for increased reliability and frequency of service, hoping that these improvements will help their businesses succeed.

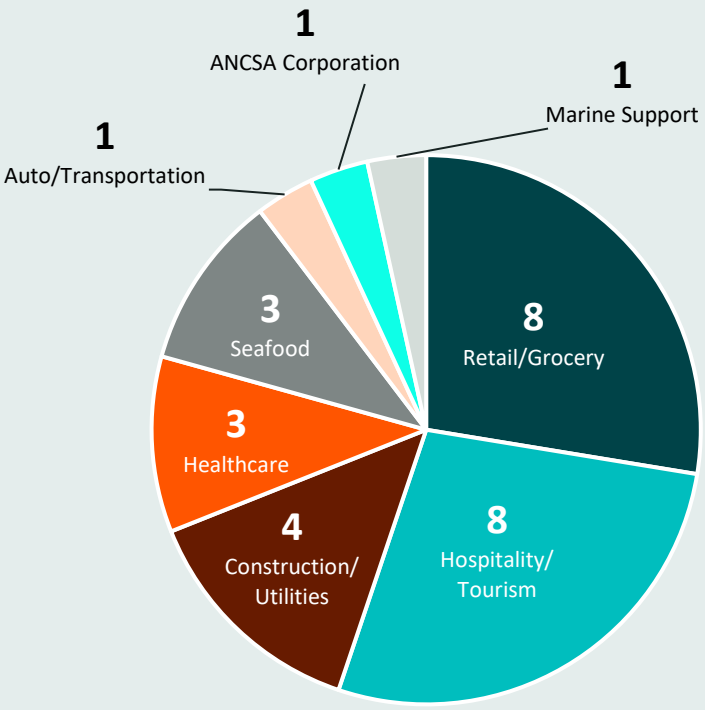
FINDINGS AT A GLANCE

29 BUSINESSES INTERVIEWED ACROSS COASTAL ALASKA

Geographic Distribution of Completed Interviews



Industry Distribution of Completed Interviews



83% of respondents reported that their business currently or previously utilized AMHS

#1 Identified challenge to utilizing current ferry service was a lack of **reliability**.

#2 Identified challenge was **low frequency**.

2. PURPOSE AND BACKGROUND

The Alaska Marine Highway System (AMHS) is developing its 2045 Long-Range Plan (LRP) to guide operations and capital investments in AMHS operations and fleet and terminal infrastructure over the next 20 years. Although the plan will be updated every five years and short-term planning will occur annually, this 20-year vision aims to establish a long-term strategy for ferry operations, focusing on efficiency and resiliency to better serve Alaska's residents and visitors.

Recognizing the critical role Alaska's business community plays in utilizing and supporting AMHS services, this effort aims to enhance the 2045 LRP through increased and focused business stakeholder engagement. A series of executive interviews with businesses across the AMHS service area were conducted to gather these insights. Over the past decade, changes in AMHS service and reliability have significantly affected businesses and industries. The insights gained from these interviews illustrate how AMHS services impact workforce dynamics, revenue, and the overall quality of life for businesses and their employees.

Funding for this scope of work was provided by USDA Rural Development, with the National Association of Development Organizations (NADO) as a coordinating partner of this technical assistance project for Southeast Conference (SEC) and AMHS. NADO is a membership association established in 1967, representing regional community and economic development organizations. Its mission is to advocate for federal policies and programs that support equitable community development, economic competitiveness, rural development, economic mobility, and quality of life. NADO focuses on critical areas such as transportation planning, workforce training, and affordable housing, all of which align with the needs of communities across the United States.

SEC, a NADO member, is both the federally designated Economic Development District for Southeast Alaska and the state-designated Regional Development Organization. SEC's mission is to promote strong economies, healthy communities, and a quality environment in Southeast Alaska. In alignment with this mission, SEC and NADO, in collaboration with AMHS, have partnered to fund this critical scope of work.

AMHS serves as an essential transportation link for much of coastal Alaska. While some communities have alternative transportation options, these may not meet the needs of businesses throughout the AMHS service area. The information gathered from this effort will help ensure that the 2045 LRP addresses the unique needs of the business community and supports the economic vitality of the region through planned operating and infrastructure investments throughout the 20-year planning horizon.

3. PROCESS SUMMARY

3.1 METHODOLOGY

The AMHS Business Impact Study was designed to engage a diverse range of business owners across different regions and market sectors in AMHS-served communities. A targeted interview plan was developed to compile a contact list of businesses for the study. Once identified, businesses were interviewed by phone using a standardized set of questions. These questions were crafted to understand how various market sectors rely on or use the ferry system and how their needs and usage may vary depending on changes in reliability or service levels. The results were analyzed to identify common themes, as well as specific geographic and market sector needs, for consideration in the AMHS 2045 Long-Range Plan.

3.2 SAMPLE PLANNING

The project team generated a list of 100 businesses in communities served by AMHS in 2024. Businesses were selected through AMHS, SEC, other stakeholder recommendations, the consultant team's professional experience, and from the State of Alaska business license directory with the goal of geographic and market sector diversity.

All 100 businesses from this initial list were contacted with 29 full interviews completed.

3.2.1 REGIONAL FOCUS

The project plan called for conducting 75% of interviews in the Southeast region, corresponding with the geographic distribution of all AMHS sailings. The remaining 25% of businesses chosen for interviews were split between Southcentral and Southwest Alaska. Southwest covers the area from Kodiak west to Unalaska. Southcentral covers Homer, Seldovia, and Prince William Sound. Southeast covers the area from Metlakatla north to Yakutat.

Completed interviews ended up near the goal geographic distribution, with 76% of completed interviews (22 interviews) in Southeast, 14% (four interviews) in Southwest, and 10% (three interviews) in Southcentral, as shown in *Figure 1*. Within Southeast, about two-thirds of interviews were with businesses in northern Southeast, while one-third were with businesses in southern Southeast.

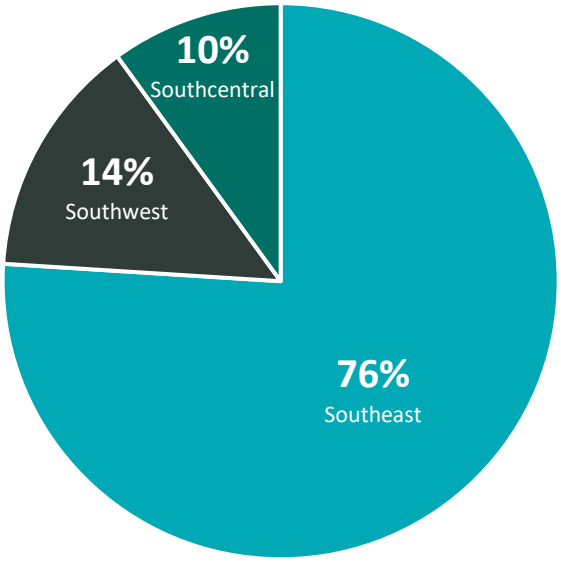


Figure 1: Geographic Distribution of Completed Interviews

3.2.2 INDUSTRY FOCUS

The interview sample plan was designed to gather perspectives from a wide variety of industries, including:

- Retail/grocery
- Construction/Utilities
- Hospitality/Tourism
- Healthcare
- Seafood
- Marine Support
- Automotive/Transportation
- Alaska Native Claims Settlement Act (ANCSA) corporations

The project team attempted to complete at least two interviews for each industry and was successful for all industries except ANCSA corporations (1 interview completed), marine support (1 interview completed), and auto/transportation (1 interview completed).

A complete list of interviewed businesses is available in *Appendix A.*

3.3 INTERVIEW PROTOCOL AND ADMINISTRATION

Interviews were conducted between June 21 and August 8, 2024. Each interview lasted about 30 minutes.

Questions included:

- *Do you use the state ferry service at all to support your business operations?*
- *How do you use the ferry? For passenger service? Vehicle service? Cargo truck, trailer, or van service?*
- *Has your business' use of the ferry system changed over the last several years?*
- *Do your customers use the ferry system to access your business?*
- *What other types of transportation besides the Alaska Marine Highway System do you use to support your business? What are the advantages and disadvantages of these transportation services?*
- *What level of ferry service do you believe is essential for your business?*
- *Would a greater frequency of ferry service allow you to grow your business?*

A complete copy of the interview protocol is available in *Appendix B*.

Research was conducted as a series of interviews rather than a written survey to give interview participants a chance to answer in detail and respond to follow-up questions. The interviews were successful at developing an increased understanding of business use of AMHS and common concerns associated with future schedules and vessels.

4. FINDINGS BY INDUSTRY

The LRP project team completed 29 interviews with businesses across eight sectors (*Figure 2*) and located in 15 communities across coastal Alaska, mapped in *Figure 3*. Across all industries, respondents pointed to low reliability as the main barrier to utilizing AMHS to support their business.

Among the 29 businesses interviewed, 22 currently use the ferry service and seven do not. Among the seven that do not currently use AMHS, two reported that they utilized the system before service deteriorated in recent years.

17 businesses reported using the ferry to transport cargo vans or trailers, 13 reported using it to transport passengers, and eight reported using it to transport vehicles.

18 businesses mentioned service reliability as a reason they avoid using the ferry or consider alternative transportation options. Reliability was routinely

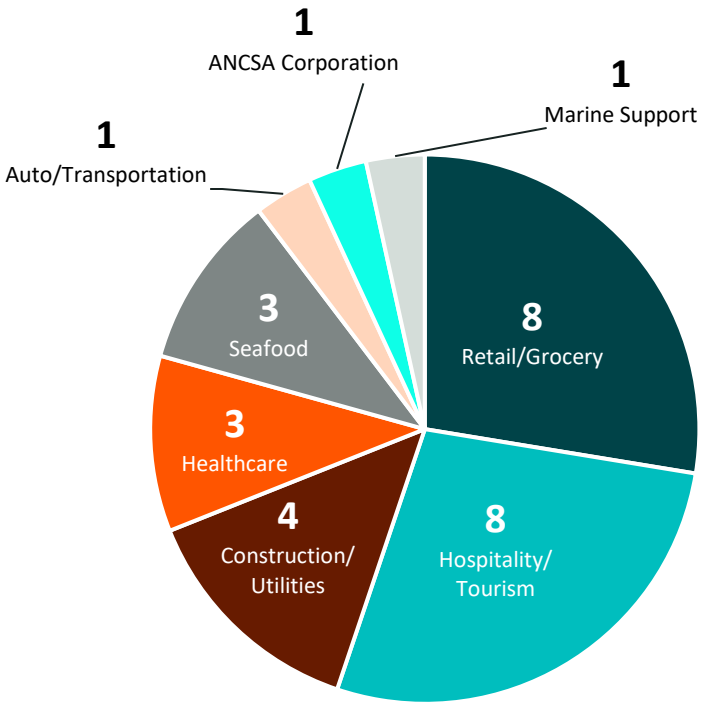


Figure 2: Industry Distribution of Completed Interviews

described as a more important consideration than service frequency or cost.

This section summarizes the industry-specific uses of, and challenges with, AMHS ferry service. The industries are grouped into Construction/Utilities, Healthcare, Hospitality/Tourism, Retail/Grocery, Seafood, and Miscellaneous. Miscellaneous includes Auto/Transportation, Marine Support, and ANCSA Corporations. For each sector, findings are presented in two parts: first, the "Use Case," which outlines how and why businesses interact with or rely on AMHS services; and second, "Challenges and Considerations," which highlights the unique issues each industry faces in relation to ferry service.

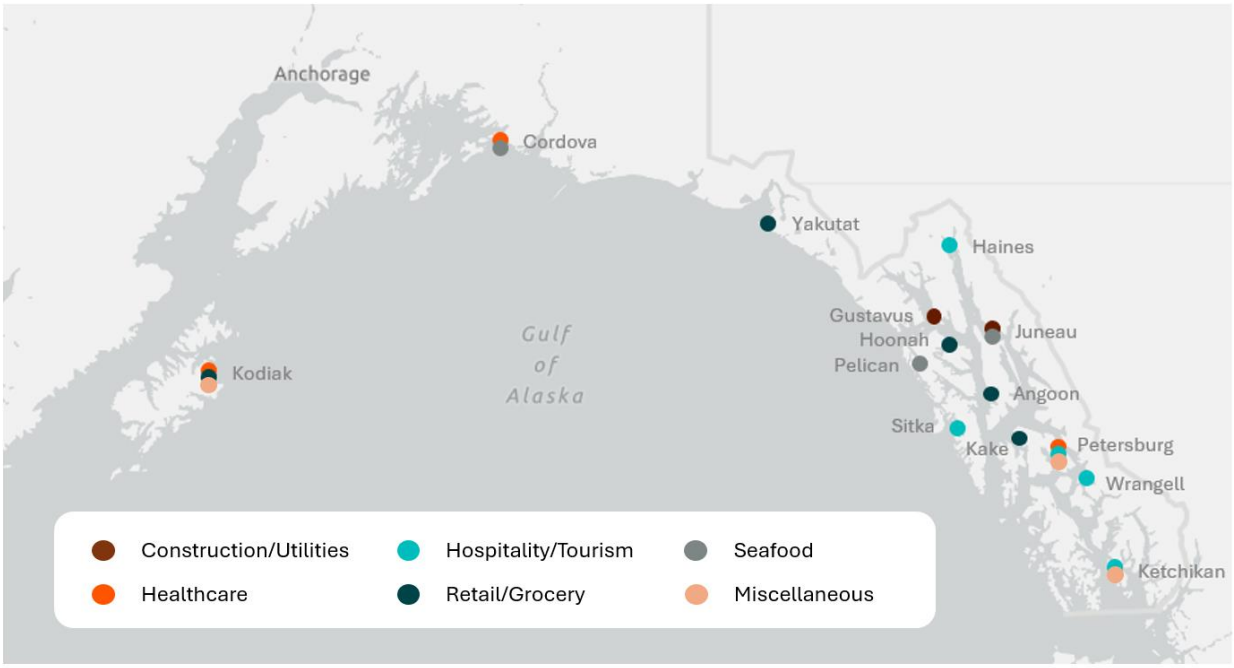


Figure 3: Interviews Mapped by Industry

4.1 CONSTRUCTION/UTILITIES

Construction/Utilities include companies that focus on the installation, maintenance, and repair of Alaska's infrastructure. The utility sector specifically supports the state's essential services such as water, electricity, gas, telecommunications, and sewage.

4.1.1 USE-CASES

Respondents representing the construction/utilities sector reported using AMHS for transporting equipment, materials, and employees across Southeast Alaska to support contracted work and routine maintenance.

For half of the respondents, passenger service was reported to be crucial to transport staff. For all respondents, vehicle service was said to be important for crew transport and some small equipment transport. Half of the respondents rely on AMHS for cargo and freight capacity to transport larger equipment and vehicles, while the other half of the respondents opt for alternative service providers (i.e. Alaska Seaplanes, Trucano Trucking, Alaska Marine Lines) to fulfill this need.

Important AMHS routes for construction and utilities transportation mentioned in interviews included Ketchikan – Juneau, Haines – Juneau, and Haines – Sitka.

4.1.2 CHALLENGES AND CONSIDERATIONS

Though AMHS remains the most affordable option for the uses specific to this sector, there are several reasons offered by respondents for why a construction or utility provider may look for alternatives to AMHS.

Reliability – Construction companies and utility providers rely on the ferry to move staff and equipment between jobs. When AMHS is unable to make the scheduled trip, there are often costly repercussions. Return of rented equipment may be delayed, adding additional per day costs. Delays hinder operations, making the business unable to provide timely service for customers. In the case of Chatham Electric, this may mean that an essential utility is down for longer in emergency situations. More than increased service requests, these businesses reported that a reliable schedule is the most important factor for carrying out current and potentially increased business.

Frequency – Businesses benefit from the greater flexibility of frequent trips, allowing them to take on new contracts with less notice. Contracted barge service (AML) and seaplanes allow for more spontaneous travel to accommodate the occasional request for a quick project startup.

Capacity – Some construction equipment is too large or heavy for AMHS to accommodate, making contracted barge service a better option. The travel and freight demand from construction companies can often be unpredictable and arise on short notice, in these instances space on AMHS vessels is not always available. Alternative providers can offer transport when the ferry is fully booked.

4.2 HEALTHCARE

Healthcare includes hospitals and medical clinics that provide routine and/or emergency care.

4.2.1 USE-CASES

The healthcare sector utilizes AMHS primarily to relocate permanent and temporary employees and their personal vehicles. Interview participants also noted use of AMHS transporting patients to/from scheduled care and bringing in medical equipment and supplies. Frequent and reliable service is critical for each of these uses, allowing increased flexibility for staff members' travel between communities and more options for patients when scheduling appointments.

Medical centers, such as Providence Kodiak Island Medical Center (PKIMC), frequently have temporary employees that relocate to their area. In the case of PKIMC, 75 to 100 employees relocate to Kodiak every year. AMHS allows these employees to travel to their contract by car.

Important AMHS routes for healthcare transportation mentioned in interviews included Cordova – Whittier and Kake/Wrangell – Petersburg.

4.2.2 CHALLENGES AND CONSIDERATIONS

AMHS is the preferred choice for employee transportation because alternative options, such as Matson, Samson Tug & Barge, Alaska Air Cargo, Island Air, and Sundog Charters, tend to be more expensive and may not accommodate vehicles or larger personal belongings, which are often needed when employees are relocating for extended periods. For example, the average contract length for a registered nurse can range from 8 to 16 weeks.

Reliability – When transportation is unreliable, employees and patients are both impacted.

For employees, the ferry is the most affordable way to transport themselves and their personal vehicles when relocating. However, delayed or canceled trips often force them to resort to more expensive air travel to ensure they arrive in the community by the time their contract or job starts. Timeliness is crucial, especially since these employees often provide essential healthcare services in remote areas.

Patients also depend on the ferry to attend scheduled medical appointments. Reliable ferry service is especially critical for those with health conditions that prevent them from flying, as it is often their only means of accessing care.

Frequency – Due to the duration of some ferry trips and layovers, AMHS is often not a favorable option for many travel workers because they must stay in the community longer than they would prefer, waiting for the return trip. One interview participant noted that this delay was significant enough to dissuade many nurses from working in certain communities – becoming a major issue for the clinics to meet minimum staffing requirements.

Frequency of service also impacts patients' ability to schedule care. Currently, appointment options are constrained by the ferry schedule, requiring patients to plan extensively and make compromises. More frequent trips would provide more travel options, offer greater flexibility, and better support emergent or emergency healthcare needs.

Feedback indicated that a schedule with trips every other day, including both weekday and weekend service, would significantly improve access and convenience for patients.

4.3 HOSPITALITY/TOURISM

Hospitality encompasses businesses across the region that provide accommodation, food, or entertainment. This includes hotels, bed and breakfasts, and restaurants.

Tourism relates to businesses that support visitors to Alaska. These businesses include travel agencies and guided tour companies.

4.3.1 USE-CASES

AMHS supports the hospitality and tourism industries by bringing in patrons and supplies from across the region, Anchorage, and the Lower 48. In addition to transporting patrons with scheduled bookings, businesses located near AMHS ports greatly benefit from the foot traffic that AMHS brings to shops, restaurants, and special events, notably in the summer months. Tourism and travel agencies that were spoken with all mentioned the overwhelming demand for ferry trips from visitors.

Additionally, many business owners noted the desire for patrons to include a ferry ride in their travels. Locals and visitors alike have fond memories of AMHS and often want to include it in their itinerary.

Important AMHS routes for hospitality and tourism transportation mentioned in interviews included trips in and out of Juneau and Bellingham, WA.

4.3.2 CHALLENGES AND CONSIDERATIONS

The overwhelming feedback from respondents representing the hospitality and tourism industries was that AMHS is no longer the best choice for their customers due to difficulties with scheduling and trip planning, reliability, and cost. With the recent reduced service, AMHS is no longer an option for many travelers. Even when it is, the lack of reliability makes it risky and undesirable. Alternative transportation services are recommended instead and booked more frequently for these reasons.

Reliability – Many visitors plan their Alaska vacation up to one year in advance and need the security of knowing that they will be able to get where they need to go within their discrete travel window. Businesses in the tourism sector must ensure guests have peace of mind, which is challenging when ferry schedules are unpredictable and vessels are prone to maintenance issues.

With delayed schedule releases and lack of service reliability, travelers are unable to rely on AMHS and tend to choose other modes.

Frequency – Air service (Alaska Airlines, Alaska Seaplanes) allow travelers greater flexibility in both the timing and duration of their trip, whereas the current ferry schedule restricts options, often making short weekend visits impossible. Many businesses indicated that a schedule that arrives on Thursday or Friday and leaves on Sunday afternoon would support the interests of more weekend travelers.

The reduced service frequency and fewer stopovers in port communities have led to decreased foot traffic for businesses and restaurants. As a result, hospitality businesses are experiencing lower revenue, which has reduced the need for full-time staff.

Schedule – Publishing a schedule in advance would significantly benefit these businesses by enabling earlier bookings by visitors and tourism agencies. Industry feedback reveals that visitors often plan their travel and accommodations up to a year ahead. Without a published schedule, AMHS loses the chance to be included in these plans, as travelers opt for flights simply because airline schedules are available sooner.

4.4 RETAIL/GROCERY

Retail/Grocery encompasses establishments that supply groceries and provisions, clothing, and gear. Those included in this study are largely local businesses that source their inventory from wholesalers in neighboring communities.

4.4.1 USE-CASES

Retail and grocery providers in communities without access to scheduled barge freight service reported reliance on the ferry to bring in inventory. Retail stores in smaller communities that do have scheduled freight service appreciate having access to AMHS as an alternative way to bring in goods. When AMHS is used to transport deliveries, vehicle and freight space are important. A few key wholesale suppliers, namely Costco and Northern Sales Company, Inc, are based in Juneau, supplying many of the businesses in Southeast Alaska, making connections to Juneau especially important.

Interview respondents indicated that local retailers and grocery stores are not reliant on passenger service to bring in customers, as most of their profit comes from local customers.

4.4.2 CHALLENGES AND CONSIDERATIONS

AMHS would remain the preferred option for cargo transportation if its reliability improved. Alternative services are more expensive and often come with added challenges in loading and unloading. All business owners interviewed in communities without scheduled barge service agreed that AMHS would be their top choice if it could provide consistent and reliable service.

Reliability – Though many businesses use AMHS currently, seven reported they do not, citing lack of reliability as the main concern. Timeliness is of the essence for deliveries like produce, and cancellations or missed trips can be extremely costly if the inventory spoils in transit. Alternative modes (chartered air service or barge) are thus used more often.

4.5 SEAFOOD

Seafood covers fisheries, processors, and distributors that provide seafood for the state and beyond. Alaska harvest is about 60% of the total United States seafood harvest and 1.3% of the global seafood harvest[1].

4.5.1 USE-CASES

AMHS service is critical for transporting seafood out of small communities that are not on the main barge line. The ferry system is also important for small and medium-sized seafood processing businesses in larger communities, such as Juneau and Cordova, as it is a lower-cost alternative to barge service.

Important AMHS routes for seafood transportation mentioned in interviews included Cordova-Whittier, Pelican-Juneau, and Juneau-Skagway. After using the ferry to bring seafood (primarily frozen but also refrigerated) to the larger hub communities or the road system, seafood processors have access to a wider set of shipping options to reach final markets including barge, container ship, truck, and air cargo.

4.5.2 CHALLENGES AND CONSIDERATIONS

Seafood processing businesses reported relying on the ferry primarily because alternatives were either more expensive or unavailable. However, they expressed frustration over the recent decline in service frequency, and the lack of reliability. Many of these businesses need to plan far in advance for using AMHS because with reduced service, ferries are more likely to be overloaded.

Reliability – During the busy summer salmon season, shipping delays can damage processors' customer relationships and lead to frozen inventory piling up in limited storage space. If the backlog grows too large, processors may have to stop purchasing new seafood, which negatively impacts the local fishing fleet. For fresh (refrigerated) products, service disruptions can also result in product quality degradation.

Vessel configuration – A concern specific to the community of Pelican is that the stern-loading configuration of the MV LeConte and associated dock in Pelican does not facilitate the use of alternative vessels for loading processed seafood.

4.6 MISCELLANEOUS

This section includes unique responses from Alaska Native Corporations (ANCSA), the automotive/transportation industry, and a respondent who provides marine support services. Automotive/transportation pertains to businesses providing vehicle repair and maintenance services. Marine support pertains to businesses providing specialized maritime services which may include transportation, logistical support, environmental cleanup, and other miscellaneous maritime services.

4.6.1 USE-CASES

The ferry transports vehicles, parts, and equipment to vehicle repair shops for repair or maintenance. Vehicles are transported from other parts of the State or the Lower 48 on the ferry when schedule and capacity allow. Alaska Native Corporations rely on the ferry primarily for relocating employees and moving equipment between surrounding communities which receive AMHS service.

[1] McKinley Research Group, LLC, The Economic Value of Alaska's Seafood Industry, April 2024

4.6.2 CHALLENGES AND CONSIDERATIONS

There are AMHS-served communities in Southwest, Southcentral, and Southeast Alaska that do not have direct barge service, making AMHS vital for shipments and deliveries as it is the primary way of bringing in inventory and equipment for these businesses and others across industries.

The automotive/transportation industry respondent indicated that the cost of AMHS was an obstacle for their business. The business provides vehicle and parts repair services to Ketchikan and surrounding communities. Historically, vehicles, parts, and equipment were transported via ferry to the shop for repair. It was reported that the revenue from a job rarely offsets the high shipping cost for the ferry from some communities.

Reliability – Unreliable ferry service leads to missed business opportunities and higher costs to move employees. Businesses are not able to accept contracts at short notice, as the ferry may not be scheduled in time to accommodate, or scheduled trips may be fully booked. Even when trips are scheduled, delays and cancellations often inhibit the timeliness of the work.

Cost – As freight costs rise, it has become increasingly impractical for many businesses to ship vehicles and parts via ferry. Customers in other communities are often able to find a local mechanic and, in some situations, opt for cheaper shipping alternatives, such as Alaska Air Cargo to ship parts.

5. CONCLUSIONS

Across all market sectors interviewed, service reliability emerged as a key challenge that must be addressed for businesses to thrive. A dependable schedule would encourage many businesses to return to AMHS as their primary mode of transportation, benefiting not only the businesses but also their communities, workforce, and the ferry system itself. With a reliable schedule, deliveries can be made on time, contracts can be scheduled and completed, employees can commute reliably, and patients can receive timely care. While communities have adapted to the current, often inconsistent schedules, their ability to depend on ferry transportation is ultimately tied to the ferry system fulfilling its planned services.

A schedule that caters to each sector, community, and individual business' unique needs is a difficult feat, though a couple key considerations were heard repeatedly in these interviews.

- *Schedules need to be published earlier to allow for pre-planning, both for tourists planning trips in advance and for businesses scheduling deliveries and work contracts.*
- *Weekend service (Thursday – Monday) to and from hub communities* (where connections are made for travel or that have a higher-level of availability of goods and services) *would allow deliveries to arrive at the beginning of the week, and individuals to travel, shop, and attend appointments over the weekend.*

In the interviews, respondents were asked to define service levels that would support both (1) the essential functioning of their business and (2) future growth for their business. When describing an essential service level, many indicated that the current service would be adequate—provided it was reliable. Responses by region are broken down in Figure 4.

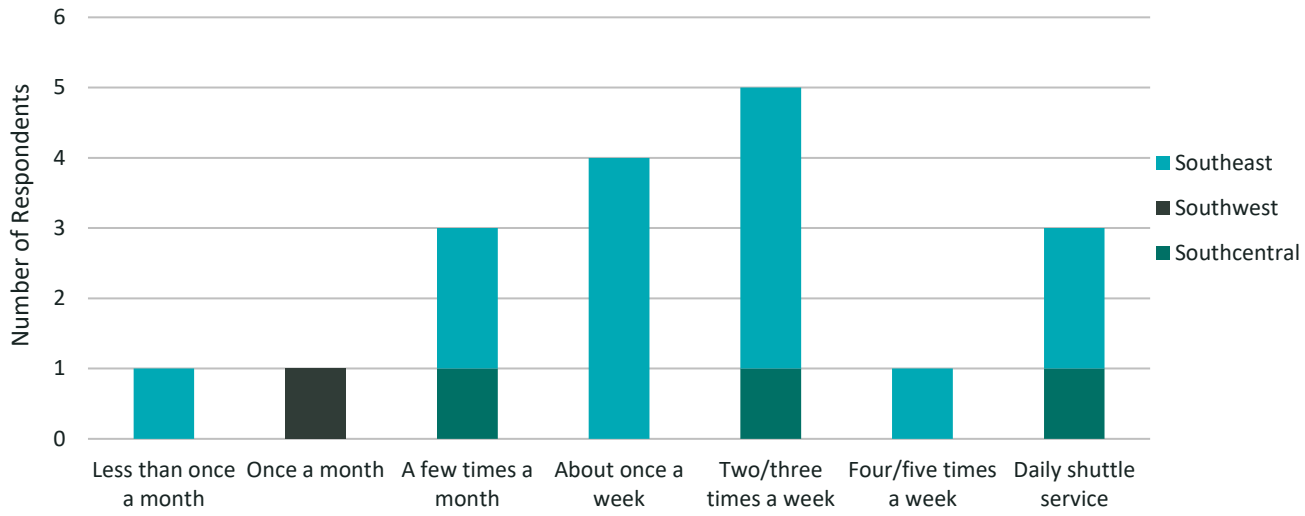


Figure 4: Identified Essential Service Levels, by region

For some, identifying a growth scenario was difficult, as their business operations have formed around current service. Of the responses gathered, it was clear that across regions, service once a week or more would be beneficial, as shown in Figure 5.

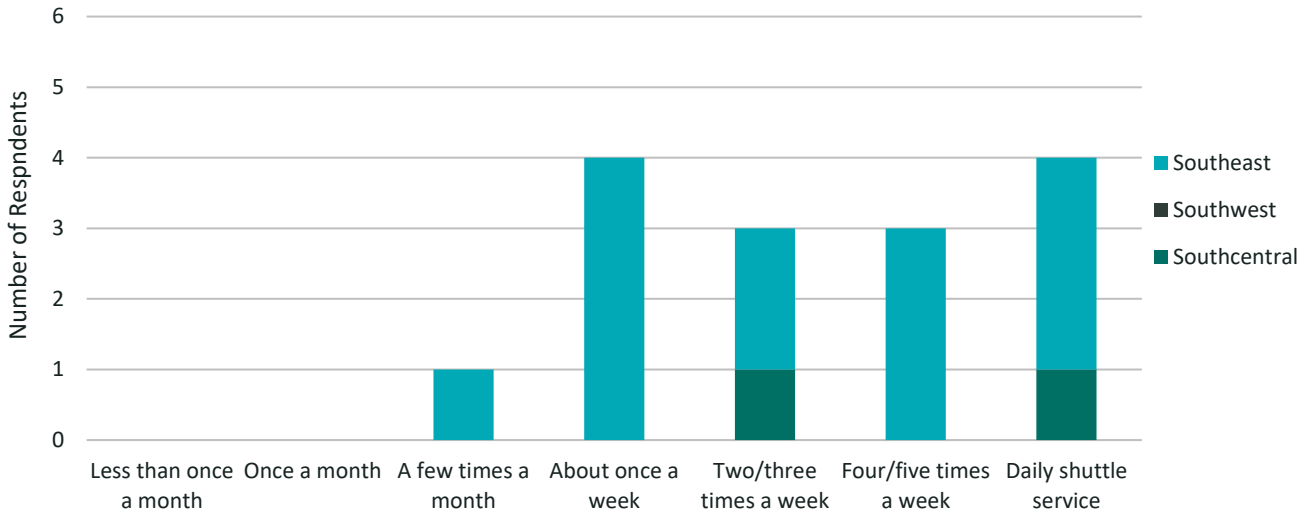


Figure 5: Identified Growth Service Levels, by region

Though many have now opted for alternative transportation providers for much of their business operations or have identified ways to manage the reliability issues that now challenge the system, ultimately, interviewees expressed hope for the future of AMHS. To quote one business owner from Pelican, “As the ferry system grows, our community becomes more livable.” Most respondents are eager to see AMHS return as a reliable, frequent, and cost-effective option again.

APPENDIX A

Completed Interviews Business List

COMPLETED INTERVIEWS BUSINESS LIST

- 60 North Seafoods, Cordova
- Alaska Glacier Seafoods, Juneau
- Angoon Trading Co., Angoon
- Aspen Suites, Sitka
- Bobcat, Juneau
- Chatham Electric, Juneau
- Collete's Cupboards, Hoonah
- Cordova Community Health Center, Cordova
- Cost Savers, Kodiak
- Dan's Automotive Services, Ketchikan
- Glacier Bay Construction Inc., Gustavus
- Grand View B&B, Wrangell
- Haines RV Park, Haines
- Island Escape Car Rental, Wrangell
- Kodiak Area Native Association, Kodiak
- Koniag Incorporated, Kodiak
- Lisianski Inlet Café, Pelican
- Mallott's General Store, Yakutat
- Morsa Marine, Juneau
- Nichols' Backdoor Company, Cordova
- Olerud's Market, Haines
- Petersburg Dental / Bed and Breakfast, Petersburg
- Providence Kodiak Island Medical Center, Kodiak
- Sagebrush Dry Manufacturing, Juneau
- SECON, Juneau
- Showers of Flowers, Metlakatla
- The Landing Hotel, Ketchikan
- Viking Travel, Petersburg
- Yakobi Fisheries, Pelican

APPENDIX B

Interview Protocol

INTERVIEW PROTOCOL

1. DO YOU USE THE STATE FERRY SERVICE AT ALL TO SUPPORT YOUR BUSINESS OPERATIONS?
    a. If yes, go to question 2.
    b. If no, skip to question 3.
2. PLEASE DESCRIBE HOW YOU USE THE FERRY SYSTEM TO SUPPORT YOUR BUSINESS. (PROMPT, IF NEEDED, WITH THE FOLLOWING OPTIONS.)
    a. Passenger service
        i. If yes, how important is this service to your business currently?
            1) How frequently do you use this service?
        ii. If no, move to next service.
    b. Vehicle service
        i. If yes, how important is this service to your business currently?
            1) How frequently do you use this service?
        ii. If no, move to next service.
    c. Cargo van or trailer service
        i. If yes, how important is this service to your business currently?
            1) How frequently do you use this service?
            2) How much cargo are you moving each time?
        ii. If no, move to next service.
3. HAS YOUR BUSINESS USE OF THE FERRY SYSTEM CHANGED OVER THE LAST SEVERAL YEARS?
    a. If yes, why?
    b. If no, go to question 4.
4. DO YOU CUSTOMERS USE THE FERRY SYSTEM TO ACCESS YOUR BUSINESS?
5. WHAT OTHER TYPES OF TRANSPORTATION BESIDES THE ALASKA FERRY SYSTEM DO YOU USE TO SUPPORT YOUR BUSINESS? (PROMPT, IF NEEDED, PRIVATE BARGE SERVICE, SCHEDULED OR CHARTERED AIR SERVICE.)
    a. What are the advantages each type of transportation you use compared to the Alaska ferry system?
    b. Are there disadvantages these other types of transportation compared to the ferry system?
6. DOES THE PRICE OF RIDING OR MOVING CARGO OR VEHICLES ON THE ALASKA FERRY SYSTEM IMPACT HOW YOU USE THAT SYSTEM FOR YOUR BUSINESS?

a. If yes, how?

b. If no, skip to question 7.

7. WHAT LEVEL OF FERRY SERVICE DO YOU BELIEVE IS ESSENTIAL FOR YOUR BUSINESS? BY "ESSENTIAL" WE MEAN A LEVEL OF SERVICE THAT ALLOWS YOU TO TRAVEL OR MOVE PRODUCTS OR CUSTOMERS TO OTHER COMMUNITIES AS NEEDED FOR YOUR BUSINESS.

   a. Daily shuttle service

   b. Four/five times a week

   c. Two/three times a week

   d. About once a week

   e. A few times a month

   f. Once a month

8. WOULD AN INCREASE IN FERRY SERVICE HELP YOUR BUSINESS GROW?

   a. If yes:

      i. Specifically, how would an increase help your business grow?

      ii. Go to question 9

   b. If no, skip to question 10

9. WHAT LEVEL OF FERRY SERVICE DO YOU BELIEVE IS NEEDED TO SUPPORT GROWTH OF YOUR BUSINESS?

   a. Daily shuttle service

   b. Four/five times a week

   c. Two/three times a week

   d. About once a week

   e. A few times a month

   f. Once a month

10. IS THERE ANYTHING ELSE YOU THINK YOU WOULD LIKE TO SHARE ABOUT BUSINESS NEEDS RELATED TO AMHS FERRY SERVICE?

11. ARE THERE ANY OTHER BUSINESSES YOU RECOMMEND WE TALK WITH AS PART OF THIS DISCUSSION?

APPENDIX B2

PUBLIC COMMENT RESPONSE

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group (EBDG)
Date: May 2025
Subject: LRP Public Comment Response, by Category
Version 4.0 (New)

PURPOSE

During the public comment period (March 1, 2025 through March 31, 2025), the Alaska Marine Highway System (AMHS) received around 150 comments on the 2045 Long-Range Plan from Alaska residents, communities, and businesses. In addition to these comments, four letters were also received from coastal Alaska communities. The comments reflect the importance of AMHS to the respondents and coastal Alaska and a general enthusiasm that the system has adopted a long-term vision. While all comments were reviewed by AMHS and the planning team, this document provides responses to commonly received questions and comments, by categories within plan focus areas.

SERVICE

COMMUNICATION

A few comments focused on the importance of continued transparency of the system. AMHS will continue updating the Plan throughout the time horizon and will continue to prioritize community engagement. Check back for continued information and engagement opportunities on implementation of the Plan.

SERVICE REQUESTS

Some comments received focus on specific service requests. While it is important to remember that the LRP is a high-level planning document, as the Plan is implemented, specific service needs will be evaluated and incorporated with help from continued community input.

Many comments were received requesting the restoration of the Cross-Gulf route. Due to United States Coast Guard (USCG) regulations, this route requires an "ocean-class" vessel. "Ocean-class" is a specific designation given to vessels that are designed to operate in the open ocean. Other than the Aleutian Chain, most of AMHS routes are classified as "protected waterways", so only the *Tustumena* and *Kennicott* were designed to have the "ocean-class" designation. With the *Tustumena* being the only vessel that can serve the Aleutian Chain and the *Kennicott* being out of service to undergo required maintenance, AMHS is not able to offer this route until the *Kennicott* returns to service. AMHS will restore this route as soon as the *Kennicott* is available and there are enough crew to operate two mainline vessels during the summer. The Plan's vessel construction schedule identifies two new ocean-class mainliners, aiming to increase AMHS resiliency and vessel redundancy on the cross-gulf route.

ROAD CONNECTIONS

Public comments on the LRP were generally supportive of the Plan's recommendation to evaluate potential future road connections. Their inclusion reflects the multi-modal nature of transportation in coastal Alaska and the potential for road links to reduce AMHS operating costs and enhance service efficiency. These references also acknowledge long-standing proposals and studies initiated by communities and the Alaska Department of Transportation and Public Facilities (DOT&PF). The Plan makes clear that these road connections are not assumed to be completed, nor are service levels modeled with them in place.

Importantly, the Plan does not presume that any of these connections will be realized. Rather, it recommends that such opportunities be evaluated as part of long-term planning. The service levels proposed throughout the Plan are developed independently of any future road extensions. As a living document, the LRP will continue to be updated to reflect changes in other DOT&PF plans, evolving transportation priorities, and future infrastructure developments.

FLEET AND TERMINAL INFRASTRUCTURE

"DON'T REINVENT THE WHEEL"

A few comments received requested that the system focus its fleet efforts on vessel design elements that have been tested and proven to work for AMHS. While it may seem advantageous to reuse existing vessel plans, it is not possible to simply reuse older designs due to the changes in regulations and technology that have occurred over the past 60 years. The Plan identifies notional vessels that reflect tested AMHS designs and considers lessons learned throughout AMHS' history and identifies opportunities to leverage technological advancements for more efficient and sustainable operations.

RELIABILITY AND AFFORDABILITY

Many comments addressed the need for future vessels to be reliable and affordable. AMHS is designing new vessels with both these factors in mind. The hybrid-propulsion systems that include an additional generator will increase the reliability of the vessels and allow the vessels to continue operating even if one generator is non-operational. The vessels will also be "right sized" for the routes that they will serve with route durations, distances, and historical ridership taken into consideration.

VESSEL INTERCHANGEABILITY

Some comments discussed the importance of vessel interchangeability. New vessel classes will be designed to be interchangeable with similarity within vessel classes – high-efficiency shuttles being similar to each other, the mainline vessels being similar to each other, and the dayboat vessel being similar to the existing Alaska Class Ferry vessels. Vessels will be designed to have similar access points with most vessels having side and stern vehicle doors. The terminals will also be upgraded to align with vessel access points.

HYDER/PRINCE RUPERT

A number of comments stated a preference for service to Prince Rupert, BC or Hyder, AK. As stated in the Plan, the decision to provide service to either Hyder to Prince Rupert is pending a feasibility

study. A study to support this decision will include an analysis of cost, operational considerations, and community input.

ACCESSIBILITY

A few comments requested better accessibility on the vessels and at the terminals. Accessibility is important to AMHS and all new vessels will be built to meet ADA requirements. Terminals will also be updated to address accessibility issues.

WORKFORCE

RETENTION

Several comments were received regarding AMHS' need to retain existing crew members and the issues that current crew face with overall compensation and lack of performance reviews, bonus programs, mentoring programs, and disciplinary programs. As discussed in the Plan, AMHS management will continue to work with the State Officials to improve the overall crew compensation. AMHS will also work with the Unions to address the additional programs that were put forward for consideration.

FINANCIAL

FARES

A few comments focused on the nature of system fares. Going forward, the system will continue to evaluate fare policies to better serve the system and riders. At this time, the Plan does not involve dynamic pricing.

FUNDING

A number of comments recognized how critical funding is to AMHS. With a clear Long-Range Plan, State and Federal representatives are better equipped to make informed funding decisions in support of AMHS.

Additionally, AMHS will seek to increase passive revenue generation by completing financial feasibility assessments on all passive revenue generation ideas such as bars/restaurant services, gift shops, and onboard/in-terminal advertising to ensure the services generate positive net income.

TOURISM

There were a few comments that suggested advertising traveling on AMHS as an alternative to cruise ships. AMHS plans to increase advertising to tourists during the Mid-Term period of the plan, once the system is stabilized, more reliable, and service levels have increased enough to support local demand.

APPENDIX C1

SERVICE LEVEL FRAMEWORK

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Service Level Framework
Version: 4.0 (New)

PURPOSE

This memo details the process for developing a target Service Level for the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP). In the context of the AMHS LRP, a service level refers to the frequency of service provided to each community by the AMHS fleet. These service frequencies are used in the Plan's Service Scenario Framework to evaluate potential plan scenarios for their ability to meet the target service level for each community (see Appendix C2). This memo describes the goals and framework used to develop the AMHS 2045 LRP target Service Level.

GOALS

The primary goal of the Service Level Framework is to develop a tool to assist AMHS in identifying a target 2045 Service Level for all AMHS-served communities, built upon the feedback and input from the communities themselves. The service levels identified are targets that meet the understanding of community needs for both the number of port calls to a community and the connections to other communities. In support of this primary goal, a secondary goal of this framework is to provide each community with equivalent or greater service than was provided in 2022, which was chosen as the baseline year because it was the latest available data at this stage of the Plan development.

It is important to note that the Service Level Framework is a long-term planning process to support the 20-year planning horizon of the AMHS 2045 LRP; therefore, operational decisions, such as ideal sailing times or days of the week are not captured by the framework. The Service Level framework outputs an *annual number of port calls by community*, which is then converted to an *approximate service frequency* (i.e. number of port calls per week) for ease of understanding.

APPROACH

The AMHS 2045 LRP aimed to create a Service Level that is equitable and based on the ***needs*** and ***access*** of communities. Public input is at the core of the framework development and outcome. The framework first pulls from the needs assessment body of work, which identified community needs through community research and engagement with community members. Building on the needs assessment, the results of a public survey, which aimed to capture community perceptions of AMHS service levels needed to support their communities, were integrated into the framework

(see Appendix B1 for survey response summary). Service provided in 2022 was used as a minimum for all communities, ensuring that the Level of Service Framework output target levels met or exceeded 2022 service levels.

Figure 1 summarizes the overall approach taken in developing the target Service Level.

Figure 1: Service Level Framework Approach Graphic

COMMUNITY RESEARCH AND IDENTIFICATION OF COMMUNITY NEEDS

The needs assessment aimed to evaluate the availability of resources within AMHS-served communities and determine their reliance on the ferry system for connections to goods, services, and other communities. The assessment was completed through community research and engagement, such as the Public Survey (Appendix B1) that asked respondents to report on the resources available within their communities. For more detail on the community engagement that occurred throughout this plan, see Appendix B1.

Although it is not possible to evaluate the availability of all goods and services relevant to reliance on the ferry system, data for the following service categories were evaluated for each AMHS-served community:

- Availability and quality of grocery stores
- Availability of Women, Infants, and Children (WIC) vendors
- Availability and quality of medical facilities
- Availability of inter-community road connections
- Availability and quality of air service
- Availability and quality of barge service
- Availability of vehicle repair facilities

DEVELOPMENT OF COMMUNITY TYPOLOGIES

Based on the results of the needs assessment, Community Typologies were developed to categorize AMHS-served communities by their relative access and function within the system, allowing for target levels of service to be prescribed across the system. Four typologies were created to describe the Alaskan communities served by AMHS:

- ***Type A*** communities are characterized by the highest access to goods and services in the system. Type A communities are often visited by many system communities, even those

outside of the immediate region, for more specialized healthcare, commerce, and access to travel outside of the system.

- ***Type B*** communities are characterized by high access to goods, amenities, and community connections, but do not offer the high levels of services that are offered by a Type A community. Type B communities may have access to alternative modes of transportation but often utilize the ferry system for community connections and travel to Type A communities.
- ***Type C*** communities are characterized by moderate access to goods and amenities. While Type C communities are not typically visited for their high levels of access, members of neighboring Type D communities may visit to meet core needs. Type C communities may have limited alternative transportation options but rely heavily on the ferry system to meet higher levels of needs.
- ***Type D*** communities are characterized by low access to goods, amenities, and community connections. Type D communities have very few or no alternative modes of transportation to other communities. Type D communities rely on the ferry system to meet even core needs.

One additional typology was created to describe non-Alaskan communities in the system:

- ***Gateway*** communities are non-Alaskan communities within the system that function as connections between Alaskan communities and the Lower 48.

Figure 2 shows the list of community typologies based on the Community Research and Identification of Community Needs analysis.

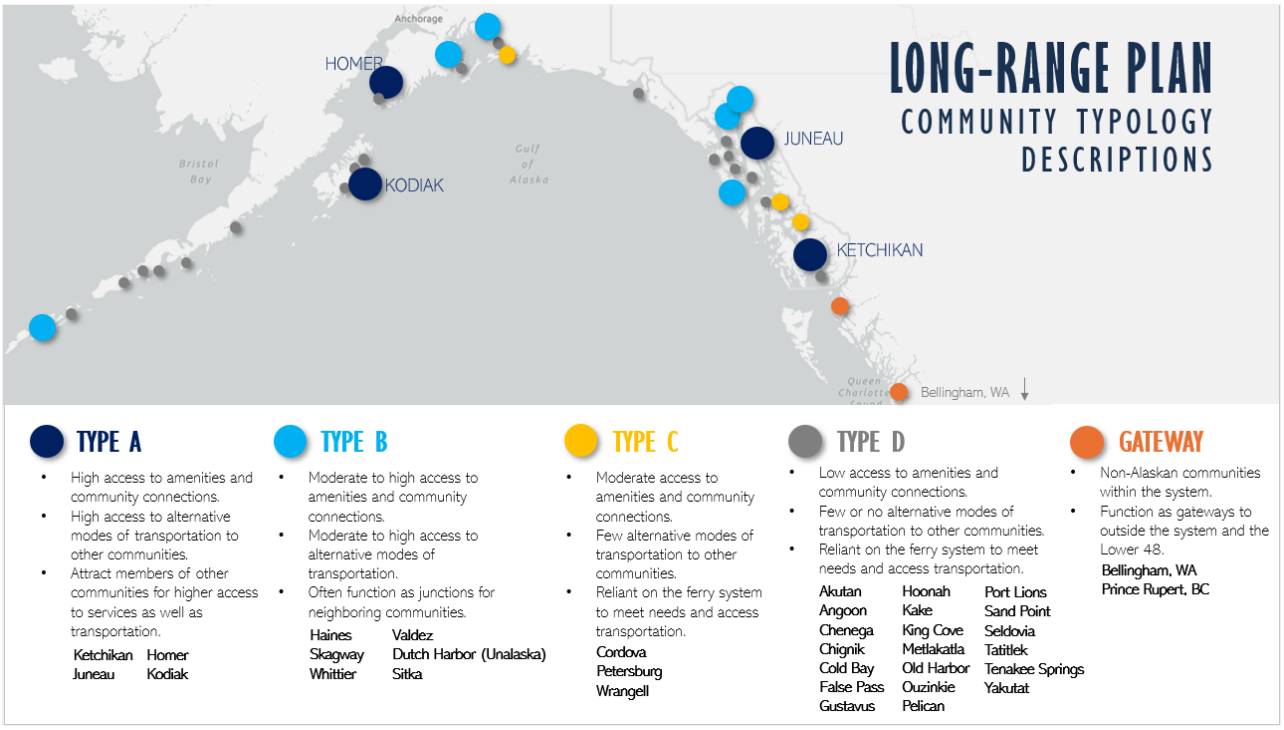


Figure 2: Map of AMHS LRP Community Typologies

IDENTIFYING TARGET SERVICE LEVELS

Target Service Levels were identified based on the needs and access of AMHS-served communities, their determined Community Typologies, the identified travel patterns of their residents, and additional external factors, such as geography and weather considerations.

- ***Needs and Access:*** Service frequencies were assigned to each level of access for the identified community needs as listed in the "Community Research and Identification of Community Needs " section above. For example, the lack of availability of a grocery store was assigned a target service frequency of once a week. This was repeated for each of the listed needs with individual target frequencies derived from community engagement. For each community, the highest service frequency determined through this analysis was used as the minimum target for that community.
- ***Public Survey:*** In addition to the results of the needs assessment, a public survey conducted for the LRP, which reached members of every system community, asked respondents to identify their desired level of service for their community and for their most-traveled connections to other communities. The results of this survey (results summary can be found in Appendix B1) were accounted for in the Service Level Framework, helping to better refine the target level of service and desired connections across the system.

- ***Community Typologies:*** Categorization of system communities provides a helpful way to further understand potential travel patterns across the system. Insight gained through community engagement, such as the Public Survey, revealed that the primary goal of AMHS travel was to connect communities with lower levels of access to goods and services (Type C and D communities) to communities with higher levels of access (Type A and B communities). With this in mind, target levels of service were built up starting with the Type D communities and building connections to surrounding communities. The level of service target for Type A and B communities is therefore aggregated from the determined service level targets for Type C and D communities and the possible vessel routes for that region. Using Figure 3 as an example, the Public Survey and other community engagement identified which connections residents are attempting to make via AMHS. In the case of the Northern Southeast region, surrounding communities are primarily attempting to connect to Juneau (Type A), with additional desired connections between Type D communities. Based on possible vessel routing schemes, Juneau receives port calls from multiple routes in the region (*Haines – Skagway – Juneau*, *Tenakee – Angoon – Kake – Angoon - Juneau, Gustavus – Pelican – Juneau, Hoonah – Gustavus – Juneau*, as examples).

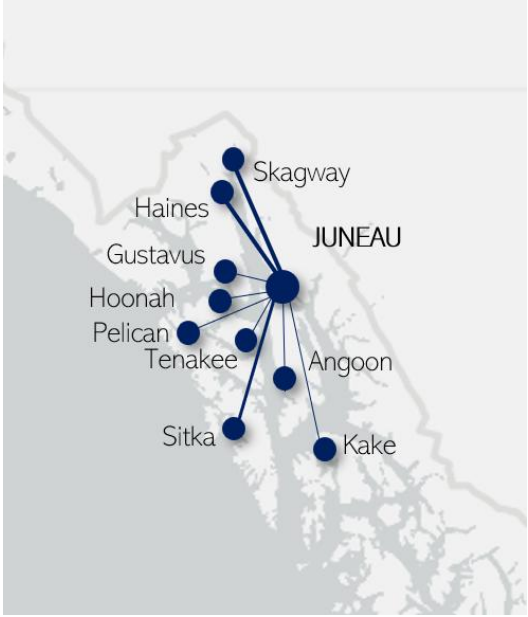


Figure 3: Identified Community Connections to Juneau

OPERATING CONSIDERATIONS

Some community service levels are constrained by geography (for example, turn-around ports, such as Dutch Harbor, receive half the service of other communities with which they are connected) and weather (for example, the Aleutian Chain typically does not receive service in the winter due to harsh weather conditions). Metlakatla, due to its short distance to Ketchikan and existing shuttle route, received a target service level that reflects a continuation of that service.

FINDINGS

FREQUENCY TO PORT CALLS CONVERSION

Based on the approach described above, target Service Levels for each community were developed. Table 1 provides a key for an approximate conversion from frequency to port calls as used in this framework.

Table 1: AMHS LRP 2045 Target Service Levels Frequency Key

FREQUENCY	PORT CALLS
Once or more a day	One or more port calls per day
Several times a week	Four, five, or six port calls per week
A few times a week	Two or three port calls per week
About once a week	One port call per week
A few times a month	Two or three port calls per month
Once a month	One port call per month

TARGET SERVICE LEVELS

Table 2 summarizes the 2045 target frequency for each system community. These service levels represent the target level for the system in 2045 and form the basis of the identification and analysis of Service Scenarios (see Appendix C2 for more information).

Table 2: AMHS LRP 2045 Target Service Levels

COMMUNITY	TYPOLOGY	FREQUENCY	COMMUNITY	TYPOLOGY	FREQUENCY
Akutan*	D	A few times a month	Metlakatla	D	Once or more a day
Angoon	D	A few times a week	Old Harbor*	D	A few times a month
Bellingham	Gateway	About once a week	Ouzinkie	D	A few times a week
Chenega Bay	D	A few times a month	Pelican	D	A few times a month
Chignik*	D	A few times a month	Petersburg	C	A few times a week
Cold Bay*	D	A few times a month	Port Lions	D	A few times a week
Cordova	C	Several times a week	Prince Rupert	Gateway	A few times a month
Dutch Harbor (Unalaska)*	B	Once a month	Sand Point*	D	A few times a month
False Pass*	D	A few times a month	Seldovia	D	A few times a week
Gustavus	D	A few times a week	Sitka	B	A few times a week
Haines	B	Once or more a day	Skagway	B	Once or more a day
Homer	A	Several times a week	Tatitlek	D	A few times a month
Hoonah	D	A few times a week	Tenakee Springs	D	A few times a week
Juneau	A	Once or more a day	Valdez	B	A few times a week
Kake	D	A few times a week	Whittier	B	Several times a week
Ketchikan	A	Once or more a day	Wrangell	C	A few times a week
King Cove*	D	A few times a month	Yakutat	D	About once a month
Kodiak	A	A few times a week			

*Communities on the Aleutian Chain typically do not receive service in the winter operating season due to weather constraints.

APPENDIX C2

SERVICE SCENARIO DEVELOPMENT & SELECTION

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group
Date: May 2025
Subject: AMHS 2045 Long-Range Service Scenario Development and Selection
Version: 4.0 (New)

PURPOSE

This memo outlines the development of Service Scenarios, and the methodology used to select a ***2045 Plan Scenario*** for the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP). The selected ***2045 Plan Scenario*** is foundational to the AMHS 2045 LRP and drives the required improvements to the system to meet the objectives identified in the plan, including the following supporting plan elements:

- Vessel Replacement Schedule
- Terminal Upgrades Schedule
- Capital and Operating Budgets
- Required Crewing Levels

To identify a ***2045 Plan Scenario,*** Service Scenario alternatives were built from analysis and understanding of community characteristics, connections, and service needs. The scenarios were analyzed using a Service Scenario Framework. This framework identified evaluation criteria which best meets the goals and mission of the plan – to chart a path forward to a thriving AMHS system that is maintainable, reliable, and connective to support the residents, communities, and businesses of coastal Alaska.

Each "Service Scenario" developed for analysis refers to a particular fleet and routing combination to provide service to AMHS communities. The ***2045 Plan Scenario*** refers to the service scenario selected as the target fleet and routing combination for implementation by 2045 and outlined in the AMHS 2045 LRP. The steps for evaluation of the Service Scenarios are outlined in Figure 1 below and described further in this memo.

Figure 1: Service Scenario Development Process Graphic

The steps taken to develop the Service Scenarios aimed to provide a thorough analysis of potential fleet scenarios to determine a ***2045 Plan Scenario*** that met the target level of service identified through public and stakeholder engagement and that was also feasible and reliable. Below are more detailed descriptions of the steps outlined above.

STEP 1: FLEET CONFIGURATION WORKSHOP 1

To begin the process of developing potential Service Scenarios, AMHS staff members were invited to participate in a brainstorming session where they were asked to present a variety of potential fleet options. Some of the presented options were similar to former and present AMHS fleet configurations, while other options included fleet configurations, sizes, and routing that have not previously been included in AMHS operations. Participants were asked to think "outside-the-box" to enter all ideas into discussion.

STEP 2: PRELIMINARY SCENARIO EVALUATION

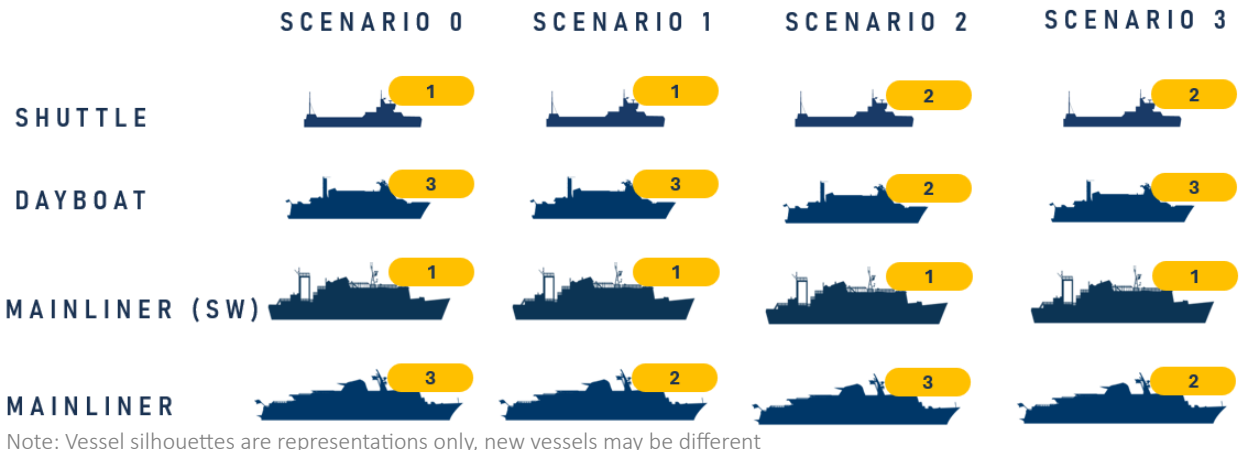
Based on the ideas brainstormed in Fleet Configuration Workshop 1, a range of preliminary scenarios were drafted. These scenarios addressed the wide spectrum of possibilities identified in the workshop, creating a set of scenarios that varied in fleet configuration, size, and routing. These scenarios were then evaluated for their capacity to meet the target ***service level*** for each community (see Appendix C1), relative capital, operating, and maintenance costs, and relative crewing level requirements.

SERVICE LEVEL FRAMEWORK

The Service Level Framework, which created a process for evaluating the needs of AMHS communities and determining reliance on the ferry system as a provider of transportation to reach goods and services, played a major role in Service Scenario development. For more information on the Service Level Framework, see Appendix C1. Through the analysis of needs and engagement with community residents and businesses, a **Target Service Level** was identified for each system community, which was used as the basis of modeling routing for each potential scenario.

STEP 3: FLEET CONFIGURATION WORKSHOP 2

Participants reviewed and discussed the eight scenarios and their preliminary evaluations to narrow the list to four scenarios for further evaluation. Scenarios were eliminated from the list because they did not meet the target service levels or were operationally infeasible (difficulty in meeting labor work-rest requirements, weather constraints on operations, etc.). All four of the chosen scenarios were able to meet 2045 target service levels. Figure 2 summarizes the fleet compositions of the four scenarios identified for further evaluation. For more information on the vessel classes used for this analysis, see Appendix C3.



Note: Vessel silhouettes are representations only, new vessels may be different

Figure 2: Four Scenarios Selected for Further Evaluation

STEP 4: FINAL SCENARIO EVALUATION

The four narrowed scenarios were then adjusted based on workshop discussion and were evaluated in further detail. This evaluation included more granular estimates of service levels, capital, operating, and maintenance costs, crewing requirements, fleet interchangeability, length of maintenance periods, and projected revenue generation. Table 1 lists the fifteen criteria used to evaluate the four scenarios. These fifteen criteria were chosen as a reflection of the focus areas and goals identified by the 2045 AMHS LRP (see Appendix C1).

Table 1: Service Scenario Criteria

CRITERIA	DESCRIPTION
1 Total Workforce Size	Total one crew requirement for the fleet.[1]
2 Crew Composition	Total one crew sea time requirement to fill all positions assuming entering fleet in new-hire position (not from a maritime academy).
3 Two Crew Requirement	Percentage of vessels in fleet with two-crew requirements.
4 Level of Service	Total annual port calls.
5 Port Call Distribution	Total annual port calls, discounting those delivered by a shuttle.[2]
6 Service Reliability	Percentage of estimated reliability for routes that are receiving service from smaller vessel than current.
7 Fleet Redundancy	Number of vessels that can cover for one another.
8 Vehicle Capacity	Total estimated vehicle capacity in lane length.
9 Passenger Capacity	Total estimated passenger capacity.
10 Maintenance Weeks	Number of estimated maintenance weeks per vessel count.
11 Fleet Capital Cost	Rough order of magnitude estimates of capital costs for fleet.
12 Terminal Capital Cost	Rough order of magnitude estimates of capital costs for terminals.
13 Fleet Maintenance Cost	Rough order of magnitude estimates of maintenance costs for fleet.
14 Fleet Operational Cost	Rough order of magnitude estimates of operational costs for fleet.
15 Farebox Recovery Rate	Farebox recovery rate relating revenue generation to fleet operational cost.

The following tools were used to evaluate the scenarios against these criteria:

1. Operations Model, which included inputs of *vessel characteristics* and *operating parameters*, *crew costs*, *overhead costs*, *distance between ports*, *vessel routings*, *fuel cost per gallon*, *weeks of service* of each vessel for summer and winter, *overhaul and layup periods*, *routes for each vessel* and *number of trips per week* on each route, and calculated:
    a. Number of port calls per community
    b. Operational costs (marine operation costs, shoreside operation costs, support service expenses)
    c. Vessel overhaul and capital improvement costs
2. Ridership and Revenue Model (see Appendix C5), which calculated:
    a. Projected ridership based on number of port calls
    b. Projected revenue based on projected ridership
3. New Vessel Capital Costs (see Appendix D1), which estimated design and build costs for each of the new vessels

[1] If a vessel operates more than 12 hours a day, the USCG requires two crews for the vessel to operate. See Appendix A1 for more information.

[2] This criterion evaluates how port calls are distributed among communities served by AMHS. While shuttle ferries provide frequent service, they typically operate point-to-point and serve only a limited number of locations. By focusing on port calls made by non-shuttle ferries, this criterion assesses the extent to which service levels facilitate connections between communities, with a broader distribution of port calls being more favorable.

4. Terminal Capital Costs Model (see Appendix E1), which estimated design and construction costs for terminal modifications necessary to support each scenario
5. Workforce Projections, which estimated the workforce required to operate each scenario's fleet

STEP 5: 2045 PLAN SCENARIO SELECTION

Participants of the Fleet Configuration Workshops were presented with the results of the final evaluation of the four scenarios. They were then asked to weight the fifteen criteria listed in Table 1 by level of importance. This weighting method allows for the results of the evaluation to be viewed through the lens of various priorities. The responses collected from participants varied in emphasis and prioritization of the fifteen evaluation criteria.

FINDINGS

Although criteria priority weightings varied across respondents, Scenario 3 consistently scored the highest for each participant. After discussion amongst participants on the findings and scoring of the evaluation, Scenario 3 was chosen as the ***2045 Plan Scenario***, due to its ability to meet the 2045 target service level while maintaining financial efficiency, system reliability, and workforce sustainability.

Note: Vessel silhouettes are representations only, new vessels may be different

Figure 3: 2045 Plan Scenario

The ***2045 Plan Scenario*** has the Mainliner (SW) serving Southwest Alaska year-round and the Aleutian Chain in the summer. The two mainliner vessels serve Southeast Alaska year-round with service from Bellingham and Prince Rupert, B.C. or Hyder, AK to Skagway. One mainliner vessel also provides cross-gulf service from Bellingham to Kodiak in the summer. Two dayboat vessels provide year-round service to the North Lynn Canal and Northern Southeast areas. One shuttle vessel provides summer service between Haines and Skagway, and the second shuttle vessel provides year-round service between South Tongass (Saxman) and Metlakatla.

For more information on the ***2045 Plan Scenario*** and its implementation, see the Fleet Plan section of the AMHS 2045 LRP, which provides a timeline of vessel design and construction.

APPENDIX C3

VESSEL CHARACTERISTICS

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Vessel Characteristics
Version: 4.0 (New)

PURPOSE

This memo provides the estimated principal characteristics for vessels included in the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP) service scenario analysis. A vessel's characteristics, which includes its length, beam, design speed, loading configuration, and passenger capacity, help to understand the operational and maintenance costs, capital costs, potential ridership, required terminal infrastructure improvements, and its ability to operate in the various AMHS service regions.

APPROACH

For the purposes of this analysis, three major vessel classes have been identified to categorize the general abilities and characteristics of the future fleet. These classes reflect vessel types that have operated in the AMHS fleet and are proven to meet service demands.

- ***Mainliners*** are vessels intended for multi-night passenger travel over long distances.
- ***Dayboats*** are vessels intended for traveling shorter distances and are not suitable for overnighting passengers. Does have crew quarters allowing crew to work beyond 12 hours, but not 24 hours.
- ***Shuttles*** are vessels intended for point-to-point transit multiple times a day with no crew quarters and crew unable to work beyond 12 hours.

In addition to the vessel class,

- ***Ocean*** is a designation given to vessels that can operate in the Gulf of Alaska and along the Aleutian Chain.

Furthermore, three different, but substantially similar variations of the mainliner were included with each variation tailored for its intended service.

Using knowledge of current vessel types, approximate characteristics were developed for each of the potential future vessel classes that could meet the opportunities, challenges, and limitations of the service scenarios, geography, sea states, and route distances. Table 1 lists the class designations of each of the vessels in the 2024 AMHS fleet for reference.

Table 1: 2024 Fleet Designations

CLASS	VESSELS
Mainliner	*Columbia, Matanuska, Kennicott*, Tustumena**
Dayboat	*Leconte, Aurora, Tazlina*[1]*, Hubbard*
Shuttle	*Lituya*

*Vessels with ocean designation, allowing for operation in the Gulf of Alaska and along the Aleutian Chain.

FINDINGS

Based on the assumptions outlined in the Approach section, the following characteristics were developed for each vessel type.

Table 2: Vessel Principal Characteristics

	MAINLINER	MAINLINER MINUS	MAINLINER SW	DAYBOAT	SHUTTLE
Length Overall (ft)	408	360	330	280	197.5
Beam (ft)	74	67	74	67	53
Depth (ft)	24.5	20	24.5	20	17.75
Draft (ft)	15.25	13.5	15.83	13.92	11
Lightship (LT)	5609	3566	4600	2100	932
Displacement (LT)	7470	4728	5680	3016	1190
Tonnage (GRT)	Unlimited	Unlimited	Unlimited	Under 1600	Under 100
Crew Size	48	44	38	25	6
Passenger Capacity	450	350	250	300	150
Vehicle Capacity	83	73	58	53	30
Lane Length (ft)	1960	1460	1220	1060	600
Passenger Staterooms	Yes	Yes	Yes	No	No
Crew Staterooms	Yes	Yes	Yes	Yes	No
Power (HP)	2 x 5000	2 x 4000	2 x 4116	2 x 3000	2 x 1560
Design Speed (kts)	17.5	17	15	16.5	14.5
Fuel Consumption (gal/hr)	448	298	262	250	110
Annual Maintenance Time (weeks)	12	11	10	8	4
Freeboard (ft)	9.25	6.5	8.67	6.08	6.75
Stern Door	Yes	Yes	Yes	Yes	Yes
Bow Door	No	No	No	No	No
Side Doors	P/S Fwd	P/S Aft	P/S Aft	P Aft/S Fwd	Stbd Fwd

[1] *Tazlina* Crew Quarter design is in progress with construction starting in 2025.

Table 3 provides a key for vessels planned in the Service Scenarios, designating the vessel's name, class, and status in the current or future fleet.

Table 3: Service Scenario Vessel Key

VESSEL	DESCRIPTION	STATUS
Mainliner Replacement Vessel (MRV)	Mainliner	Future fleet
Ocean Mainliner Replacement Vessel (OMV)	Mainliner*	Future fleet
Tustumena Replacement Vessel (TRV)	Mainliner Southwest*	In design
Tazlina (TAZ)	Dayboat	Current fleet
Hubbard (HUB)	Dayboat	Current fleet
Mainliner Minus Replacement Vessel (MMRV)	Mainliner Minus	Future fleet
Dayboat (DB)	Dayboat	Future fleet
High Efficiency Ferry (HEF)	Shuttle	Future fleet

*Vessels with ocean designation, allowing for operation in the Gulf of Alaska and along the Aleutian Chain.

The vessels listed in Table 3 make up the four Service Scenario fleets for 2045. Other existing vessels that are in the 2025 fleet will also be included in the fleet plan for the LRP Scenario Selection but will be retired prior to 2045.

APPENDIX C4

ECONOMIC TRENDS

To: Alaska Marine Highway System (AMHS)
From: McKinley Research Group
Date: May 2025
Subject: Coastal Alaska demographic and economic trends impacts or associated with AMHS travel demand
Version: 4.0 (New)

PURPOSE

This memo documents the process taken to assess population and industry trends which may have a material impact on Alaska Marine Highway System (AMHS) use and demand. This effort was intended to inform AMHS 2045 Long-Range Plan (LRP) service demand and potential ridership changes to shape future service scenarios.

APPROACH

This document describes population forecasts and key industry metrics to identify socioeconomic trends most likely to impact AMHS use by residents and businesses. Several key data sets were used in this analysis, including:

- Population estimates and forecasts published by the Alaska Department of Labor and Workforce Development (ADOLWD). This data includes detailed demographic estimates and projections which are informed by U.S. Census Bureau Decennial Census data, Permanent Fund Dividends distribution data, and other factors.
- Seafood industry data including commercial permit holder data by residence provided by special request from the Alaska Department of Fish & Game and processing participation as published by ADOLWD.
- Tourism industry indicators are based on cruise ship port call schedules published by Cruise Line Agencies of Alaska, passenger residence data provided by AMHS, and McKinley Research Group calculations.
- Other public data sources such as federal infrastructure fund tracking and the Alaska Construction Spending Forecast.[1]

[1] McKinley Research Group. *Alaska's 2024 Construction Spending Forecast*. Prepared for the Associated General Contractors of Alaska, January 2024.

FINDINGS

Review of key forecasts and metrics related to the population and economy of coastal Alaska revealed a mix of socioeconomic factors exerting competing pressures on AMHS service demand. Those expected competing pressures include:

1. Population decline is expected across most communities served by AMHS. Under stable operating conditions, a decline in the number of residents would likely **reduce demand for transportation services.**
2. Population aging will continue through at least 2030, which may **increase demand for medical care-related travel** for residents of coastal Alaska's most remote communities.
3. A decline in the number of residents under age 18 across communities served by AMHS may put **downward pressure on school-related travel.**
4. No long-term changes are expected in the composition of coastal Alaska's economy or the volume of economic activity in the region. Changes in the level of AMHS service have potential to impact many industries; however, there are **currently no industry trends which would suggest an exogenous change in business demand for AMHS service.**

The following sections provide key metrics related to these findings.

POPULATION AND DEMOGRAPHICS

The trajectory of the resident population living in the 35 communities directly served by AMHS has shifted over the last decade. Total population across the communities generally increased at a modest rate between 2009 and 2014. Population declined following 2014 coincided with a statewide recession spurred by low oil prices. This trend continued until 2020, and population change has been slight in the intervening years.

Figure 1 provides data on the total resident population living in AMHS-served port communities from 2009 to 2022.

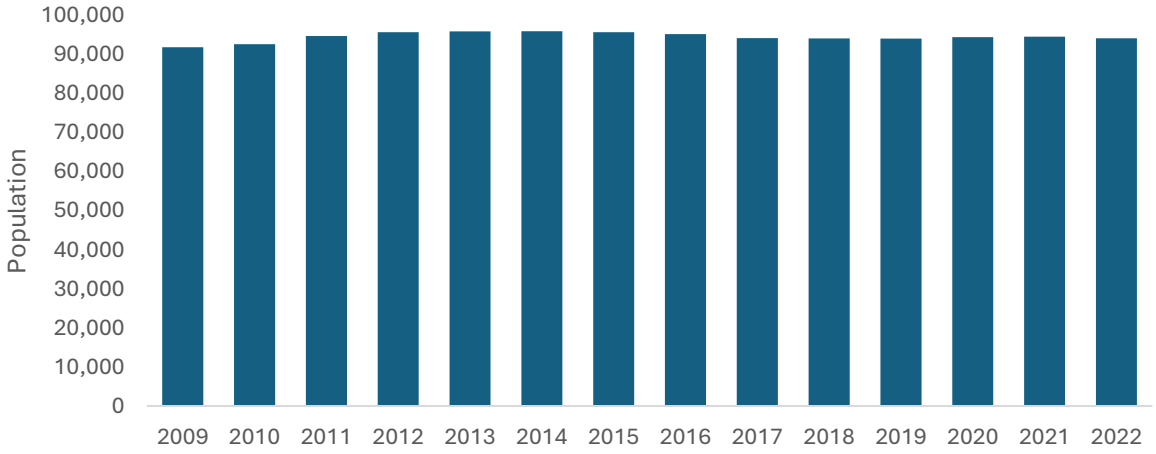


Figure 1: Total Resident Population Living in AMHS-Served Port Communities, 2009-2022
Source: Alaska Department of Labor and Workforce Development and McKinley Research Group calculations

As with other transportation systems, AMHS use is highly related to the number of port calls made to each community, schedule reliability, and demand for travel to and from ports. Declining system use over the last decade has been highly related to changes in service level (supply). While ridership decline coincided with population decline between 2015 and 2022, the magnitude of the change in passenger use does not suggest that declining transportation demand was the primary driver of changing system use.

Figure 2 and Figure 3 show the relationship between AMHS passenger ridership, the total resident population of AMHS-served communities, and annual AMHS port calls from 2009 to 2022.

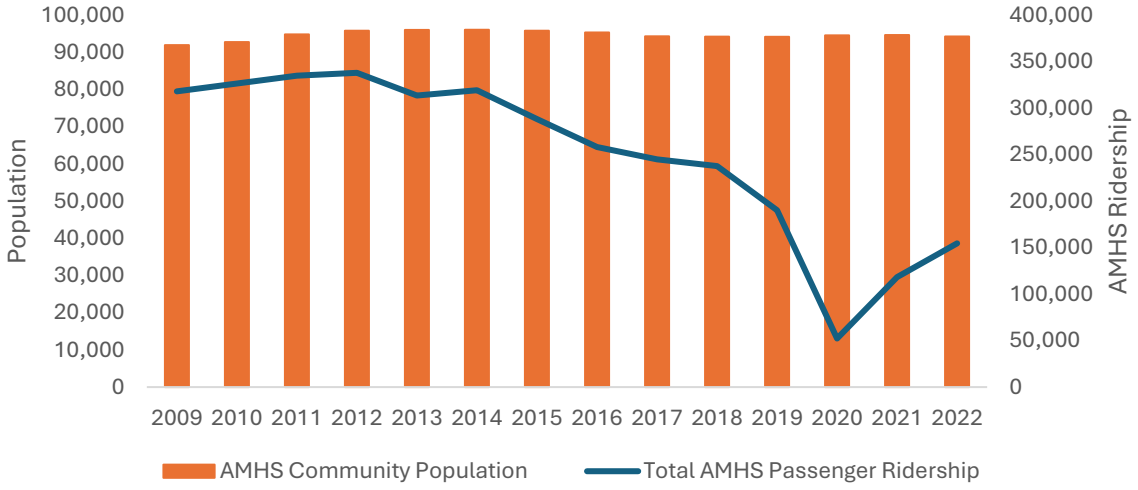


Figure 2: Total Resident Population Living in AMHS-Served Port Communities and AMHS Passenger Use, 2009-2022
Source: Alaska Department of Labor and Workforce Development, Alaska Marine Highway System, and McKinley Research Group calculations

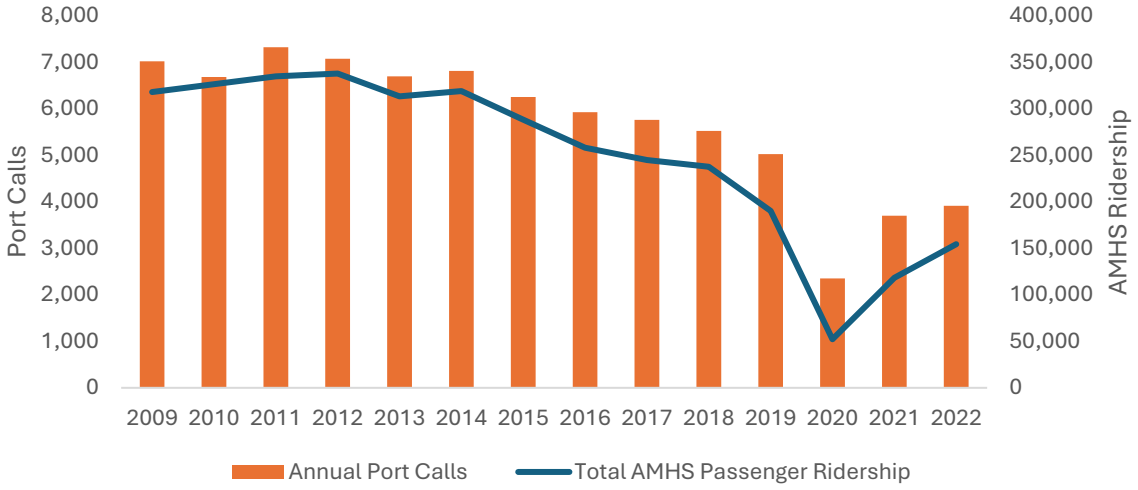


Figure 3: Annual AMHS Port Calls and AMHS Passenger Use, 2009-2022

Source: Alaska Marine Highway System and McKinley Research Group calculations

Population decline is expected to continue through 2045 across most communities served by AMHS. The total population of AMHS-served communities is expected to decrease by 8% (7,800 people) by 2045, in contrast to an expected 3% increase in the statewide population. Population decline in regional hubs such as Juneau, Ketchikan, Sitka, and Kodiak contribute significantly to this forecast. The population of most non-hub communities is also expected to decrease. Exceptions to this trend include Skagway (+421 residents expected by 2050), Unalaska (+112), and Homer (+89).

Figure 4 shows the total resident population of AMHS-served communities as of 2022 and the expected population at five-year intervals through 2045.

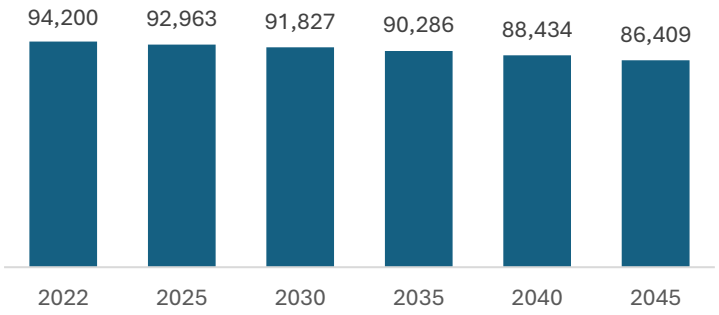


Figure 4: AMHS-Served Port Community Total Population, 2022 Actual and 2025-2045 Projected

Source: Alaska Department of Labor and Workforce Development and McKinley Research Group calculations

A decline in the resident population of AMHS communities may exert limited downward pressure on travel demand across the system. However, resident survey research performed for this long-range planning effort suggests there is excess resident travel demand which is expected to outweigh the impact of this population change.

POPULATION AGING

Alaska's population has generally aged over the last decade; the number of residents aged 65 and above doubled between 2009 and 2022, while the population below 65 declined. The

demographics changes in areas of coastal Alaska served by AMHS have been consistent with this statewide trend.

The number of residents aged 65 and above living in communities served by AMHS is expected to increase between 2022 and 2030, before gradually declining through 2045. An increased senior population may result in higher transportation demand by seniors traveling to hub communities for health care. To the extent that senior fare discounting continues as part of the AMHS fare structure, an increase in seniors as a percentage of AMHS passengers may exert downward pressure on overall system revenue.

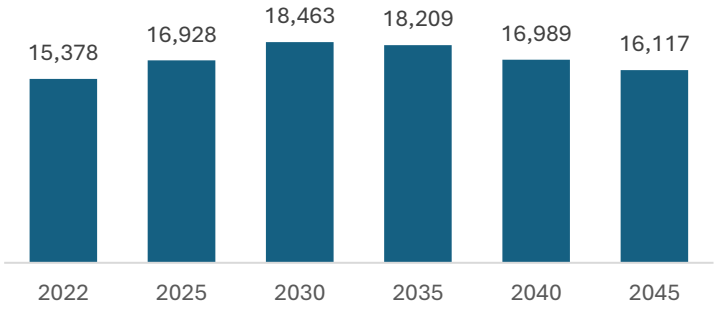


Figure 5: AMHS-Served Port Community Population Aged 65 and Above, 2022 Actual and 2025-2045 Projected

Source: Alaska Department of Labor and Workforce Development and McKinley Research Group calculations

Figure 5 shows the population aged 65 and above living in AMHS-served communities as of 2022 and the expected population of seniors at five-year intervals through 2045.

POPULATION BELOW AGE 18

The number of children living in AMHS-served communities declined by 9% between 2009 and 2022. This trend of a declining population of children is expected to continue through 2045, with the population of children declining by a further 22%. Population decline in many of coastal Alaska's largest communities such as Juneau, Ketchikan, Sitka, Kodiak, and Cordova are expected to contribute significantly to this overall decline.

Student groups are frequent AMHS users, particularly in regions with frequent ferry service. School groups use AMHS to travel between communities for sports and other extracurricular events. A decline in the number of children in coastal Alaska is expected to exert downward pressure on public school enrollment in many communities and may result in lower demand for school-related travel.

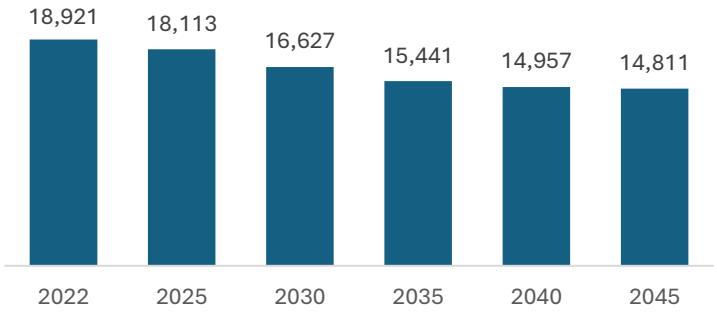


Figure 6: AMHS-Served Port Community Population Aged 18 and Below, 2022 Actual and 2025-2045 Projected

Source: Alaska Department of Labor and Workforce Development and McKinley Research Group calculations

Figure 6 shows the population of children aged 18 and below living in AMHS-served communities as of 2022 and the expected population of children at five-year intervals through 2045.

MIGRATION PATTERNS

AMHS service is frequently used by residents as they move to and from Alaska, and within the state. Residents moving to and from coastal Alaska and other communities on Alaska's road system use the system to transport vehicles and personal belongings during their relocation. Annually, about 42,000 new residents move to Alaska, and 44,500 residents move out of state. This level of population churn creates demand for AMHS service. This level of in-and out-migration is expected to continue, and residents will likely continue to use AMHS for relocation purposes at rates similar to current use.

Figure 7 shows the number of new residents moving to Alaska, and the number of residents moving away from Alaska, each year between 2009 and 2022.

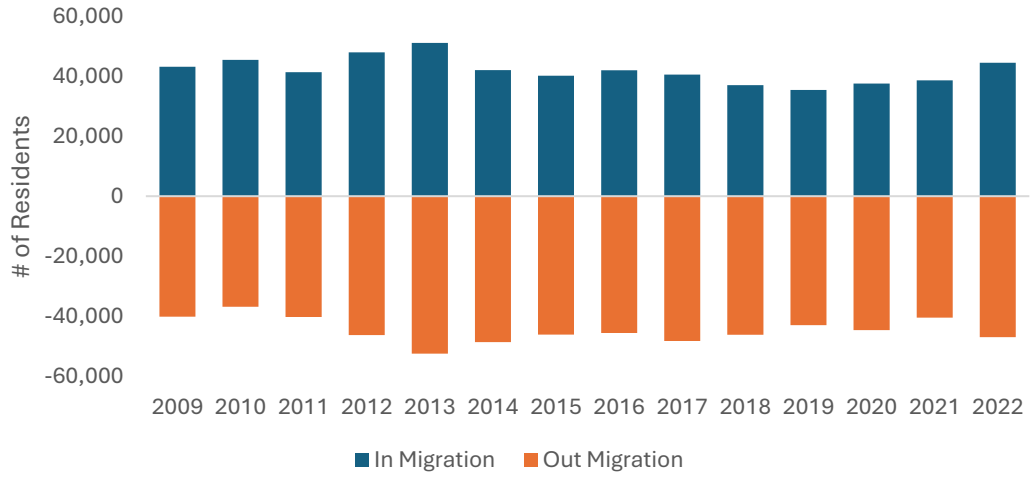


Figure 7: Alaska Population In- and Out-Migration, 2009-2022

Source: Alaska Department of Labor and Workforce Development and McKinley Research Group calculations

INDUSTRY OUTLOOK

In addition to personal resident use, AMHS provides important transportation services to businesses and other organizations working in coastal Alaska, as well as non-resident visitors. Any significant changes in the level of economic activity, supply chain patterns, or other business considerations have the potential to impact regional travel demand. The following sections provide high-level metrics with which to consider the trajectory of key industries operating in coastal Alaska. The trends highlighted below have been aggregated across all regions served by AMHS. Industry trends can, and often do, vary significantly across different regions of Alaska. Where appropriate, regional trends are described to enhance clarity.

SEAFOOD INDUSTRY

Commercial seafood harvest and onshore processing are important to the economies across all regions served by AMHS. System use is most common among commercial fishermen and processors operating along routes with frequent service (Southeast and Prince William Sound). AMHS service is used less frequently by processors operating in Southwest Alaska which generally use air service to transport staff, and commercial freight services to move processed products to market.

The following harvest and processor employment data provide just one measure of industry activity.

Resident participation in commercial seafood harvest declined between 2015 and 2022 at a statewide level and in regions served by AMHS.

Table 1: Resident Commercial Seafood Permit Holders and Crew Members by Region, 2015 and 2022

REGION	2015 RESIDENT PARTICIPANTS	2022 RESIDENT PARTICIPANTS	CHANGE IN PARTICIPATION	PERCENT CHANGE
Bering Sea and Aleutian Islands	870	517	-353	-41%
Kodiak	1,437	1,116	-321	-22%
Southcentral	6,072	5,172	-900	-15%
Southeast	4,900	3,806	-1,094	-22%
Total AMHS-Served Area	**13,279**	**10,611**	**-2,668**	**-20%**

Source: Alaska Department of Fish & Game, Commercial Fisheries Entry Commission, and McKinley Research Group Calculation

Employment at Alaska's seafood processing plants has also declined over the same time period. The decline in average annual employment by seafood processors accelerated between 2020 and 2022 due to the impacts of measures to slow the spread of COVID-19.

Figure 8 shows annual average employment at Alaska commercial seafood processing facilities between 2009 and 2022.

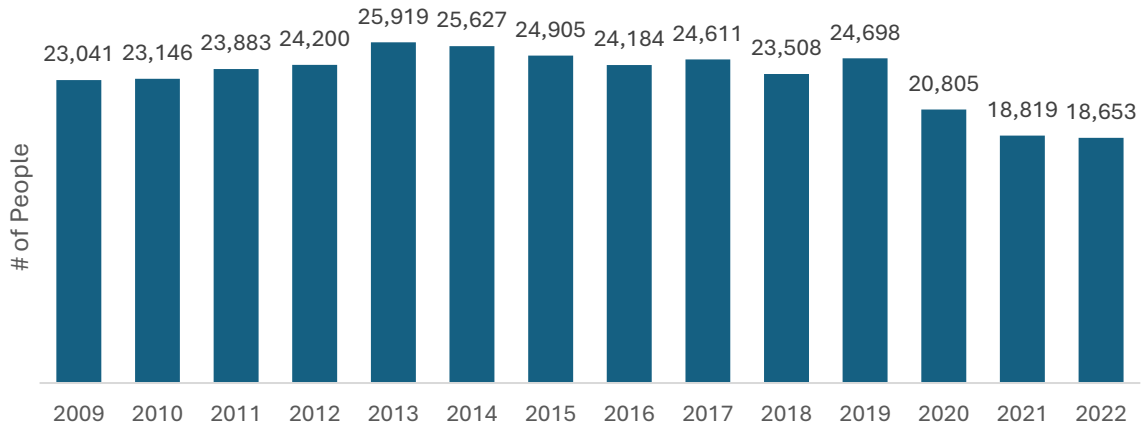


Figure 8: Annual Average Commercial Seafood Processing Employment, 2009-2022
Source: Alaska Department of Labor and Workforce Development and McKinley Research Group calculations

Alaska's seafood industry is diverse, encompassing many regions, species, and gear types. In turn, the harvesters and processors who participate in this industry are subject to varied commodity prices and operating conditions. In 2023, prices declined significantly for many species harvested in Alaska, creating challenging economic conditions for harvesters and processors in the near-term. Price declines have resulted in the sale or closure of several onshore processing plants and changing capital investment conditions for others. These industry changes may or may not lead to sustained change in the level of seafood industry activity in coastal Alaska in the medium and long-term. In the near-term, demand for seafood industry-related transportation is expected to be consistent with the past decade. Industry use of AMHS to meet this demand depends to a large extent on the reliability and frequency of service.

TOURISM INDUSTRY

The tourism industry is particularly important to the Southeast and Gulf Coast regions served by AMHS. The number of tourists visiting Alaska has grown over the last decade, excluding the 2020 and 2021 seasons which were significantly impacted by measures to mitigate the spread of COVID-19. Visitors to Alaska use various modes of transportation to, and within, the state. AMHS service may be complementary to some visitor modes and types (independent travelers using air, highway, or ferry transport), while in competition with others (visitors entering or exiting Alaska by cruise ship). This section describes the largest segments of the visitor industry by volume and their relationship with AMHS service.

CRUISE TRAVELERS

Cruise travel accounts for about two-thirds of nonresident visitors at a statewide level. Cruise visitation to Alaska experienced a steep increase following cancelled or truncated seasons in 2020 and 2021. About 76% of cruise passengers are on "Inside Passage" itineraries, embarking and disembarking in Seattle or Canada. Passengers on these itineraries are not adding additional Alaska destinations to their trip or seeking alternative transportation service to visit other communities.

Another 24% of cruise passengers are on Cross Gulf itineraries, embarking or disembarking in Southcentral/Gulf Coast ports such as Whittier and Seward. Frequent extensions to these itineraries include trips to Interior Alaska (Denali, Fairbanks) or additional nights in Southcentral (Anchorage, Kenai Peninsula). Cross Gulf passengers rarely extend their trip via AMHS. The increase in cruise visitation to coastal Alaska is not expected to drive increased demand for AMHS service given these typical travel patterns.

Figure 9 shows the total number of cruise passengers visiting Alaska between 2009 and 2023.

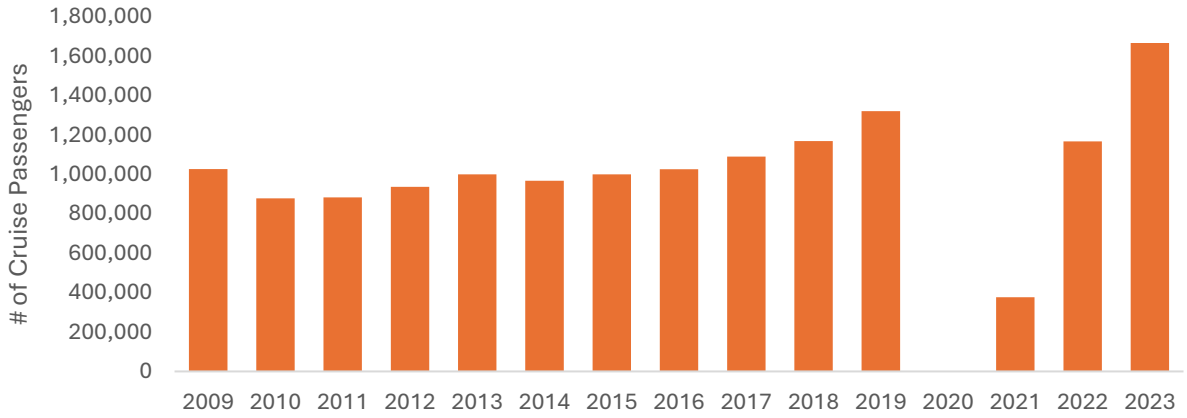


Figure 9: Alaska Cruise Ship Passenger Visitation, 2009-2023
Source: Cruise Line Agencies of Alaska and McKinley Research Group calculations

INDEPENDENT TRAVELERS

The remaining third of visitors to Alaska travel to the state via air, highway, or ferry. These nonresident travelers are often known collectively as "independent" visitors. As a destination, Alaska offered several attractions to independent visitors in 2020 and 2021. While visitor travel to foreign destinations was more difficult due to travel restrictions developed to minimize the spread of COVID-19, Alaska offered a domestic destination with outdoor or distanced attractions. Preliminary data suggests independent travel to Alaska continued at levels above pre-pandemic visitation in Summer 2023 at a statewide level.[2] While independent travel may continue to grow, coastal communities served by AMHS often have limited infrastructure (hotels, transportation) to serve a large increase in non-cruise visitation. Holding everything else constant, these infrastructure constraints will place a functional limit on the growth of tourism and visitor demand for non-cruise travel between port communities.

AMHS service is currently used by a small portion of visitors to Alaska. In summer 2023, visitors entering the state via the ferry or highway represented 3% of all visitors (about 77,100 people).[3]

While this is a small portion of visitors to the state, these independent visitors can have a significant impact on AMHS ridership. In 2023, about 33% of AMHS passenger fares were purchased by

[2] McKinley Research Group. *Summer 2023 Visitor Volume*. Prepared for Alaska Travel Industry Association, April 2024.
[3] Ibid.

someone with a non-Alaska address.[4] Nonresident use of AMHS service is highly seasonal; nonresidents represent 43% of riders between May and September, and 14% of riders outside of the summer season. These riders likely represent a mix of people moving to Alaska and vacationers. Visitor use of the system, particularly in Southeast and Prince William Sound, has potential to increase based on changes to AMHS travel schedules and service reliability. Additional service promotion following changes would likely help attract a wider share of independent visitors.

Visitor use of AMHS as a mode of transportation in Southwest Alaska is unlikely to increase given the length of AMHS routes and current infrequency of service in the region.

CONSTRUCTION INDUSTRY

Construction companies in Alaska are often headquartered in hub communities (Anchorage, Mat-Su, Fairbanks, and Juneau) and deploy crews to work on projects across the state. Movement of construction workers, material, and equipment are primary logistics questions for construction companies performing work in remote, coastal Alaska. AMHS service is one piece of the transportation network available to solve these logistics challenges.

Statewide, construction activity has increased over the last several years due primarily to an influx of federal infrastructure funding and large North Slope investments.[5] More than $6.0 billion in funding related to the 2021 federal Infrastructure Investment and Jobs Act has been allocated to Alaska awardees.[6] These projects are expected to be distributed widely across communities. Funding is anticipated to be spent by federal fiscal year (FFY) 2031 given federal spend down requirements. This will result in an increase in statewide construction material movement. AMHS port communities will see increased construction material movement on a project-specific basis which is not expected to result in a permanent increase in cargo movement or demand for AMHS service.

OIL AND GAS INDUSTRY

Alaska's oil and gas industry plays an important role in the statewide economy through direct employment and use of petroleum-related state revenue to fund public services and capital projects statewide. Among the regions served by AMHS, the oil and gas industry is most active in Valdez (the terminus of the Trans Alaska Pipeline System [TAPS]) and Cook Inlet.

Several significant developments are under construction on Alaska's North Slope as of 2024. These developments, including Santos' Pikka and ConocoPhillips' Willow projects, will contribute to TAPS throughput following the construction phase. These developments are not expected to impact demand for AMHS passenger or cargo service.

[4] Based on calendar year data provided by AMHS directly to McKinley Research Group.
[5] McKinley Research Group. *Alaska's 2024 Construction Spending Forecast*. Prepared for the Associated General Contractors of Alaska, January 2024.
[6] Invest.gov data downloaded as of January 2024.

Cook Inlet has long been a source of natural gas for electricity and heat generation in Southcentral Alaska. In 2022, the largest gas producer in Cook Inlet informed several utilities that the producer could not guarantee renewal as current contracts expire due to a shortage of natural gas.[7] Impacted utilities are evaluating alternatives to this fuel source, including barging or trucking natural gas to Alaska. This evolving natural gas situation is not expected to impact AMHS service demand.

OTHER INDUSTRIES

Several other industries are important to coastal Alaska: mining, state and local government operations, forestry, the military, mariculture, and others. Developments across these varied industries have potential to impact demand for AMHS service, either through changing needs to move workers and material between communities or changes to direct employment. Examples include:

- Increased mariculture (kelp and oyster) permitting activities in regions such as Prince William Sound, Kodiak, and Prince of Wales Island are one signal of the growth in the mariculture cluster. Significant increases in kelp and oyster farming may have potential to increase demand for cargo movement among these mariculture hubs in the long-term.
- Palmer Mining Project is currently in the advanced exploration stage in Haines. If the mine were developed, increased employment may spur population growth and increased travel demand in Haines. No final investment decision has been made on this project.

Many of these developments are uncertain or anticipated to occur in the long term. Based on current information, these developments are not anticipated to have a significant impact on AMHS service demand over this planning horizon.

CONCLUSION

AMHS service levels changed significantly over the last decade. Based on resident survey research performed as part of this long-range planning process, these changes have left excess demand for ferry service across much of the AMHS service area. Given this level of unmet demand, the competing demographic pressures in coastal Alaska, and lack of significant change expected in key sectors which would materially alter AMHS service demand, projections of system use in terms of passenger ridership and vehicle use over the planning horizon should be based on the target level of service provided by 2045, rather than population projections.

Under this approach, the number of port calls by community will be the primary driver of ridership projections based on historic utilization. This ridership projection methodology can be altered to consider the impact of new vessel classes and port pairs on an as-needed basis.

[7] DeMarban, Alex. *Hilcorp warns Alaska utilities about uncertain Cook Inlet natural gas supplies*, Anchorage Daily News, May 17, 2022.

APPENDIX C5

RIDERSHIP & REVENUE PROJECTIONS

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Ridership and Revenue Projections
Version: 4.0 (New)

PURPOSE

This memo outlines the development of ridership and revenue projections as inputs to the Service Scenario Framework for the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP). The Service Scenario Framework (described further in Appendix C2), serves as the basis for selecting a ***2045 Plan Scenario***, or a fleet configuration and associated sailings. The revenue projections outlined in this memo were used to calculate a system-wide farebox recovery rate, which was one of several criteria considered as potential fleet scenarios were evaluated.

APPROACH

The graphic below outlines the general process taken in developing ridership and revenue projections for the LRP's Service Scenario Framework.

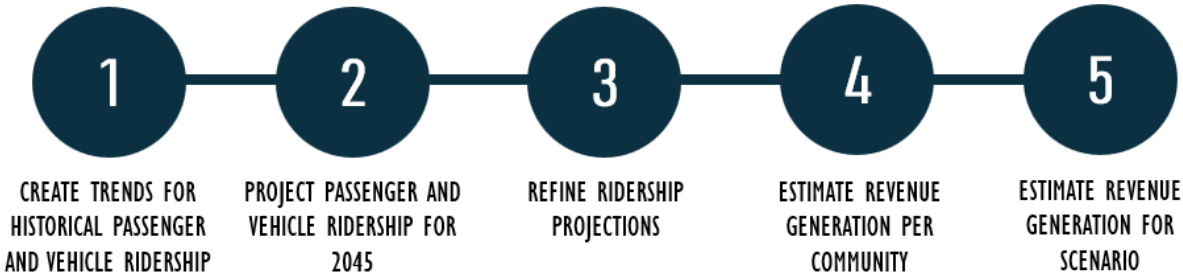


Figure 1: Ridership Analysis Process Graphic

A variety of factors influence AMHS ridership, including service frequency and timing, customer experience, convenience, and reliability of service. Although future AMHS ridership and revenue cannot be determined with certainty, the following steps were taken to estimate revenue for each of the 2045 service scenario alternatives:

1. *Create Trends for Historical Passenger and Vehicle Ridership:* Per the findings of the Economics and Demographic Trends research conducted for this plan (see Appendix C4), ridership projections were made based on historical relationships between the level of service provided and ridership. Using historical ridership data collected by AMHS, mathematical trends were identified to relate the number of port calls provided to each community to the number of embarking passengers and vehicles.

2. *Project Passenger and Vehicle Ridership for Scenarios:* The port calls estimated for each of the service scenarios by the operations model were input into the trendlines relating level of service to each community with ridership. This provided an estimated count of embarking passengers and vehicles across each community for the evaluated scenarios.
3. *Refine Ridership Projections:* A few cases warranted a closer evaluation of the calculated ridership numbers, primarily in instances where the service level was above what has been historically provided by the system. Projections of ridership on new shuttle routes were based on vessel capacity and utilization along comparable routes, such as the utilization of the Inter-Island Ferry Authority.
4. *Estimate Revenue Generation Per Community:* Historical data regarding the average ticket price paid by passengers embarking in each community were applied to the projected number of embarking passengers and vehicles across each community for the evaluated scenarios.
5. *Estimate Revenue Generation Per Scenario:* The total annual revenue generation was calculated for each scenario by summing together the estimated revenue generation for each community's embarkations.

ASSUMPTIONS AND REFERENCE DATA

The following assumptions and reference data were used to build the model used to calculate ridership projections for the service scenarios:

- Passenger and vehicle totals for each community were taken from AMHS' Annual Traffic Volume Reports (2000 – 2022) embarkation totals.[1]
- Average embarkation ticket prices by community were based on calendar year 2022 AMHS revenue by embarkation port. Average ticket prices were calculated by weighting passenger and vehicle embarkation by community.
- In scenarios where shuttle service was evaluated (such as between Ketchikan – Metlakatla and Haines – Skagway), special attention was paid to the ticket price in order to differentiate between revenue generated by shuttle service and revenue generated by dayboat or mainliner service.

FINDINGS

Table 1 lists the annual revenue projections calculated for each of the evaluated service scenarios as well as projected farebox recovery rates based on operating costs outlined in Appendix G2. The farebox recovery rates were included as a selection criterion in the identification of the ***2045 Plan Scenario***.

[1] AMHS Annual Traffic Volume Reports (2000 – 2022)

Table 1: Service Scenario Revenue Projections ($2023)

SCENARIO	PROJECTED ANNUAL REVENUE ($millions)	FAREBOX RECOVERY RATE
Scenario 0	$67.0	39%
Scenario 1	$53.0	38%
Scenario 2	$53.0	35%
Scenario 3	$52.0	36%

For a full list of criteria used to evaluate potential scenarios, see Appendix C2.

APPENDIX D1

VESSEL CAPITAL COST ESTIMATES

To: Alaska Marine Highway System (AMHS)
From: Elliott Bay Design Group (EBDG)
Date: May 2025
Subject: Vessel Capital Costs Estimates
Version: 4.0 (New)

PURPOSE

This memo is intended to document the process for establishing capital costs for the five classes of new vessels that were evaluated to be added to the Alaska Marine Highway System (AMHS) fleet over the next 20 years per the AMHS 2045 Long-Range Plan (LRP).

BACKGROUND

The vessels that were evaluated to be in the AMHS fleet over the next 20 years are:

- Tustumena Replacement Vessel (TRV) – This design is ready for shipyard bidding. It represents an ocean-going vessel with a vehicle elevator to serve Southwest Alaska.
- Mainliner Replacement Vessel (MRV) – This vessel will replace the *Matanuska or the Columbia* in providing service throughout Southeast Alaska down to Bellingham. It has not been designed yet, but the concept is a stretched version of the TRV without the vehicle elevator.
- Mainliner Minus – This class of vessel is a stretched version of the relatively new Alaska Class Ferries (ACFs), *Tazlina* and *Hubbard*. This vessel will have a hybrid propulsion system and both passenger and crew quarters.
- Dayboat (DB) – This class of vessel will also be based on the relatively new ACFs, *Tazlina* and *Hubbard* which are planned to still be active in the fleet in 2045. Dayboats are fitted with overnight crew accommodations to enable the vessel to operate on routes greater than 12 hours in duration. Any new-build vessels of this class are assumed to have hybrid propulsion systems.
- Shuttle (HEF) – The AMHS fleet has only one shuttle ferry, the *Lituya.* Additional shuttle ferries proposed by the 2045 LRP will be based on this design. These vessels will have a hybrid propulsion system and may be referred to as the High Efficiency Ferries.

Characteristics for each of these vessel types are included in Appendix C3.

APPROACH

For evaluating vessel capital cost, an Elliott Bay Design Group proprietary computer program, ShipCalc, that consists of linked Excel spreadsheets, was used. This program uses performance requirements and physical characteristics of vessels to estimate capital costs through an iterative

process. Initial estimates of dimensions, hull form factors, deadweight items, powering, and electrical needs are inputs. Deadweight items include vehicles, passengers, crew and their effects, stores, and provisions. It also includes tankage quantities for fuel, lubricating oil, dirty oil, oily water, potable water, sewage, and seawater ballast. The program then creates an estimate of total displacement using parametric formulas. Weights are grouped using the U.S. Navy's Ship Work Breakdown System (SWBS) with the following broad categories:

Table 1: Ship Work Breakdown System

SWBS GROUP	CONTENT
100	Structure (based on overall dimensions of Length x Beam x Hull Depth)
200	Propulsion Machinery (based on installed horsepower)
300	Electrical Systems (based on installed electrical power in kW)
400	Command, Control, & Communication Systems (estimated value)
500	Auxiliary Systems (based on sum of horsepower and kW)
600	Outfit (based on overall dimensions of Length x Beam x Hull Depth)
700	Mission Equipment (estimated value)

An example of a SWBS 700 item is the vehicle elevator for the TRV.

The weight parameters are based on estimating relationships from comparison with other vessels and checked against the actual lightship weight values (where known) or weight estimates for similar vessels. Reference vessels included existing AMHS ferries such as the *Tazlina*, the *LeConte*, the *Matanuska*, and the *Tustumena*. The Inter-Island Ferry Authority vessel *Prince of Wales* was also used as a reference.

If the weight shows a greater value than the displacement, the hull form parameters are adjusted until a match is achieved within 1%. Then the powering is checked against initial assumptions. Powering is estimated using the Holtrop regression method, a common method for estimating powering requirements, with user inputs on margins for wind and wave effects, overall propulsive efficiency, and desired powering reserves. If the initial estimated power is inadequate, a new powering value must be chosen. This will impact both the SWBS 200 and SWBS 500, so the weight and buoyancy must be balanced again iteratively with installed power.

With the vessel lightship weight established by SWBS category, the construction cost of the vessel can then be estimated parametrically from the weights. Each SWBS Group is assigned parametric values for material cost per unit weight and labor hours per unit weight. The parametric values are based on EBDG's database of vessel projects. For example, steel structure is estimated to cost $2.00 per pound for cut pieces with a pre-construction primer applied. The associated labor is estimated at 100 hours per long ton of finished structure. This value is typical of ferry construction projects. A different parametric value would be used for constructing steel barges or aluminum fast vessels. The parameters used for the LRP estimates were the same for all vessel classes, with the following values:

Table 2: Construction Cost Parameters by SWBS Group

SWBS GROUP	MATERIAL ($/LB)	LABOR (HOURS/LB)
100	2.00	100
200	90.00	100
300	90.00	900
400	120.00	2500
500	25.00	120
600	12.00	350
700	25.00	120

By multiplying the weight values against both material cost and labor hours, an estimate for each SWBS Group is derived. For the LRP project, a fully burdened labor rate of $95.00 per hour was used that covers the shipyard overhead and profit.

For the cost estimate, one additional SWBS Group is added, SWBS 800. This SWBS Group covers all the non-weight-related costs such as engineering, warehousing, outside services, and inspection fees. For this analysis, the SWBS 800 costs were 15% on materials and 10% on labor.

Finally, an overall contingency was applied to reflect some of the uncertainties in the estimating process. Since the LRP is intended to be a guidance document, not a budgeting document, the contingency was set at a relatively modest 10%.

VESSEL BUILD COSTS

The resulting vessel build costs, rounded to the nearest million, are as follows:

Table 3: Vessel Build Cost Estimates

TYPE	CAPITAL COST ($millions)	COMMENTS
Mainliner	$397.7	Stretched TRV without vehicle elevator but with additional generator to achieve 17.5 knot speed
Mainliner SW	$334.0	TRV per the Surface Transportation Improvement Plan (STIP)
Mainliner Minus	$250.0	Stretched dayboat with hybrid propulsion
Dayboat	$93.6	Similar to *Hubbard* with hybrid propulsion and crew quarters
Shuttle	$59.0	Similar to *Lituya*

OVERHAUL COSTS

In addition to the cost of building the vessels, each vessel must be constantly maintained in order to achieve the desired service life and to minimize unplanned out of service time. The vessel crew completes most minor maintenance throughout the year while the vessel is operating, but there is additional maintenance that can only be completed when the vessel is not operating, needs the expertise of a shipyard, or both.

It is recommended that every vessel undergoes an overhaul period at a shipyard every year. The duration of the overhaul period is given in Appendix C3 as the Annual Maintenance Time; however, there are major overhaul items that increase the duration by 1.5x. These items are complete engine overhaul, complete coating replacement, and complete crew/passenger interior replacement. It is recommended that engines undergo a complete overhaul at around 36,000 hours, that the vessel coating system be replaced every 10 years, and that the interior be replaced every 20 years.

There are additional major overhaul items that do not increase the duration of the overhaul period such as engine top ends refurbishment and battery replacement. It is recommended by manufacturers that the engine top ends be refurbished every 15,000 hours and that the vessel propulsion batteries be replaced every 10 years.

Overhaul costs were estimated for each vessel of the 2045 Plan scenario for each year from 2025 to 2045. Known upcoming projects including the *Kennicott* Emissions and Exhaust and *Tazlina* Crew Quarters were included.

2024 overhaul costs were used as a baseline cost for normal overhaul work for the existing vessels. As vessels age, the amount of maintenance needed increases every year. For the existing vessels, it was assumed that for vessels over 40 years old (*Aurora*, *Columbia*, *LeConte*, *and Tustumena*) the overhaul costs increase 10% each year. For vessels under 30 years old (*Hubbard*, *Lituya*, and *Tazlina),* the overhaul costs increase 4% each year until they are 30 years old at which time the overhaul costs increase 6% each year. Even though the *Kennicott* is under 30 years old, it has unique systems that require additional maintenance, and it operates in a harsh environment, so it was assumed the *Kennicott* overhaul costs increase 6% each year.

For new vessels, it was assumed that the yearly overhaul cost would be 0.5% of the vessel build cost. After the age of 10, the overhaul costs would increase 3% each year. Shipyard labor rates have increased significantly in recent years; therefore, it was also assumed that shipyard costs would increase by 4% each year.

For the major overhaul items, it was assumed that complete coating replacement would cost 15% of the vessel build cost and complete interior replacement would cost 20% of the vessel build cost. Engine overhauls were estimated to cost $1M for each engine and top ends were estimated to cost $750k. Generator overhauls and top ends were estimated to be a third of the engine cost. For the vessels with hybrid propulsion systems, between 2030 and 2040 battery costs were estimated to be $300/kwh and between 2040 and 2045 battery costs were estimated to be $250/kwh.[1]

[1] Cost Projections for Utility-Scale Battery Storage: 2023 Update, National Renewable Energy Laboratory Wesley Cole and Akash Karmakar

Table 4 shows the short-, mid-, and long-term capital costs for each vessel which include the overhaul costs, shipyard build costs, and AMHS contract management costs for the new vessels' addition details are in Appendix G2.

Table 4: Vessel Capital Costs

VESSEL	SHORT-TERM (2025-2028) ($millions)	MID-TERM (2029-2035) ($millions)	LONG-TERM (2036-2045) ($millions)
Aurora	$9.1	$9.5	-
Columbia	$33.3	$19.7	-
Hubbard	$5.0	$22.9	$140.6
Kennicott	$44.7	$57.8	-
LeConte	$24.7	-	-
Lituya	$0.3	$2.0	$0.2
Tazlina	$35.0	$7.6	$39.1
Tustumena	$16.0	$5.0	-
DB	$2.8	$100.1	$28.1
MRV 1	$182.6	$265.0	$92.3
MRV 2	-	$349.9	$113.4
HEF 1	$64.3	$1.2	$8.2
HEF 2	-	$4.7	$61.0
TRV	$334.0	$14.1	$137.0

APPENDIX E1

TERMINAL INVESTMENT MEMORANDUM

To: Alaska Marine Highway System (AMHS)
From: KPFF Consulting Engineers
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Terminal Infrastructure Evaluations and Capital Costs
Version: 4.0 (New)

PURPOSE

This memorandum discusses the approach and findings of the terminal evaluations made to support the development of the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP).

An evaluation was conducted of existing terminal conditions and future potential 2045 vessel scenario operational alternatives for each terminal. These evaluations were used to predict which terminals require infrastructure improvements to meet AMHS' goals as outlined in the LRP. Based on these findings, a Terminal Capital Projects Plan was developed which estimated the schedule of improvements and the anticipated capital costs associated with the identified terminal projects.

BACKGROUND

The Alaska Marine Highway System (AMHS) ferry service operates across roughly 3,500 marine miles and serves 32 coastal communities throughout the state of Alaska, Washington, and British Columbia. There are currently 43 unique terminal berths that support the Alaska Marine Highway System. The Alaska Department of Transportation and Public Facilities (Alaska DOT&PF) owns and is responsible for designing, constructing, operating, and maintaining 23 terminal facilities. The remaining terminal facilities are owned by various other entities, such as the cities or port authorities, many of which partner with Alaska DOT&PF for support in construction and maintenance of the facility.

All 43 terminal facilities were analyzed as part of the terminal infrastructure assessment. These terminal facilities are shown in Figure 1.

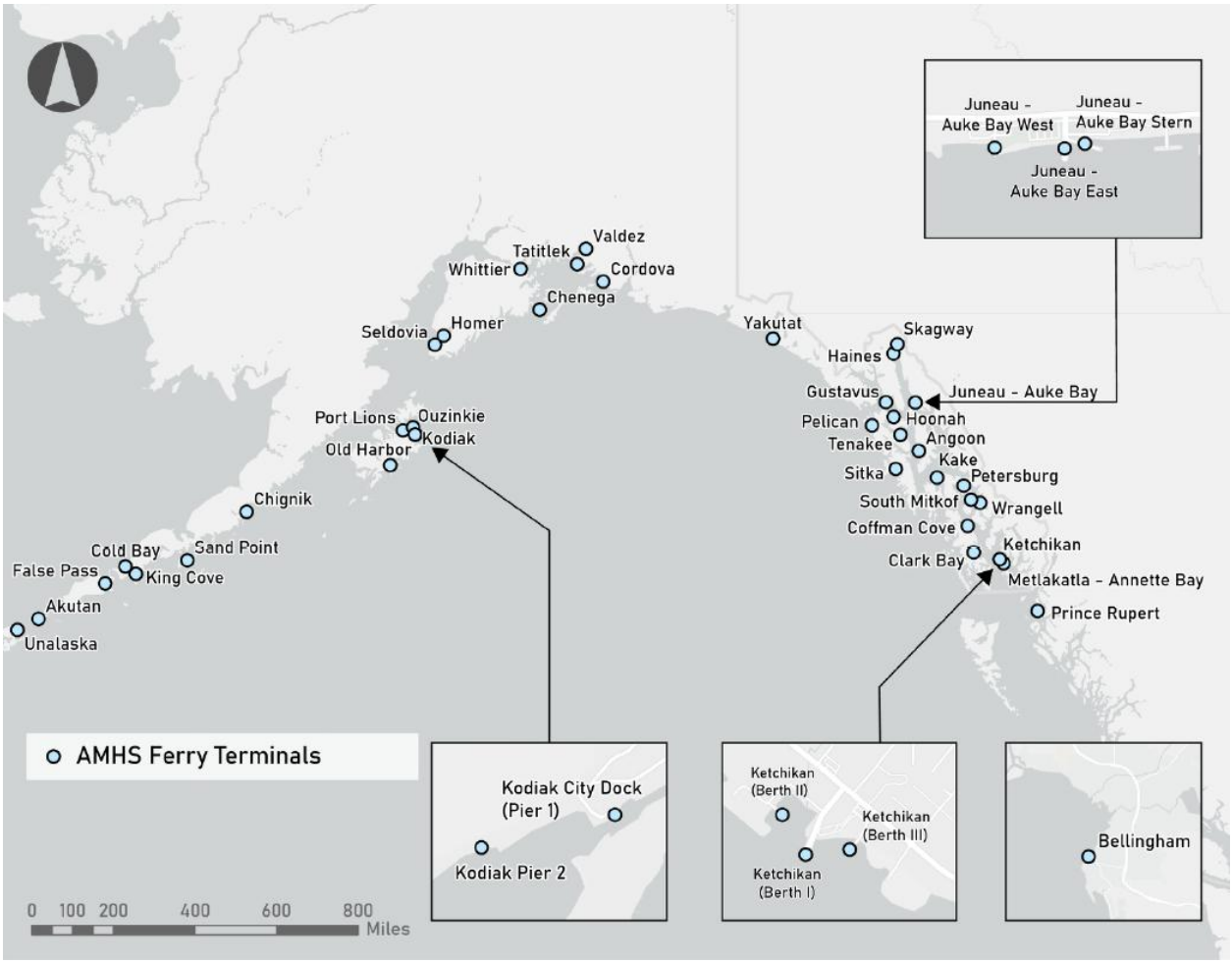


Figure 1: AMHS Terminal Facilities Evaluated

APPROACH

A comprehensive Terminal Capital Projects Plan was developed through weekly DOT&PF and AMHS coordination by identifying all of the recommended planned maintenance and improvement projects needed to support the 2045 fleet plan. These terminal projects, identified in more detail below, were scheduled throughout the LRP planning horizon, accounting for timeframes needed to accomplish the project scope and identifying capital costs needed for each project. Each project was identified with the goals of the LRP in mind: to increase reliability, apply standardization where possible, and enhance the customer experience. Additionally, a sea-level rise resiliency preliminary assessment was completed to identify areas of risk and opportunity when planning and designing future terminal projects.

Four types of terminals capital projects are reflected in support of the goals of the 2045 LRP.

- Terminal Improvements Projects - Replacement or major repair of existing terminal infrastructure, recommended based upon current condition of existing terminal infrastructure.

These are projects that have not yet been programmed into the Statewide Transportation Improvement Program (STIP).

- Terminal Maintenance Projects- Routine maintenance of existing terminal infrastructure for the purpose of preservation and maintaining the service life of assets. These projects are also identified based upon the current condition of existing terminal infrastructure and scheduled to occur approximately every 5 years per common industry practice.
- Terminal STIP Projects- Terminals projects that are programmed into the STIP. These are projects that are already underway in either planning, design, or construction phases. These projects and associated funding are identified in the 2024-2027 STIP published by Alaska DOT&PF. Terminal STIP Projects consist of projects that address aging terminals infrastructure, upgrades to support vessel service configurations, or new terminal builds.
- Terminal 2045 LRP Scenario Upgrade Projects - Terminal infrastructure upgrades needed to support the vessel service scenario of the 2045 LRP. These projects were identified based on the vessel service scenario in coordination with Alaska DOT&PF engineering staff.

Terminal capital projects require significant lead times, with project planning and design work that must be conducted prior to permitting and construction efforts. The costs and schedule impacts of these planning and design activities have also been identified and considered in the final projected funding and schedule of the Terminal Capital Projects Plan. Anticipated capital costs included in the plan are an engineer's opinion of probable cost, and the estimated costs are based on 2024 dollars identified through the long-range plan terms.

A summary of this approach is shown in Figure 2.

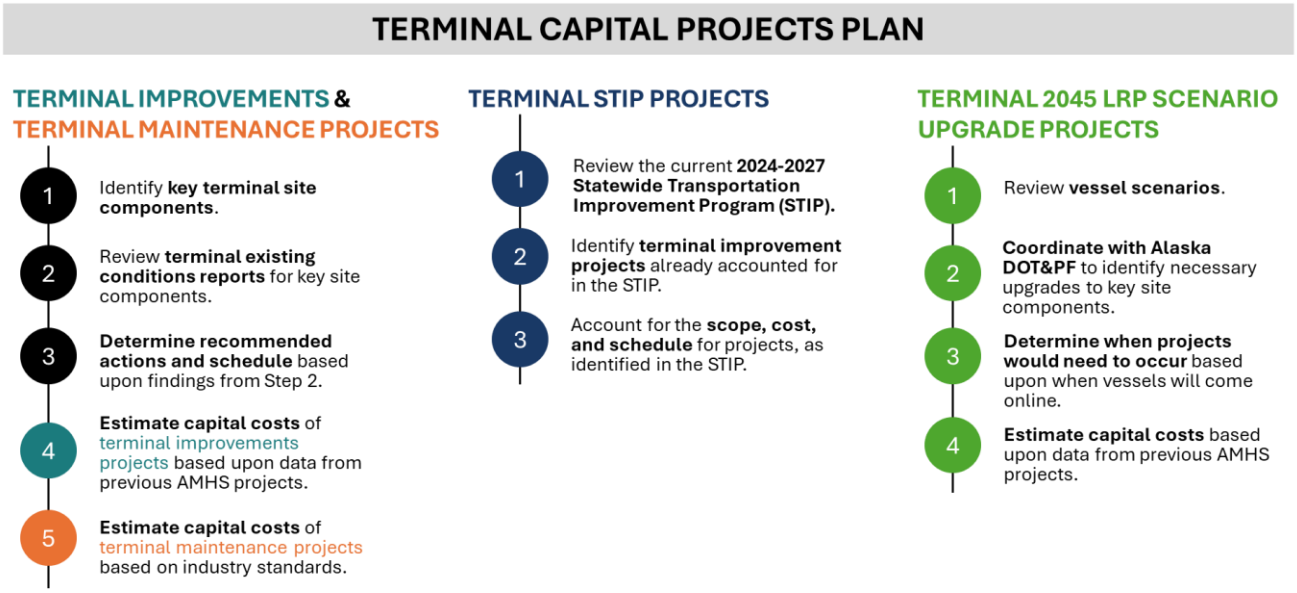


Figure 2: Terminal Capital Projects Plan Approach

TERMINAL PROJECTS EVALUATION (IMPROVEMENT AND MAINTENANCE PROJECTS)

The identification of projects and evaluation of capital costs associated with maintaining existing terminal infrastructure was performed using data from terminal condition assessments, such as the Alaska DOT&PF *2022 Alaska Marine Highway System Shore Facility Conditions Survey Report* or other similar reports. These evaluations are performed on a regular basis to keep Alaska DOT&PF informed on the condition of terminal assets. The terminal conditions reports were used to identify key site components, current terminal conditions, and to establish a baseline understanding of which facilities and components require replacement or major repairs in a given timeframe.

IDENTIFY KEY SITE COMPONENTS

To assess the terminal infrastructure, facilities were broken down into categories of key site components. The Terminal Key Site Component categories are listed in Table 1 and further defined in the following section.

Table 1: Terminal Key Site Component Categories

TERMINAL KEY SITE COMPONENTS	
Dock, Approach Trestle, and / or Bulkheads	Uplands Terminal Building
Dolphins / Mooring Structures	Uplands Staging and Parking
Float	Backup Generator
Vehicle Transfer Bridge	Electrical Utilities
Apron and/or Intermediate Ramp	Other Utilities
Transfer Bridge Lift System	
Access Catwalk and Passenger Gangway	

Dock, Approach Trestle, and / or Bulkheads: Structure that provides a landing pier for vessels to moor and transfer vehicles and passengers. Typically, a steel pile supported structure with a concrete deck, an all timber structure, or a sheet pile style bulkhead wall. The purpose of this component is to provide pedestrian and vehicle access from the shore to the vessel. These vary in length depending on the shore geometry. This infrastructure typically connects shore-side staging areas to a vehicle transfer bridge. In instances where a terminal does not have a vehicle transfer bridge, passengers and vehicles transfer directly from dock to vessel using the vehicle elevator and ramps that are equipped on certain vessels.

Dolphins / Mooring Structures: Dolphins are marine structures, steel or timber, consisting of a group of pilings arrayed together. These components are used to attach mooring lines for the vessel, or to provide access to other terminal marine structures.

Float: Floats are marine floating structures with a working deck. They are typically steel-framed or concrete floating pontoons. Floats typically have fender panels used for berthing and mooring vessels. They are often utilized as the seaward support for vehicle transfer bridges. Several

terminals also have large floats that act as a driving surface and a transfer point between a ramp and the vessel.

Vehicle Transfer Bridge: Vehicle transfer bridges are transfer structures used to convey vehicles and passengers between the shore and vessel. These structures are typically long, narrow steel bridges that are movable to adjust with the tide. Vehicle transfer bridges often have a designated protected lane providing safe transfer of pedestrians from shore to vessel. The transfer bridge shoreward support is a hinged bearing connection on an abutment structure located on a pile supported approach or a sloped embankment. The seaward support of transfer bridges varies depending on the terminal. The most common style is a float seaward support, allowing the transfer structure to passively articulate with the changing tides. In some cases, vehicle transfer bridges have a fixed marine structure as a seaward support, which requires a more substantial transfer bridge lift system to accommodate the tides.

Apron and / or Intermediate Ramp: The apron and intermediate ramp is a transfer structure used to convey vehicles and passengers as a transition from vehicle transfer bridge to vessel. All transfer bridges are equipped with an apron. Some instances of vehicle transfer bridges with a float seaward support are also equipped with an intermediate ramp. An intermediate ramp is a structure with a hinged connection on a float support providing a transition between bridge and apron. An apron is a structure that is hinged at the end of a vehicle transfer bridge or after an intermediate ramp. The seaward end of an apron is intended to be lowered onto the deck of a vessel, providing a smooth transition for the transfer of vehicles and passengers. Aprons and intermediate ramps are often actuated with a lift system.

Transfer Bridge Lift System: The transfer bridge lift system is an electromechanical or hydraulic actuation system to support varying tidal and vessel freeboard accommodations. The purpose of this component is to position the vehicle transfer bridge in a location that provides safe transfer of vehicles and passengers onto the vessel. Lift system type varies depending on application. Hydraulic cylinders are often used for actuating aprons.

In instances where a vehicle transfer bridge has a float seaward support, a hydraulic lift system is used to position the bridge and/or intermediate ramp to accommodate vessel freeboard.

A transfer bridge lift system is required in the instances where a vehicle transfer bridge has a fixed marine structure seaward support. With this system, accommodation of tidal and vessel freeboard fluctuations is achieved utilizing a wire rope hoist which raises or lowers the transfer bridge from the marine structure supports. The hoist drum is fixed to the top of the marine structures and lifts the bridge via wire rope through a series of sheaves attached to the lift beam structure secured to the underside of the bridge. It is common for this system to include gangways that provide access from vehicle transfer bridge to the marine structure supports for maintenance access and control of the equipment. Additionally, access landings, stairways, and a shelter protecting the electromechanical equipment from the environment are often included.

Access Catwalk and Passenger Gangway: Catwalks or gangways are a steel or aluminum narrow walkway that provide access to marine structures for shoreside personnel access. Catwalks are fixed on each end. Gangways are hinged to accommodate tidal variation for accessing floats and marine structures.

Uplands Terminal Building: Terminal buildings are near the shore of the ferry terminal, used by personnel and/or customers. They vary in capacity by terminal from attendant ticketing shacks to larger buildings with full-service accommodations for customers. The purpose of this component is to provide shelter for personnel and passengers awaiting vessel boarding. In some instances, terminal buildings provide amenities such as bathrooms, vending machines, ATMs, phone line access, terminal seating, and ticket counter services.

Uplands Staging and Parking: Uplands staging and parking is an area reserved for vehicles queuing to load the vessel, or parking for either personnel, customers, or both. These areas include asphalt driving surfaces and paint striping for staging lanes and parking.

Backup Generator: Generators are equipment for emergency electrical power. This component includes generator equipment, conduit and wiring, fuel storage, and a generator shelter building.

Electrical Utilities: Electrical utilities provide power to support terminal functions.

Other Utilities: Other utilities include water, fire water, telephone, TV cable, sewer services, fuel utilities, among others.

REVIEW OF TERMINAL EXISTING CONDITIONS REPORTS

To determine needed improvements and associated costs, each facility key site component was reviewed and assigned a rating based upon its condition, as identified by the terminal conditions assessment. Higher rankings indicate that a site is in better condition, while lower rankings indicate worse conditions with more action needed. Table 2 provides a detailed description of each ranking.

Table 2: Condition Rating Criteria from AMHS Shore Facilities Condition Report

CONDITION RATING	DESCRIPTION
9 Excellent	
8 Very Good	No Problems.
7 Good	Some minor problems.
6 Satisfactory	Structural elements show minor deterioration.
5 Fair	All primary structural elements are sound but may have minor section loss, cracking, spalling, or corrosion.
4 Poor	Advanced corrosion, deterioration, cracking, or chipping. Also significant erosion of piers or abutments.
3 Serious	Corrosion, deterioration, cracking and chipping, erosion of piers or abutments have seriously affected deck, superstructure, or substructure. Local failures are possible.
2 Critical	Advanced deterioration of the deck, superstructure, or substructure. May have cracks in steel or concrete, or erosion may have removed substructure support. It may be necessary to close the facility until corrective action is taken.
1 Imminent Failure	Major deterioration or corrosion in deck, superstructure, or substructure, or obvious vertical or horizontal movement affecting structural stability. Facility is closed to traffic but corrective action may put back in light service.
0 Failed	Out of service, beyond corrective action.

This rating was used to determine if replacement or major repairs are recommended in the Short-Term (2025-2028), Mid-Term (2029-2035), or Long-Term (2036-2045) range. Table 3 identifies how the condition rating was used to determine the recommended action related to terminal infrastructure maintenance or replacement.

Table 3: Recommended Action for Terminal Site Component

RATING	SHORT-TERM ACTION	MID-TERM ACTION	LONG-TERM ACTION
6-9 Rating	Ongoing Maintenance	Ongoing Maintenance	Major Repair
4-5 Rating	Ongoing Maintenance	Replacement	
0-3 Rating	Replacement		

Terminals Improvements Projects are categorized as a replacement or major repair that address the current conditions of terminals assets identified from the inspection reports.

Maintaining terminals assets is critical for achieving the LRP goals of sustainability and reliability. The Terminals Maintenance Projects reflected in the LRP are for the purpose of preservation and extending the service life of terminals assets. These projects are recommended to occur on a routine basis for every terminal, roughly every five years per common industry strategy. The scope of the Terminals Maintenance Projects will ultimately be driven by future inspection reports.

In some instances, a key site component may not have been provided a condition rating from the Shore Facilities Condition Assessments. In this case, Alaska DOT&PF's records of various

assessment reports were reviewed. If there was evidence in those reports that provided additional context, a condition rating was concluded for that component based upon description of the conditions. If no evidence of an assessment was found, an average rating of the site was applied. The AMHS terminal site average ratings are depicted in Figure 3 below. Refer to the attached terminal maps for the condition rating of each terminal key site component.

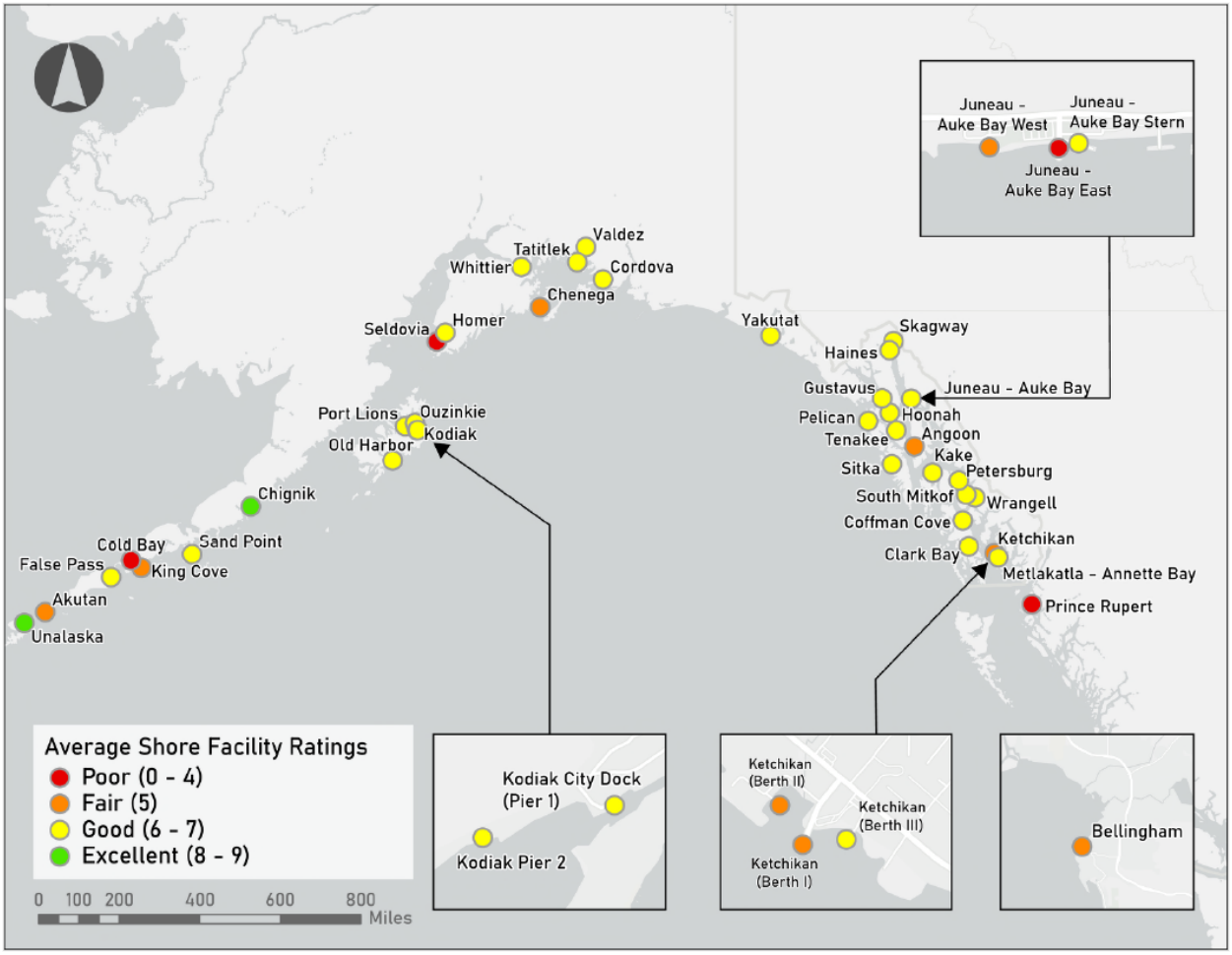


Figure 3: Average Terminal Condition Rating per AMHS Facility (as of 2024)

CAPITAL COST ESTIMATION APPROACH

Once it was determined which term a key site component is recommended to be replaced or majorly repaired, the capital costs were estimated. The unit costs, as shown in Table 4, used to generate capital costs are based on Alaska DOT&PF historical bid tabulation data from previous projects over the last ten years along with similar marine projects in Alaska.

Table 4: Key Site Component Replacement Cost Parameters (in 2024 dollars)

SITE COMPONENT	UNIT COST	UNIT
Dock / Approach Trestle	$500	SQFT
Bulkhead	$8,000	LF
Dolphins / Mooring Structures	$1,000,000	EA
Float	$430	SQFT
Vehicle Transfer Bridge	$800	SQFT
Apron	$100,000	LS
Intermediate Ramp	$400,000	LS
Hydraulic Lift System	$250,000	LS
Transfer Bridge Lift Tower System	$2,300,000	LS
Catwalk or Gangway	$150,000	EA
Uplands Terminal Building	$1,500	SQFT
Uplands Staging & Parking	$150	LF
Backup Generator	$400,000	LS
Electrical Utilities	$1,050,000	LS
Fuel Utilities	$1,000,000	LS
Utilities – Water, Sewer, Fireline	$250,000	LS

Capital costs anticipated are a rough order of magnitude (ROM) of probable cost. This includes the cost assumptions for the following:

TERMINAL IMPROVEMENTS PROJECTS

Replacement: Capital costs for a total replacement of a key site component. Considered replacement in-kind, including furnish and install costs.

Major Repair: Capital costs for a major repair of a key site component. A portion of the component is considered salvageable, but major repairs or upgrades are necessary to meet safety and reliability goals. To keep the evaluation general, major repair costs are represented as a percentage at 30% of capital costs for total replacement.

TERMINAL MAINTENANCE PROJECTS

Ongoing Maintenance: Capital costs include labor and materials for the typical maintenance recommended to uphold the condition of the key site components. It is a common industry funding strategy for budgeting maintenance funding to assume an average maintenance cost as a percentage of component total replacement asset value over a given number of years. This number varies depending on asset type, but 2-5% over 5 years is common. In this evaluation, capital costs for ongoing maintenance of the varying asset types are represented at an average of 0.5% of component total replacement asset value per year.

Table 5: Ongoing Maintenance Cost Parameters

PLANNING TERM	% OF CONST COSTS	NO. YEARS PER TERM
Short-Term Maintenance	2.0%	4
Mid-Term Maintenance	3.5%	7
Long-Term Maintenance	5.0%	10

For example, a fully funded preventative maintenance program should cost approximately $6,200,000 annually across all terminals per year to cover design, permitting, and construction costs. This is an estimation based on the rough order of magnitude of existing terminals assets as of 2024. Current Alaska DOT&PF terminals maintenance program funding levels are approximately $1,700,000 annually.

FOR BOTH IMPROVEMENT & MAINTENANCE PROJECTS

Mobilization & General Conditions: Capital costs associated with mobilization and general conditions reflect site mobilization/demobilization, and the general conditions such as indirect costs and overhead expenses associated with construction. Mobilization and general conditions are represented as a percentage of 15% of total construction costs. A regional specific location factor is applied to this base percentage to represent an increase in cost for the varying remote access to terminals.

Table 6: Mobilization & General Conditions Cost Parameters

SERVICE AREA	LOCATION FACTOR	MOBILIZATION %
Cross Gulf	1.25	19%
Homer/Kodiak	1.50	23%
Northern Southeast	1.15	17%
Prince William Sound	1.50	23%
Southern Southeast	1.00	15%
Southwest/Aleutian Chain	3.00	45%

Mobilization location factors identified in Table 6 are informed by trends of past Alaska DOT&PF projects. These location factors vary depending on regionally available resources for construction. Mobilization and general conditions cost trends are subject to change through the long-range planning horizon. Location factors should be updated as necessary to reflect current trends to promote accurate projections of capital project mobilization costs.

Soft Costs: Capital costs consisting of design, permitting, and construction management represented as a percentage of 30% of total construction cost. Each terminal facility key site component was assigned within the 2045 planning horizon of short-, mid-, or long-term range. Once identified in time, costs were summarized based on project type: replacement, major repair, or ongoing maintenance. These capital costs reflect the terminal improvements anticipated to maintain existing infrastructure and are included in the LRP financial plan.

TERMINAL STIP PROJECTS

It is understood that some of the capital costs calculated may already be accounted for due to terminal improvement projects that are currently underway by Alaska DOT&PF. These costs should be compared to the projects outlined in the 2024-2027 STIP published by Alaska DOT&PF. The scope of these projects varies from typical terminal repairs to major terminal infrastructure improvements to support the Alaska Class Ferry (ACF) vessels. It should be noted that the exact scope of each STIP project was not completely defined at the time of the study. STIP project construction scope is based on Alaska DOT&PF's project standing at the time of the evaluation. Table 7 below shows the applicable STIP projects and their corresponding project identification number.

Table 7: STIP Projects per Alaska DOT&PF

STIP (2024-2027) PROJECTS	
Angoon Ferry Terminal Modifications	#33883
Auke Bay Ferry Terminal East Berth Mooring	#29709
Chenega Ferry Terminal Improvements	#33888
Cold Bay Dock Infrastructure Replacement	#34319
Cordova Ferry Terminal Modifications	#33886
Kake Ferry Terminal Rehabilitation	#34193
Ketchikan Ferry Terminal Improvements	#31098
Pelican Ferry Terminal Improvements	#33885
Tatitlek Ferry Terminal Improvements	#33887
Yakutat City Dock Improvements	#34192
South Tongass Ferry Terminal	#33972

It should be noted that the 2024-2027 STIP also identified the construction of two new ferry terminals. The funding and schedule for the construction of the new South Tongass Ferry Terminal located in Saxman is reflected in the LRP. The construction of the new Cascade Point Ferry Terminal has begun using existing state appropriations. The work will continue seeking out federal grants and other appropriate funding sources.

TERMINAL 2045 LRP SCENARIO UPGRADE PROJECTS EVALUATION

An additional component to the Long-Range Plan is to incorporate capital costs for upgrading terminal infrastructure to support the AMHS vessel scenario alternatives assessment.

Initially, three vessel scenario alternatives were developed to meet AMHS 2045 target levels which are operational levels established with the goal of defining an essential baseline level of service that would allow Alaskan residents mobility, access, and connection. The three alternatives presented varying combinations of vessels planned to be in service at specific terminals. Details about each scenario can be found in Appendix C2.

As all three alternatives propose new fleet configurations, terminal facilities needed to be evaluated to determine what terminal upgrades would be needed to accommodate the proposed vessel scenario alternatives. This assessment of each terminal was performed in conjunction with Alaska DOT&PF, including AMHS, to understand which key site components would need to be replaced or upgraded to support the vessel scenario alternatives. The anticipated terminal infrastructure upgrades covered in the assessment were only those related to marine infrastructure. Upgrades to uplands site components to support a change in workforce or projected customers for each vessel scenario were not included.

When identifying capital cost of the 2045 vessel service scenario, the LRP goals of reliability and standardization were considered. Assumptions for standardized loading and unloading locations for new vessels were also considered.

Capital costs associated with these terminal infrastructure upgrades were calculated similarly to the approach taken for calculating capital costs to support existing terminal infrastructure. In addition to the furnish and installation costs for upgrading, capital costs also include mobilization and general conditions and project soft costs as a percentage. Capital costs to support the vessel scenarios are in 2024 dollars.

SCENARIO COMPARISON

The capital costs projected for each vessel scenario were a component contributing to the decision-making matrix for determining the selected Vessel Scenario for the AMHS Long Range Plan. Refer to the Vessel Scenario Alternatives Assessment memorandum (Appendix D1) for the results of the selected vessel scenario.

Table 8: Capital Cost Comparison for Vessel Scenarios

	CAPITAL COSTS SUMMARY ($millions)
Vessel Scenario #1	$4.0
Vessel Scenario #2	$16.5
Vessel Scenario #3	$1.5

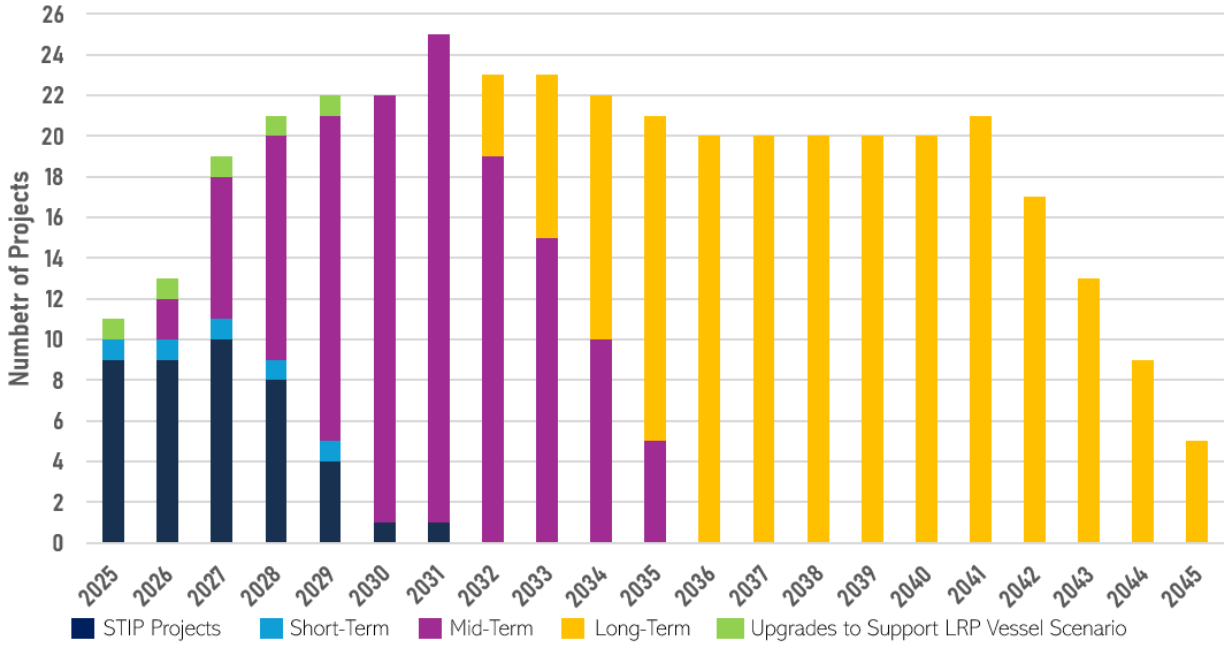
For Vessel Scenario #1, it is projected that roughly $4 million in terminal infrastructure upgrades would be needed. The upgrade actions include installing an additional mooring dolphin at the side berth of Cordova Ferry Terminal to support the Ocean-class vessel. Tatitlek Ferry Terminal would require fender upgrades to the existing dock to support the Ocean class vessel.

Vessel Scenario #2 is projected to need roughly $16.5 million in terminal infrastructure upgrades. Additional mooring dolphins and modifications would need to be made at Angoon Ferry Terminal, Gustavus, Pelican, and Tenakee to support Mainliner size vessels. Cordova Ferry Terminal would need to install a new mooring dolphin to support the Ocean class vessel. Haines Ferry Terminal would need a new mooring dolphin to accommodate mooring a Shuttle and Dayboat at the same time. Tatitlek Ferry Terminal would require fender upgrades to the existing dock to support the Ocean class vessel.

Vessel Scenario #3, the chosen 2045 LRP Scenario, is projecting roughly $1.5 million in terminal infrastructure upgrades. It is expected that Haines Ferry Terminal will need a new mooring dolphin. The need for an additional dolphin must be investigated to provide the capability for a shuttle and dayboat to be at berth at the same time. This would be from a staging perspective, only one vessel would be loading at a given time. This scenario was ultimately selected as the 2045 LRP Scenario, and only costs from this scenario are included in the Terminal Capital Projects Plan, called out in Figure 4 as “Upgrades to Support LRP Vessel Scenario."

TERMINAL CAPITAL PROJECTS PLAN

The Terminal Capital Projects Plan is summarized in Figure 4, which identified the multi-year timeframe of terminal projects ongoing during each year of the planning horizon. Projects in the short-, mid-, and long-term categories are necessary for the continued functioning of terminals. Projects in the "Upgrades to Support LRP Vessel Scenario" category reflect modifications necessary to accommodate the 2045 fleet identified by the LRP.



NOTE: Routine preventative maintenance projects are not included in this figure. Terminal preventative maintenance projects are recommended to occur at every terminal at approximately 5-year intervals.

Figure 4: Terminal Capital Projects Plan

It should be noted that this figure does not reflect the routine preventative maintenance projects. It is recommended that preventative maintenance projects occur at every terminal at roughly 5-year intervals.

The projected terminals improvements project schedule indicates a high workload demand on Alaska DOT&PF staff. Currently, Alaska DOT&PF engineering, construction and permitting staff are not able to deliver all of the maintenance and STIP projects due to staff shortages and increasing

quantity of projects. The staff is currently stretched thin with many responsibilities. To adequately address current projects and those identified through the LRP planning horizon, staffing levels should be further evaluated.

There are significant lead times associated with executing a major terminals improvements project. Example project completion durations are shown in Figure 5 below. For a major terminal improvement project, the *Design & Planning* and *Permitting & Contracting* phases can take roughly 3 years to complete. Construction phase durations vary by project scope but may take 1.5 years to complete.

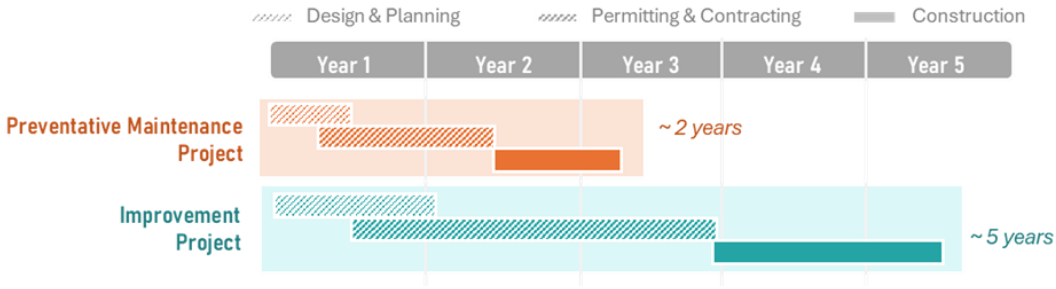


Figure 5: Example Timelines for Terminal Projects

Due to these long project lead times, projects set to be delivered in one timeframe (i.e., mid-term) may need to begin initial planning and design activities in the previous term (i.e. short-term) to ensure on-time completion of construction. For example, the Terminals Capital Projects Schedule figure reflects some mid-term Terminals Improvements Projects commencing in the short-term in order to accommodate these long lead time scheduling challenges.

Table 9 below lists projects that have been identified in the 2024-2027 STIP. These are projects that have been approved for funding and are already underway. These projects accomplish upgrading terminals infrastructure to accommodate ACF vessels, as well as addressing aging terminals infrastructure in some cases.

Table 9: Terminal STIP 2024-2027 Projects Accounted for in the Capital Projects Plan

TERMINAL	PROJECT SCOPE PER KEY SITE COMPONENT
Angoon Ferry Terminal	Dolphins/Mooring Structures, Transfer Bridge Lift System
Auke Bay Ferry Terminal East Berth	Dolphins/Mooring Structures
Chenega Dock	Dock / Approach Trestle / Bulkhead, Dolphins/Mooring Structures, Float, Vehicle Transfer Bridge, Apron / Intermediate Ramp, Transfer Bridge Lift System, Access Catwalks and Gangways
Cold Bay Dock	Dock / Approach Trestle / Bulkhead, Dolphins/Mooring Structures, Access Catwalks and Gangways, Electrical Utilities
Cordova Ferry Terminal	Dolphins/Mooring Structures, Float
Kake Ferry Terminal	Dolphins/Mooring Structures, Apron Hydraulic Lift System, Access Catwalks and Gangways
Ketchikan Ferry Terminal (Berth II)	Electrical Utilities, Access Catwalks and Gangways
Pelican Ferry Terminal	Dock / Approach Trestle / Bulkhead, Dolphins/Mooring Structures, Float, Vehicle Transfer Bridge, Apron / Intermediate Ramp, Transfer Bridge Lift System, Access Catwalks and Gangways
Tatitlek Ferry Terminal	Vehicle Transfer Bridge, Apron / Intermediate Ramp, Transfer Bridge Lift System
Yakutat City Dock	Dock / Approach Trestle / Bulkhead, Float, Vehicle Transfer Bridge, Apron / Intermediate Ramp, Transfer Bridge Lift System
South Tongass Ferry Terminal	New Terminal

Table 10 below identifies the terminals capital projects necessary to uphold the selected 2045 LRP Vessel Service Scenario. This reflects upgrades or additions to existing terminals infrastructure. The projects identified in the STIP for accommodating ACF vessels will need to be completed to uphold the 2045 LRP Vessel Service Scenario. The project identified in the table below reflects a terminals infrastructure upgrade that is not currently part of the STIP. This project is a key action item that should be executed in the short-term timeframe in support of the 2045 LRP Vessel Service Scenario.

Table 10: 2045 LRP Vessel Scenario Terminal Projects in the Capital Projects Plan

TERMINAL	PROJECT SCOPE PER KEY SITE COMPONENT
Haines Ferry Terminal	Dolphins/Mooring Structures

The Terminals Improvements Projects recommended to occur in each term through the planning horizon are reflected in Table 11 below. These are projects that address aging terminals infrastructure. The term identified for action is based upon the current condition of that key site component based on the findings in the *Alaska DOT&PF Shore Facility Conditions Survey Reports*. Project components identified for replacement in the short-term are identified with an "S". Elements for replacement in the medium-term are identified with an "M" and component for improvement in the long-term is identified with an "L". In some instances, a terminal key site component condition is in the process of being addressed by a project underway through the STIP and is identified with "STIP". If a component is not present at a terminal, it is identified with an "-".

Table 11: Terminal Improvements Projects in the Capital Projects Plan

TERMINAL	DOCK, APPROACH TRESTLE, AND / OR BULKHEAD	DOLPHINS / MOORING STRUCTURES	FLOAT	VEHICLE TRANSFER BRIDGE	APRON AND/OR INTERMEDIATE RAMP	TRANSFER BRIDGE LIFT SYSTEM	ACCESS CATWALKS AND GANGWAYS	UPLANDS TERMINAL BUILDING	UPLANDS STAGING AND PARKING	BACKUP GENERATOR	ELECTRICAL UTILITIES	OTHER UTILITIES
Akutan Village Dock	M	M	-	-	-	-	M	-	L	-	-	-
Angoon Ferry Terminal	-	STIP	L	L	M	STIP	-	L	M	-	-	-
Auke Bay East Stern Berth	L	L	L	M	L	L	L	L	L	L	L	L
Auke Bay Ferry Terminal East Berth	L	STIP	M	M	M	M	L	L	L	L	L	L
Auke Bay Ferry Terminal West Berth	-	M	M	L	M	M	L	L	L	L	L	L
Bellingham Ferry Terminal	-	M	-	L	L	L	M	M	M	M	M	M
Chenega Dock	STIP	STIP	STIP	STIP	STIP	STIP	STIP	-	L	-	-	-
Chignik City Dock	L	L	-	-	-	-	L	-	L	-	-	-
Clark Bay (Hollis) Ferry Terminal	-	L	L	L	L	M	L	L	L	-	M	M
Coffman Cove Ferry Terminal	L	L	L	L	L	L	M	L	L	L	L	M
Cold Bay Dock	STIP	STIP	-	-	-	-	L	-	M	-	-	M
Cordova Ferry Terminal	L	STIP	STIP	L	L	L	L	L	L	L	L	L
Dutch Harbor City Dock (Unalaska)	L	-	-	-	-	-	-	-	L	-	-	L
False Pass Dock	M	L	-	-	-	-	L	-	L	-	-	L
Gustavus Dock	L	L	-	L	L	L	-	-	L	L	L	L
Haines Ferry Terminal	L	L	-	L	L	L	M	L	L	L	L	L
Homer Dock Bridge	L	L	L*	L*	L*	L*	L	L	M	-	L	L
Hoonah Ferry Terminal	-	L	M	L	L	L	-	L	L	L	L	L
Kake Ferry Terminal	-	STIP	L	L	STIP	L	STIP	L	L	-	L	L
Ketchikan Ferry Terminal (Berth 1)	-	L	L	L	M	M	L	L	M	L	L	L
Ketchikan Ferry Terminal South (Berth 2)	L	M	L	L	L	L	STIP	L	L	L	STIP	L
Ketchikan Transfer Facility (Berth 3)	-	L	L	L	L	L	L	L	L	L	L	L
King Cove City Dock	L	M	-	-	-	-	M	-	M	-	-	-
Kodiak City Dock (Pier 1)	L	L*	L*	L*	L*	L*	-	-	L	-	-	L
Kodiak Pier 2	L	L	-	-	-	-	-	-	M	-	-	L

TERMINAL	DOCK, APPROACH TRESTLE, AND / OR BULKHEAD	DOLPHINS / MOORING STRUCTURES	FLOAT	VEHICLE TRANSFER BRIDGE	APRON AND/OR INTERMEDIATE RAMP	TRANSFER BRIDGE LIFT SYSTEM	ACCESS CATWALKS AND GANGWAYS	UPLANDS TERMINAL BUILDING	UPLANDS STAGING AND PARKING	BACKUP GENERATOR	ELECTRICAL UTILITIES	OTHER UTILITIES
Metlakatla (Annette Bay) Ferry Terminal	-	L	L	L	L	L	-	L	L	L	L	-
Old Harbor City Dock	L	L	-	-	-	-	L	-	L	-	L	L
Ouzinkie	L	L	-	-	-	-	L	-	L	-	-	-
Pelican Ferry Terminal	STIP	STIP	STIP	STIP	STIP	STIP	STIP	-	-	-	-	-
Petersburg Ferry Terminal	L	L	L	L	L	L	L	L	L	L	L	L
Prince Rupert Ferry Terminal**	-	M	-	S	S	S	L	M	M	-	M	M
Port Lions Village Dock	L	L	-	-	-	-	L	-	L	-	L	L
Sand Point City Dock II	L	L	-	-	-	-	L	-	M	L	-	-
Seldovia City Dock	M	-	-	-	-	-	-	-	M	-	M	M
Sitka Ferry Terminal	M	L	L	M	M	M	L	L	L	L	L	L
Skagway Ferry Terminal	-	M	M	M	M	M	L	L	L	L	L	L
South Mitkof (Petersburg) Ferry Terminal	L	L	L	L	L	L	-	-	L	L	M	M
Tatitlek Ferry Terminal	L	L	-	STIP	STIP	STIP	-	-	-	-	-	-
Tenakee City Dock	L	L	L	L	L	L	L	-	L	-	L	L
Valdez Ferry Terminal	-	L	-	L	L	L	L	L	L	L	L	L
Whittier Ferry Terminal	-	L	-	L	L	L	L	L	L	L	L	L
Wrangell Ferry Terminal	-	M	-	M	L	L	L	L	L	L	L	L
Yakutat City Dock	STIP	L	STIP	STIP	STIP	STIP	-	-	-	-	L	L
South Tongass	*STIP plans in development for construction of new terminal in the short-term*											

*Homer and Kodiak City Dock (Pier 1) have been identified as terminals needing consideration for modifying terminal infrastructure to support vessel interoperability. These terminals currently support ocean class vessels, which is also reflected in the 2045 LRP Vessel Service Scenario. If these terminals have the ability to support mainliners in addition to ocean class, this will promote resiliency in the Alaska Marine Highway System. When developing terminal improvements projects, consider constructing float and transfer bridge systems to support mainliner vessels at these terminals.

**Both Prince Rupert, Canada, and Hyder, Alaska are being evaluated for port feasibility.

SUMMARY OF CAPITAL COST INVESTMENTS BY TERMINAL

Table 12 below summarizes the anticipated capital costs associated with each terminal across the LRP planning horizon. This cost includes STIP projects, Terminals Improvements Projects, and the terminals upgrade project associated with the 2045 LRP Vessel Scenario. This table also indicates the year recommended for starting the first terminals improvements or upgrade project.

Table 12: Summary of Capital Cost Investments by Terminal in the Capital Projects Plan

TERMINAL	TOTAL CAPITAL COST FOR TERMINALS IMPROVEMENTS & STIP ($millions)	RECOMMENDED PROJECT START DATE
Akutan Village Dock	$16.7	2027
Angoon Ferry Terminal	$12.0	2026
Auke Bay East Stern Berth	$14.9	2026
Auke Bay Ferry Terminal East Berth	$17.4	2025
Auke Bay Ferry Terminal West Berth	$21.3	2027
Bellingham Ferry Terminal	$72.9	2026
Chenega Dock	$21.6	2024
Chignik City Dock	$1.9	2034
Clark Bay (Hollis) Ferry Terminal	$12.7	2027
Coffman Cove Ferry Terminal	$9.4	2027
Cold Bay Dock	$53.2	2025
Cordova Ferry Terminal	$27.9	2024
Dutch Harbor City Dock (Unalaska)	$3.6	2034
False Pass Dock	$16.9	2028
Gustavus Dock	$9.3	2034
Haines Ferry Terminal	$17.2	2025
Homer Dock Bridge	$11.2	2028
Hoonah Ferry Terminal	$10.0	2028
Kake Ferry Terminal	$12.7	2024
Ketchikan Ferry Terminal (Berth 1)	$14.8	2028
Ketchikan Ferry Terminal South (Berth 2)	$16.5	2024
Ketchikan Transfer Facility (Berth 3)	$4.5	2032
King Cove City Dock	$11.9	2029
Kodiak City Dock (Pier 1)	$4.1	2034
Kodiak Pier 2	$17.0	2029
Metlakatla (Annette Bay) Ferry Terminal	$5.7	2033
Old Harbor City Dock	$5.7	2032
Ouzinkie	$2.1	2033
Pelican Ferry Terminal	$20.4	2024
Petersburg Ferry Terminal	$10.6	2032
Prince Rupert Ferry Terminal	$39.2	2031
Port Lions Village Dock	$2.9	2033

TERMINAL	TOTAL CAPITAL COST FOR TERMINALS IMPROVEMENTS & STIP ($millions)	RECOMMENDED PROJECT START DATE
Sand Point City Dock II	$5.9	2029
Seldovia City Dock	$11.0	2030
Sitka Ferry Terminal	$15.0	2030
Skagway Ferry Terminal	$27.2	2030
South Mitkof (Petersburg) Ferry Terminal	$12.4	2030
South Tongass (Saxman) Ferry Terminal	$13.2	2025
Tatitlek Ferry Terminal	$22.8	2024
Tenakee City Dock	$6.5	2035
Valdez Ferry Terminal	$13.4	2032
Whittier Ferry Terminal	$11.4	2033
Wrangell Ferry Terminal	$24.6	2030
Yakutat City Dock	$26.7	2024

Estimated preventative maintenance project capital costs are identified in Table 13. It is estimated that 0.5% of total terminals' asset value will be spent on preventative maintenance activities per year at each terminal. This cost also includes funding for project soft costs, general conditions, and mobilization. Preventative maintenance project costs are broken down by planning term. Preventative maintenance projects are expected to occur at approximately 5-year intervals across the LRP planning horizon.

Table 13: AMHS LRP Terminal Maintenance Costs, 2025-2045, $Millions

CALENDAR YEAR	CAPITALIZED MAINTENANCE PROJECTS ($millions)
Cumulative Short-Term Costs (2025-2028)	$24.0
Cumulative Mid-Term Costs (2029-2035)	$47.6
Cumulative Long-Term Costs (2036-2045)	$59.3
Total LRP Terminal Maintenance Capital Requirement	**$131.0**

RESILIENCE TO SEA LEVEL RISE

As part of the 2045 LRP, a review was conducted to identify how resilient AMHS' terminal infrastructure is to sea level rise and associated coastal flooding and to identify which facilities face the highest risks and should be evaluated in further detail during planned capital improvement projects.

The United States and the globe have been experiencing numerous climate impacts, including rising sea levels and increasing frequency and severity of storms and severe weather.[1] However, throughout much of Southeast Alaska, another process, isostatic rebound, is offsetting much of

[1] https://nca2023.globalchange.gov/

the impact of sea level rise[2]. Through this process, land masses that were depressed during the most recent ice age are rising back up. In many places, this process is occurring faster than sea level rise, resulting in an apparent fall in sea level.

Some AMHS terminals were identified as currently at risk of flooding in extreme water levels. By 2050, changes to flood risks were found to vary between terminals, decreasing or increasing over time based upon the different levels of isostatic rebound projected for different regions in Alaska. Table 14 provides a summary of AMHS terminals that are currently at risk and those that are projected to be at risk in 2050. Terminals listed in italics are currently at risk but do not remain at risk in 2050, as future glacial rebound is anticipated to outpace sea level rise. Terminals listed in bold are not currently at risk but are expected to be at risk in 2050 due to rising sea levels.

Table 14: Summary of At-Risk Terminals

TERMINALS CURRENTLY AT RISK	TERMINALS AT RISK IN 2050
Auke Bay East Stern Berth	Auke Bay East Stern Berth
Auke Bay Ferry Terminal East Berth	Clark Bay (Hollis) Ferry Terminal
Auke Bay Ferry Terminal West Berth	Cordova Ferry Terminal
Clark Bay (Hollis) Ferry Terminal	**Ketchikan Main Ferry Terminal (Berth 1)**
Cordova Ferry Terminal	Ketchikan Transfer Facility (Berth 3)
Gustavus Dock	Metlakatla (Annette Bay) Ferry Terminal
Ketchikan Transfer Facility (Berth 3)	Pelican Ferry Terminal
Metlakatla (Annette Bay) Ferry Terminal	Sitka Ferry Terminal
Pelican Ferry Terminal	Skagway Ferry Terminal
Sitka Ferry Terminal	**Wrangell Ferry Terminal**
Skagway Ferry Terminal	
Tenakee City Dock	

Sea-level and climate resilience risks will be evaluated more closely during the design of future terminal improvements and maintenance projects. At that time, additional onsite data collection and more thorough and time-intensive sea level rise modeling and analysis can be conducted to ensure flooding risks are adequately addressed. Additionally, tidal review and wind and wave analysis are recommended as part of further terminal planning to confirm planning-level findings and to gather additional detail on which terminals face the highest risks and frequency of severe storms.

RECOMMENDATIONS

This long-range planning evaluation of terminal infrastructure provides a high-level assessment of system needs through the next 20 years. More in-depth study will be needed to closely evaluate and catalogue all of Alaska's intrastate infrastructure through an asset management system. This in-depth study would more closely identify the specific maintenance and replacements needed at each terminal to further refine the high-level analysis conducted to support the 2045 LRP

[2] https://www.climate.gov/news-features/features/interactive-map-how-has-local-sea-level-united-states-changed-over-time

recommendations. This could be done throughout the regularly scheduled inspections that could be expanded to better encompass all elements of terminal infrastructure such as terminal buildings, parking areas, and other passenger amenities. Development of a terminals focused GIS database system is recommended to keep track of this data information as it is generated.

The current staffing levels within the Alaska DOT&PF engineering, construction, and permitting group are insufficient to adequately address the current projects and expanded project list in the long-range plan. Workforce levels should be monitored and alternative project delivery methods, such as design build and progressive design build models, should be explored.

The LRP planning process has identified yearly maintenance program costs at approximately $6,200,000 per year to cover design, permitting and construction costs for the many terminal assets. The current maintenance funding levels of approximately $1,700,000 per year are not able to create an effective preventative maintenance program for terminal infrastructure. It is common for a failure-level event of a key site component to occur, resulting in the need for an emergency repair project. This type of event introduces strain on staffing and funding resources and puts service capabilities and reliability at risk. A fully funded preventative maintenance program and increased staffing levels will reduce risk and allow for more efficient funding utilization.

Maintaining, upgrading, and improving terminal infrastructure assets is essential for meeting the goals of the LRP. Terminal infrastructure asset upgrades with a focus on resiliency and standardization where practical will promote a sustainable service. Strategies for planning for the various terminal capital projects could include:

- Improving and maintaining the condition of terminal infrastructure to support more reliable and sustainable service.
    - Develop a robust maintenance program dedicated to repairing or replacing key terminal components on a regular basis.
    - Maintain an asset management program that tracks the condition of terminal infrastructure and executes the terminal improvement projects recommended per the LRP. Establish internal roles dedicated to capital asset management and deployment.
    - Implement an Infrastructure Asset Management Tool for tracking asset conditions, costs, and work history.
- Reduce risk of adverse service impacts through strategic terminal improvements projects.
    - Standardize assets to increase uniformity and consistency to support interoperability. Invest in terminal improvements that support standardization of mooring and other operational processes. Upgrade existing vessels and design new vessels to maximize standardized configurations.
    - Reduce environmental impact in infrastructure design and construction. Develop terminal improvement projects with consideration of improving the resilience of terminals to issues such as sea level rise and erosion.

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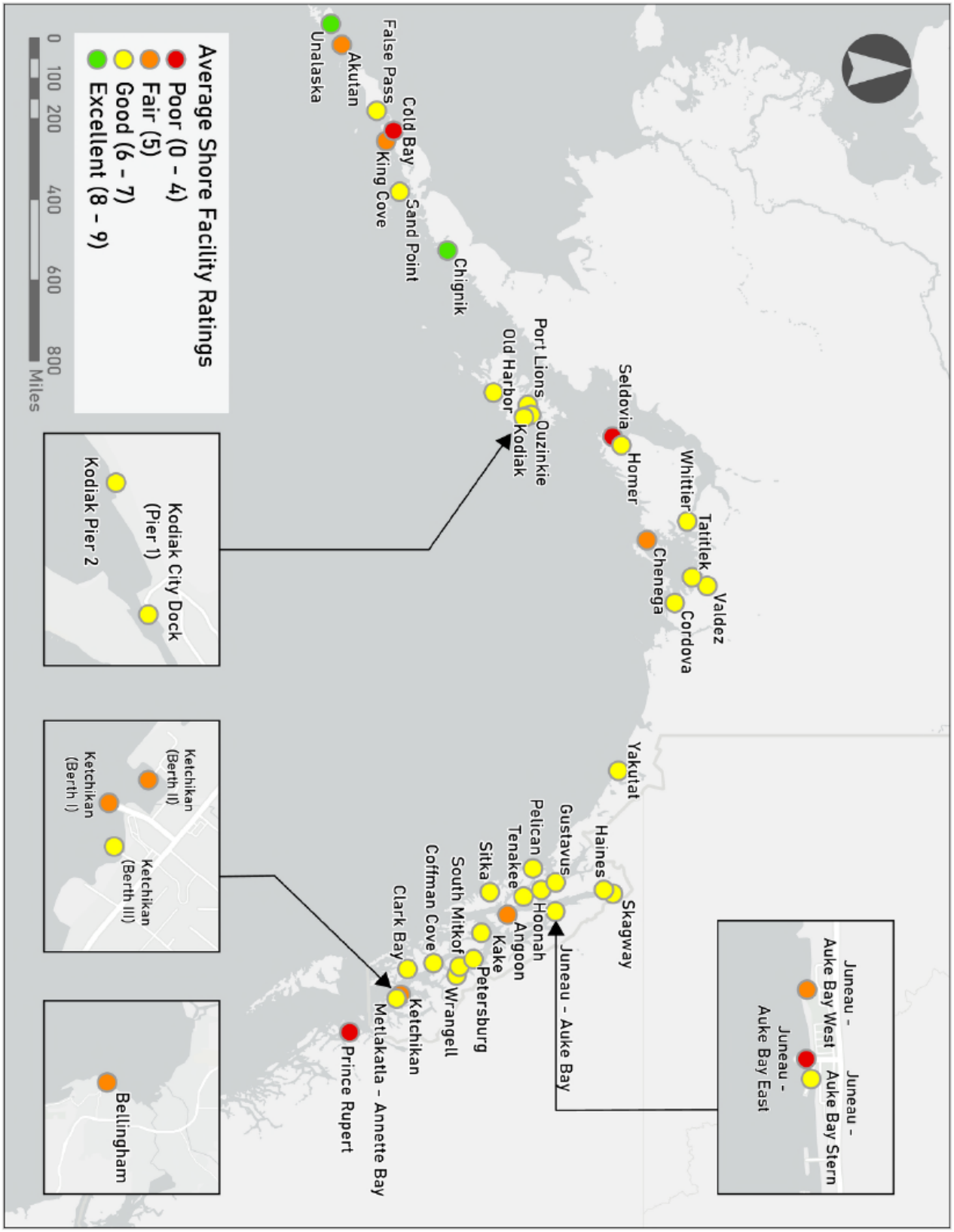

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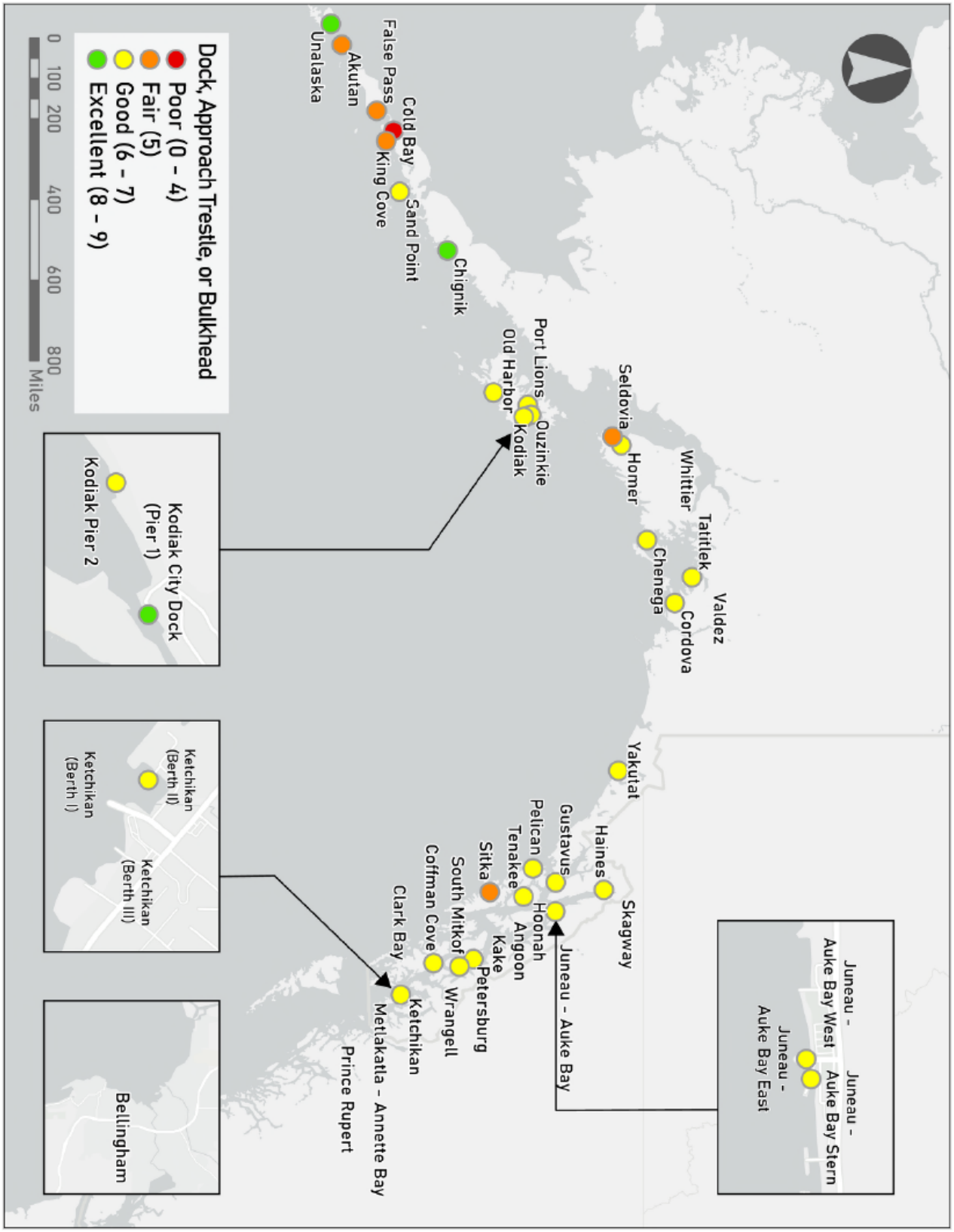

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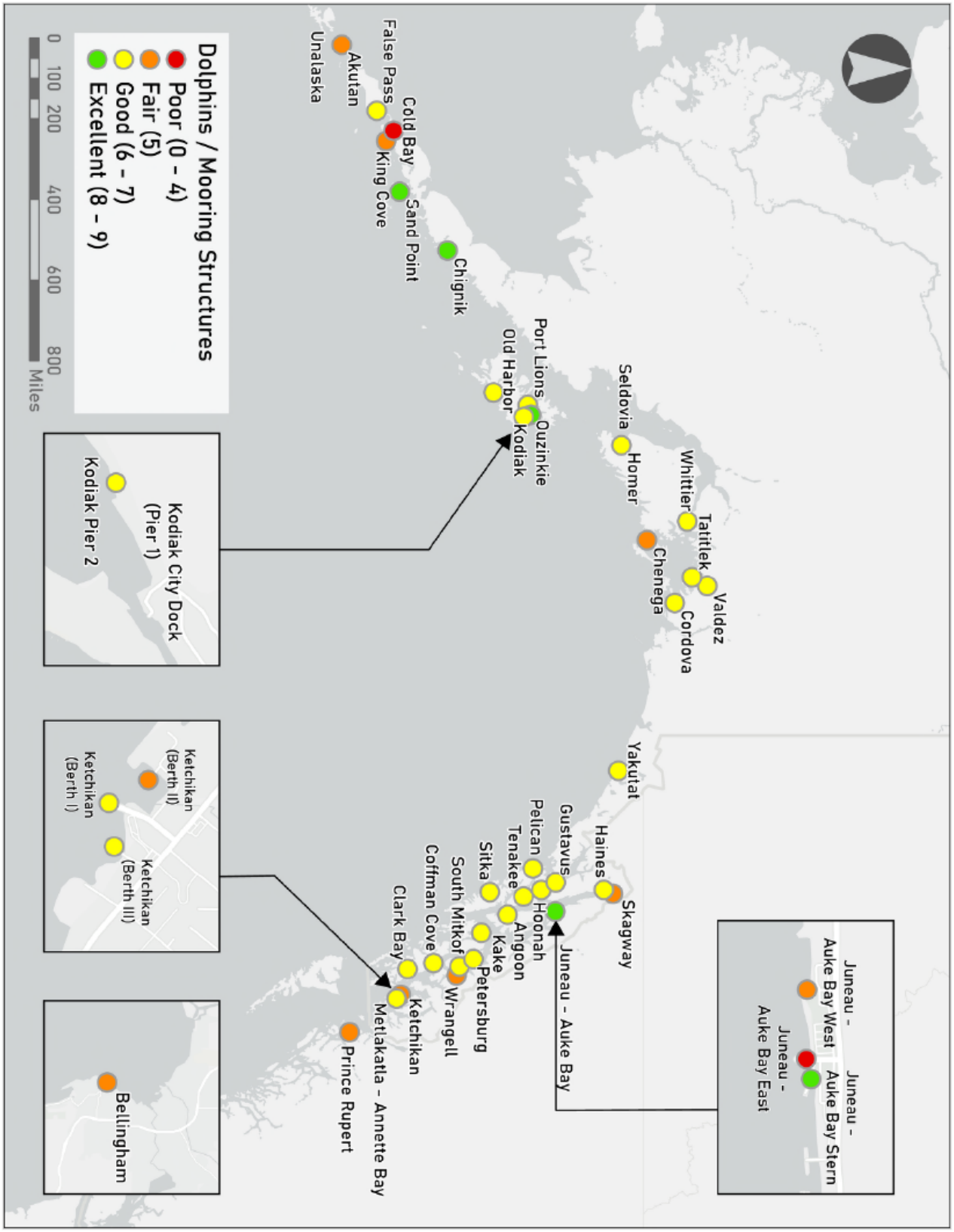

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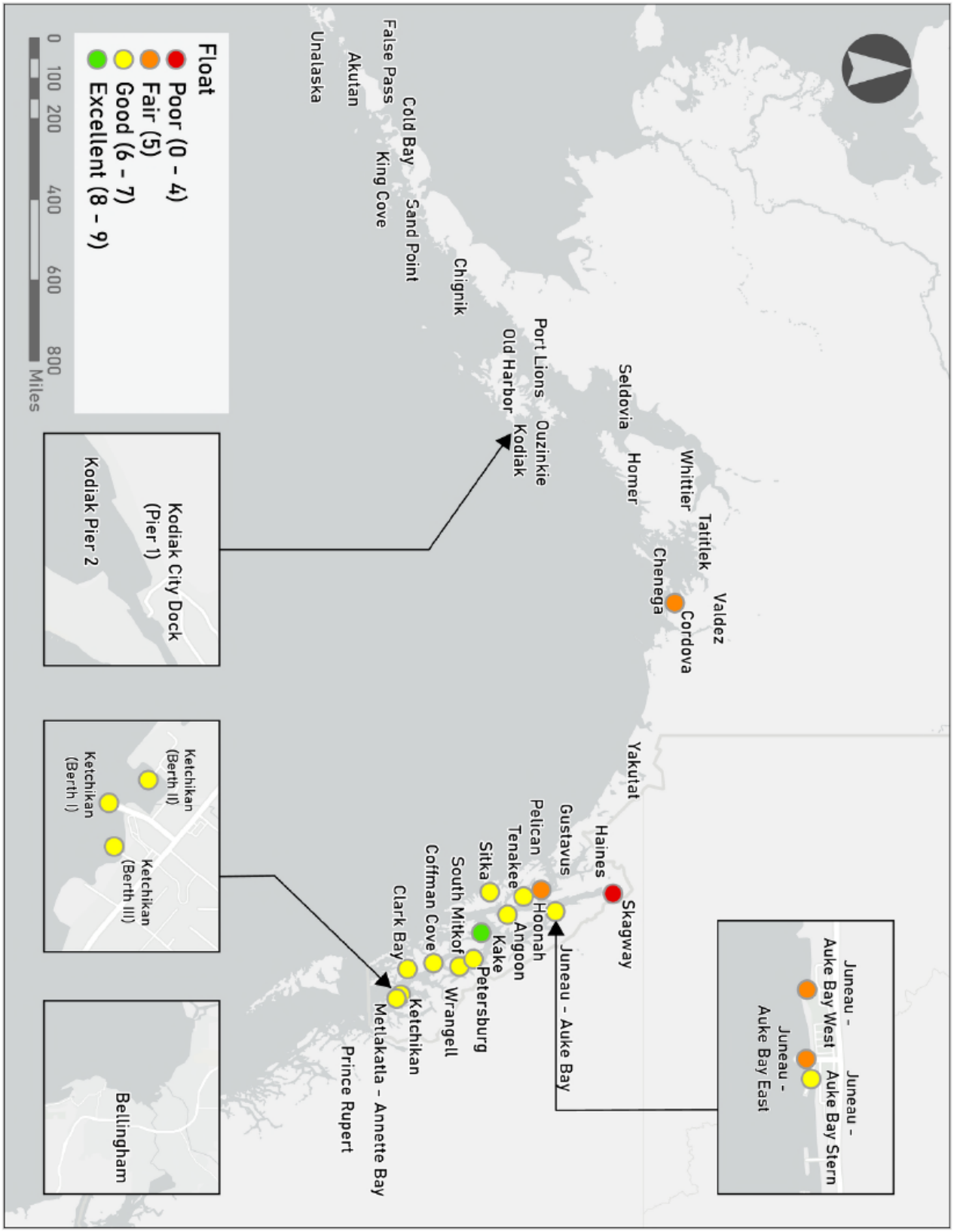

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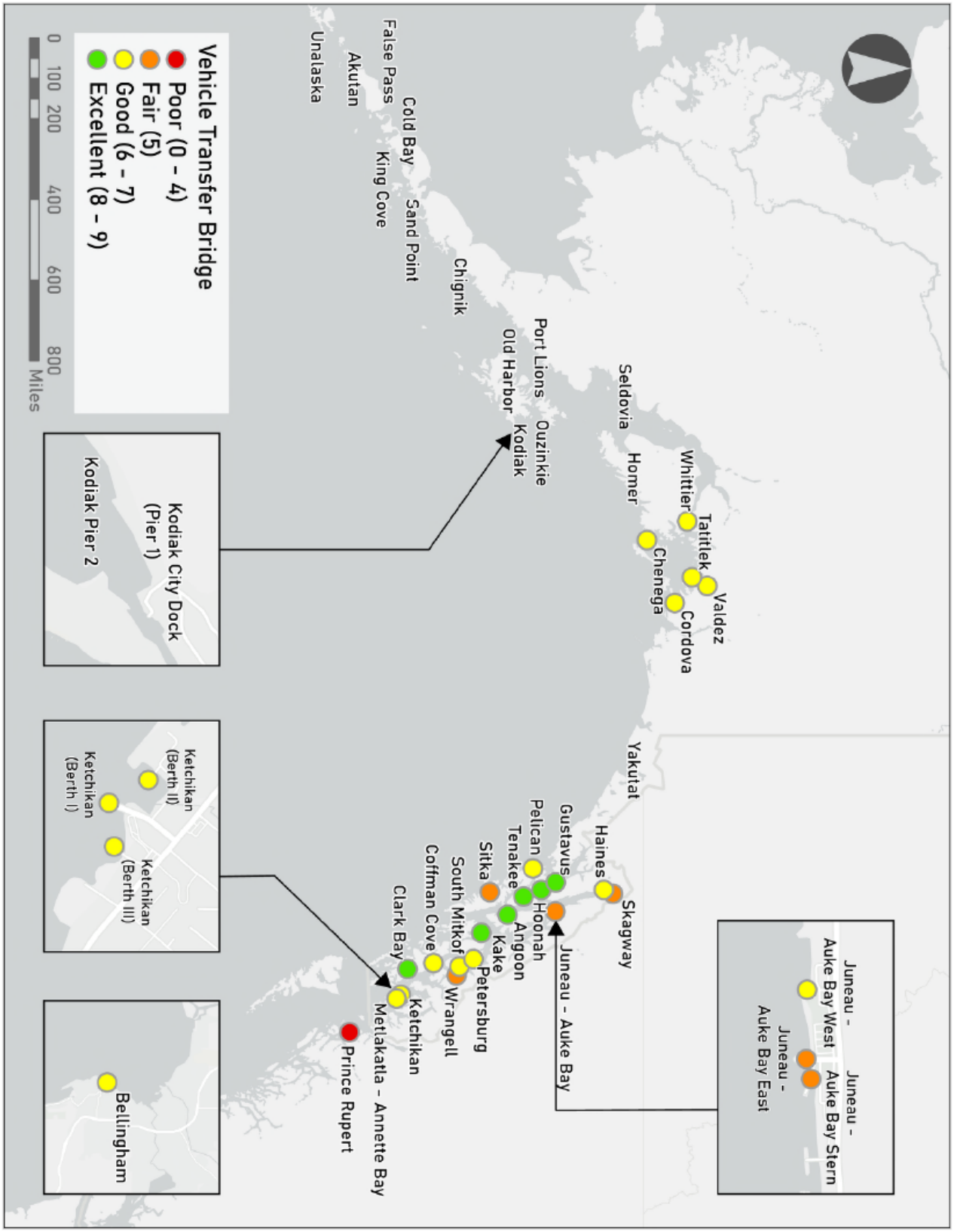

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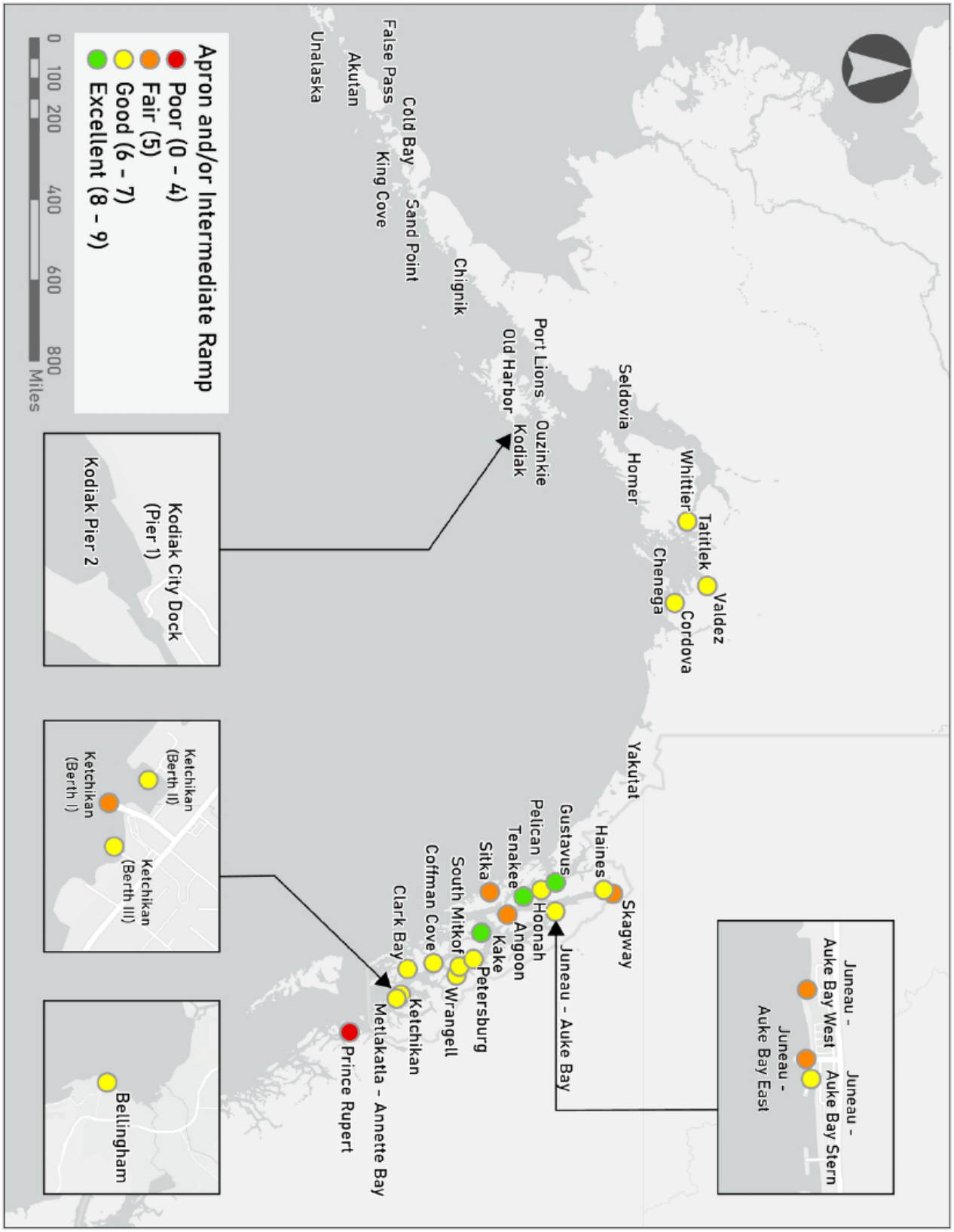

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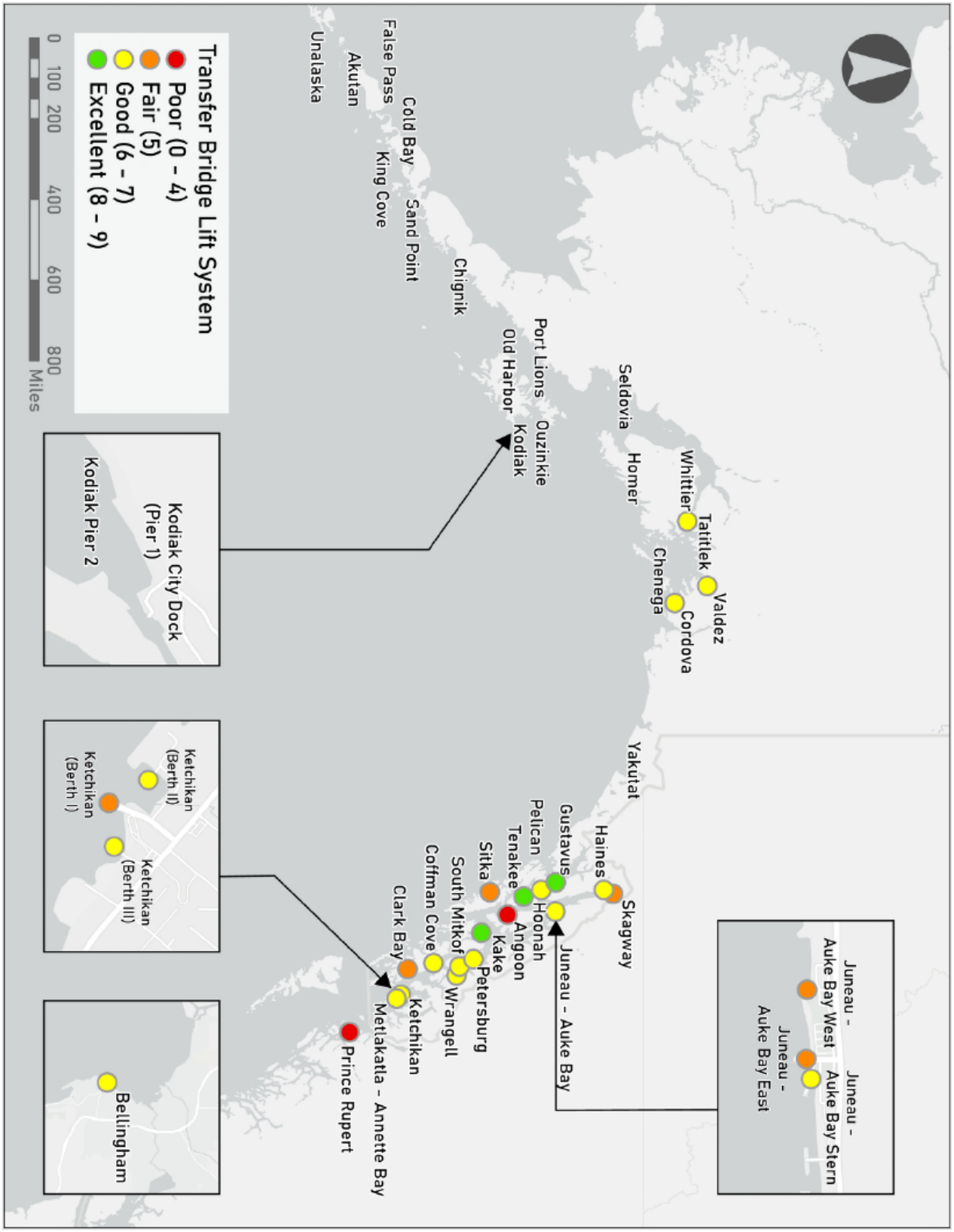

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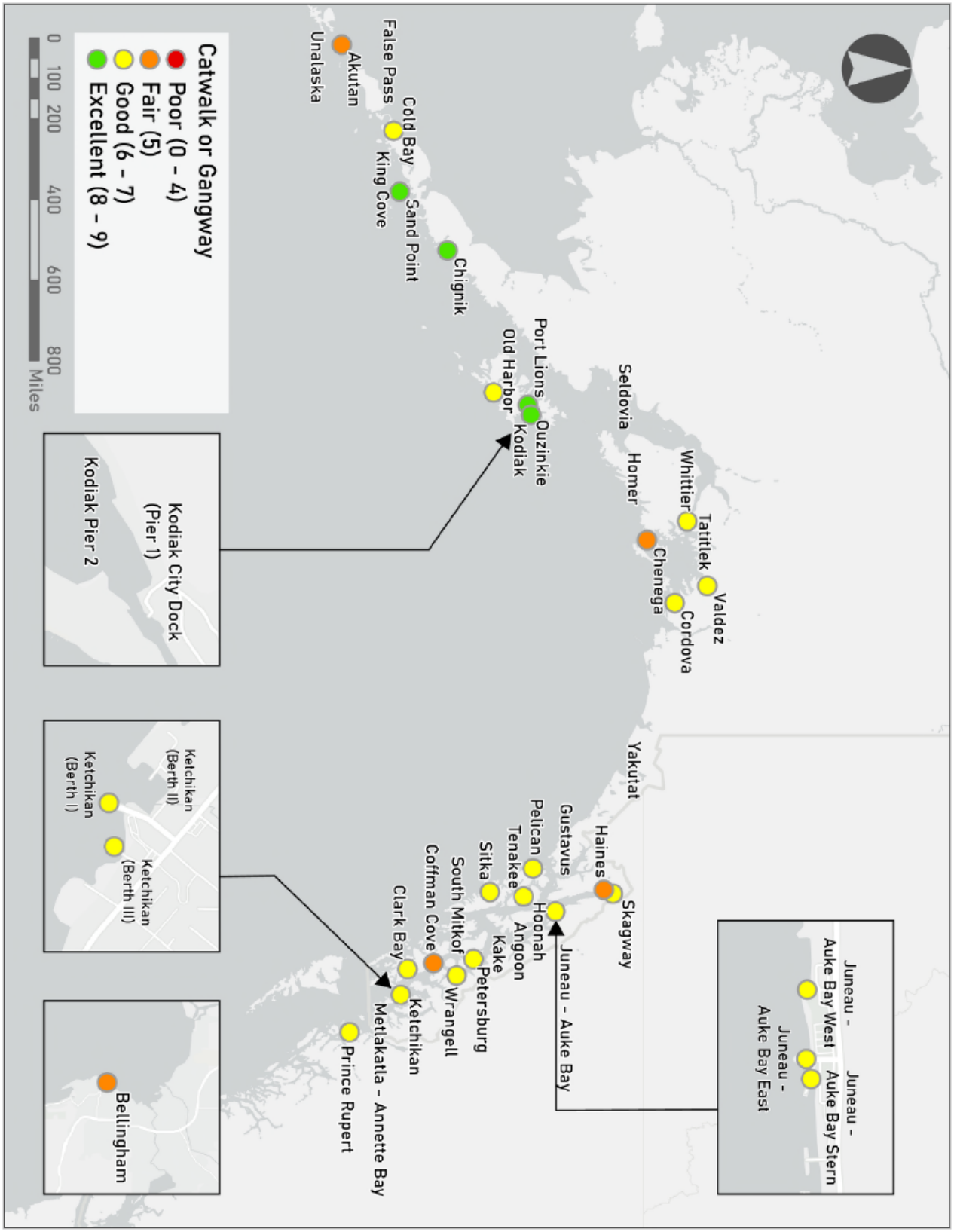

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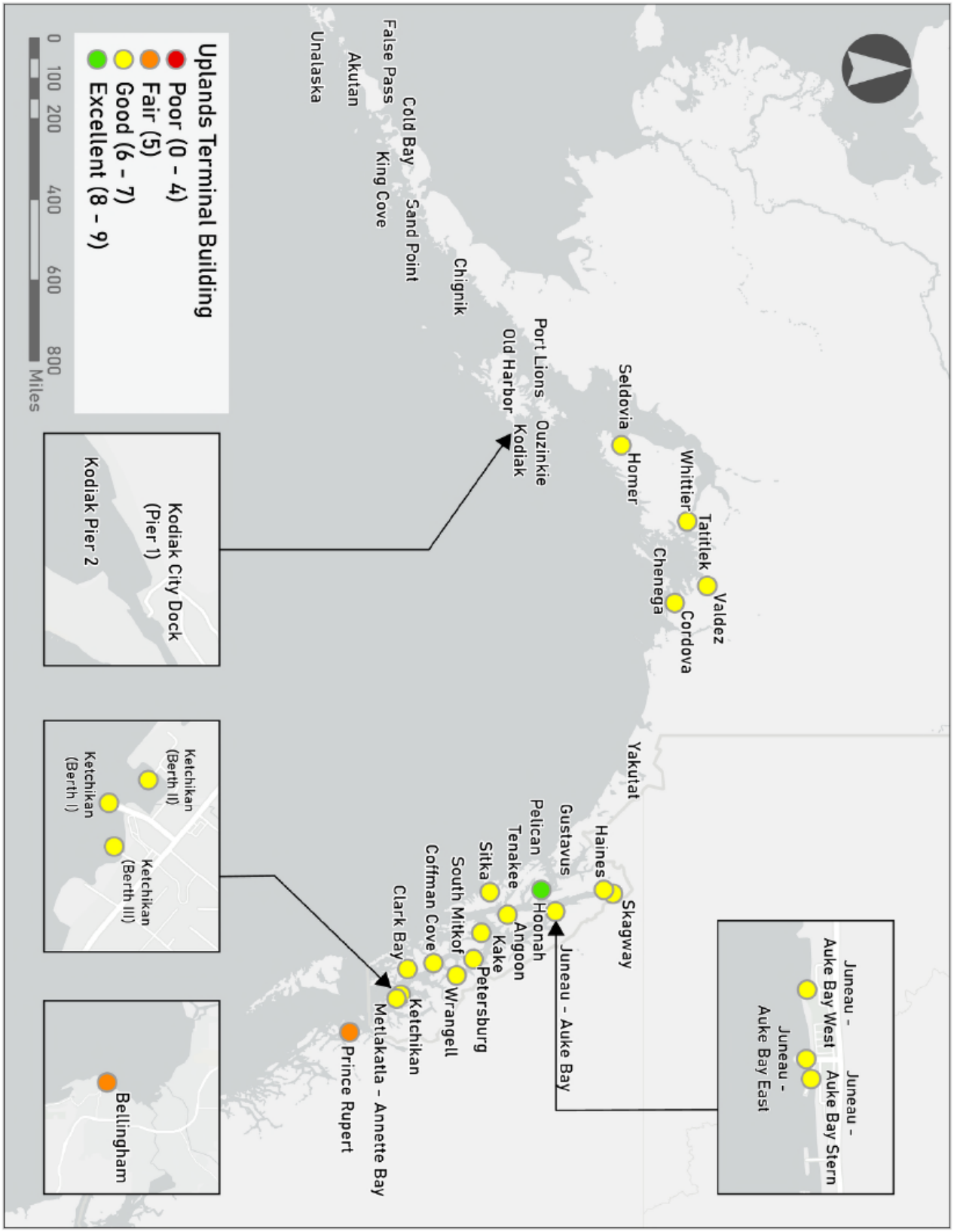

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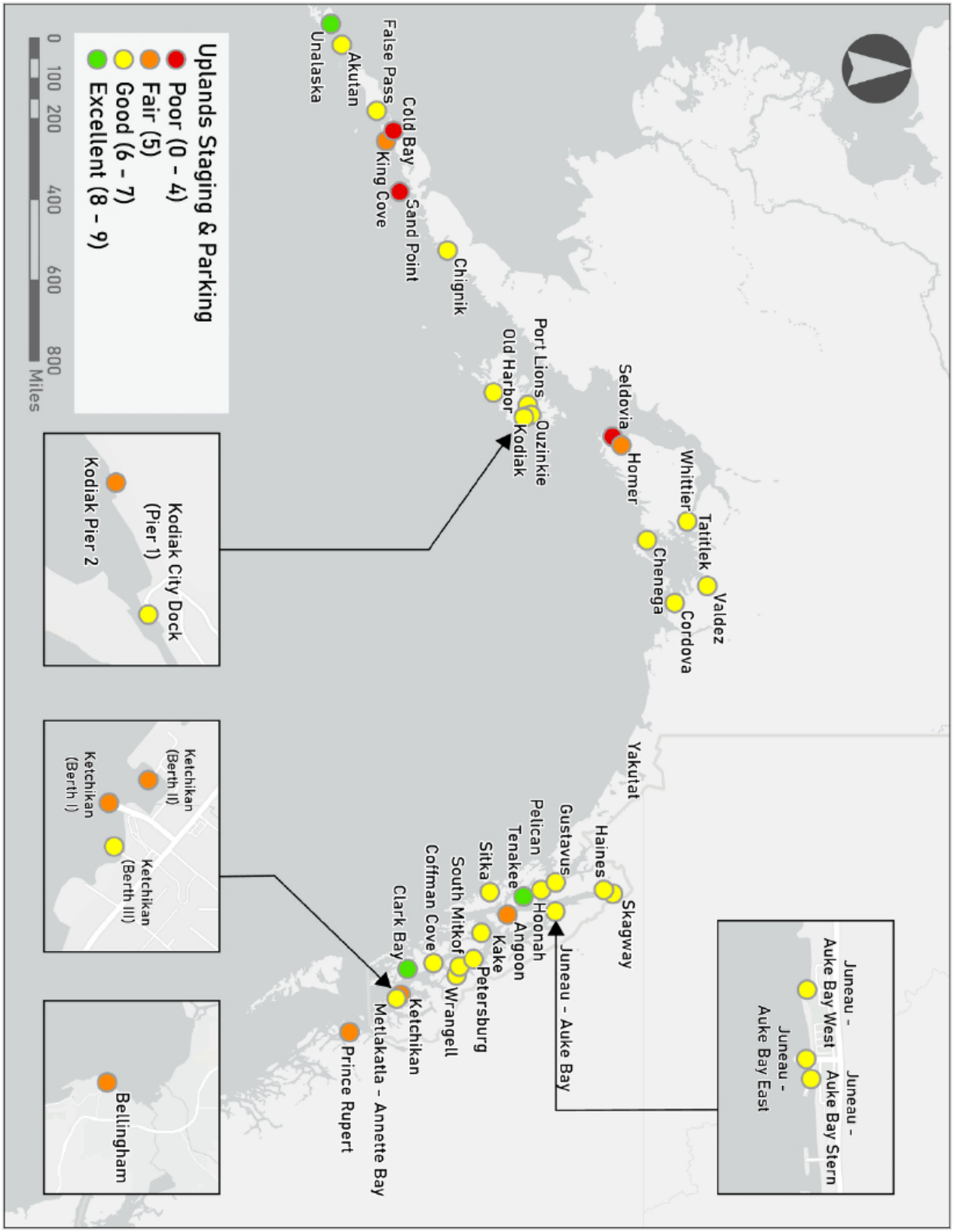

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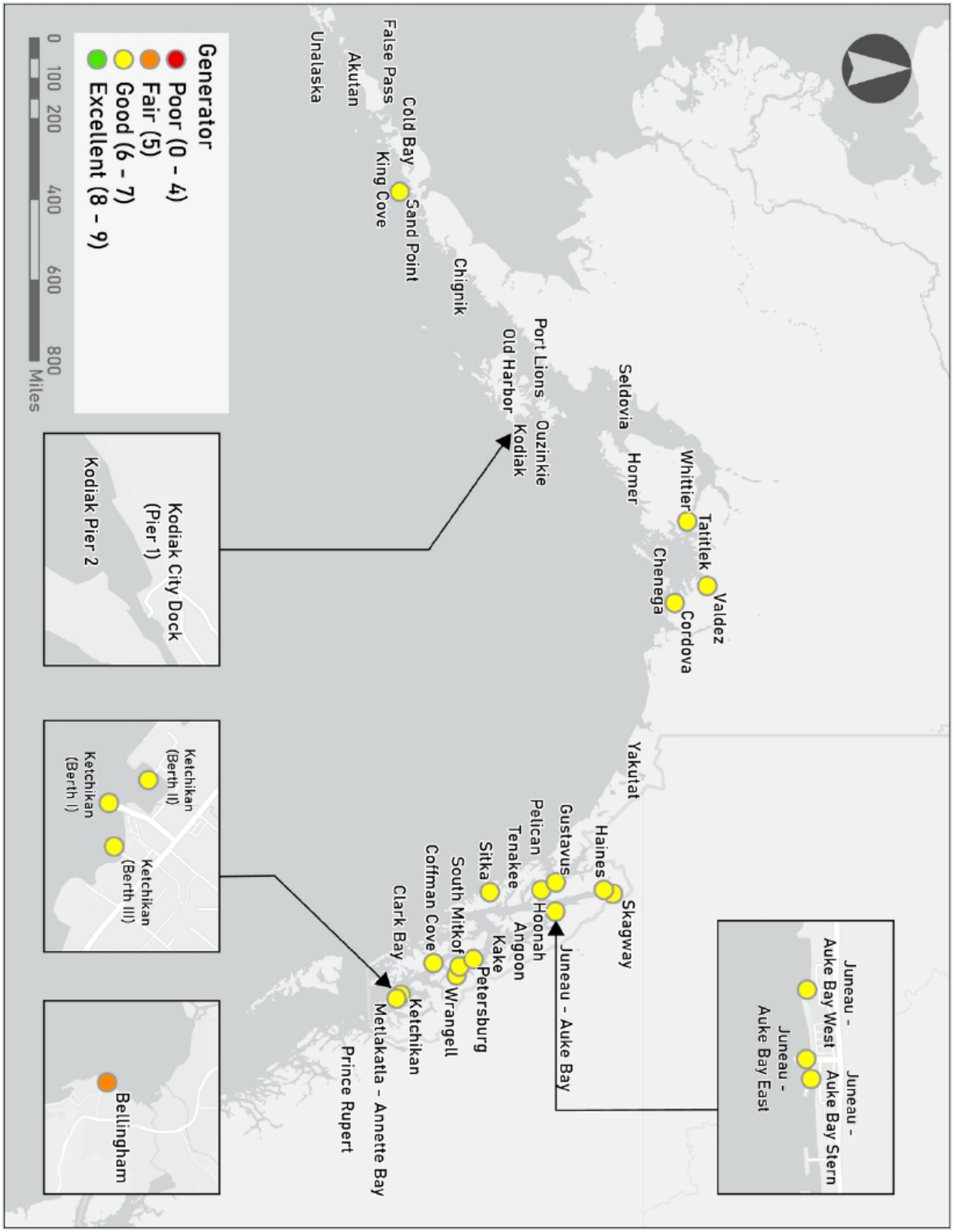

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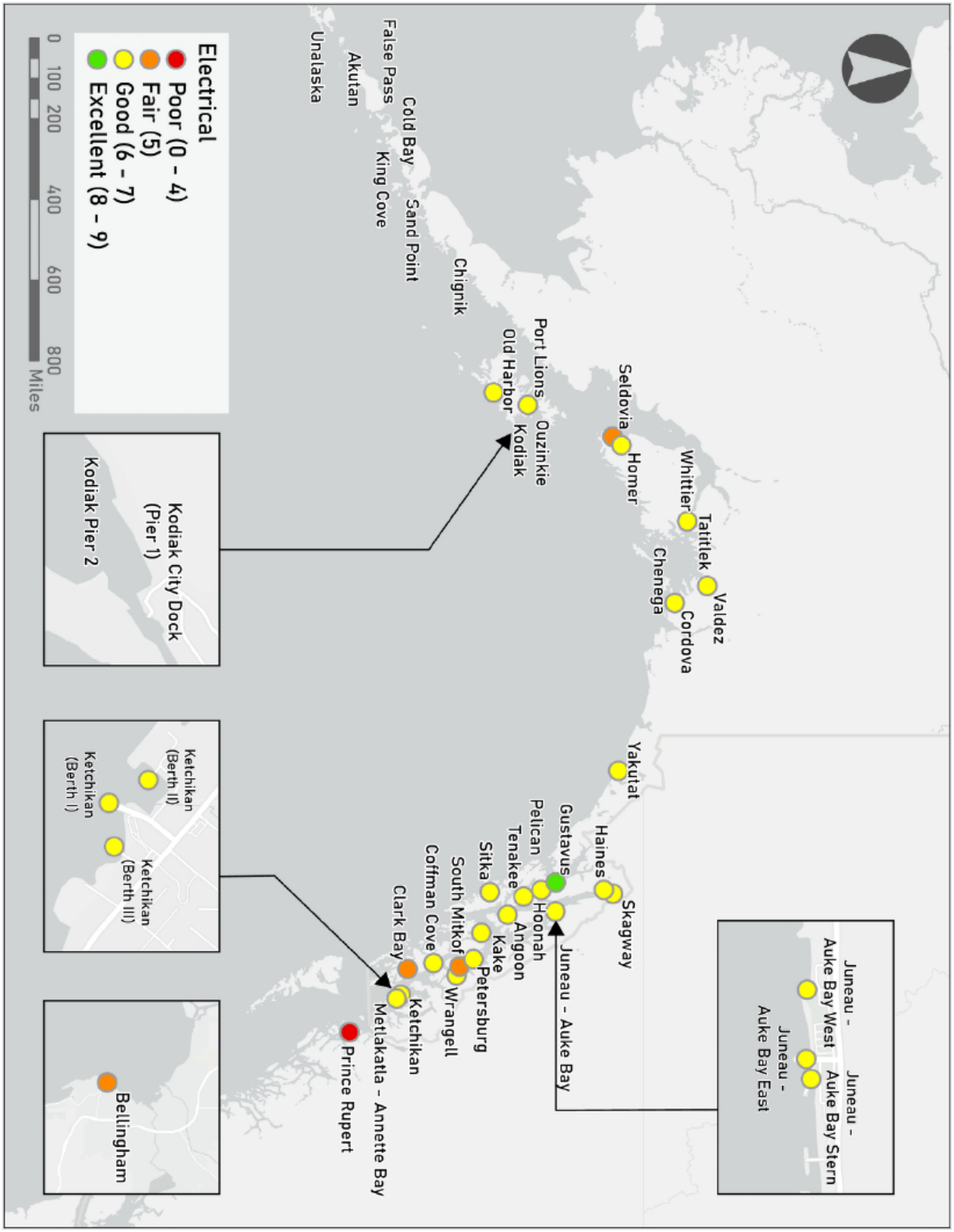

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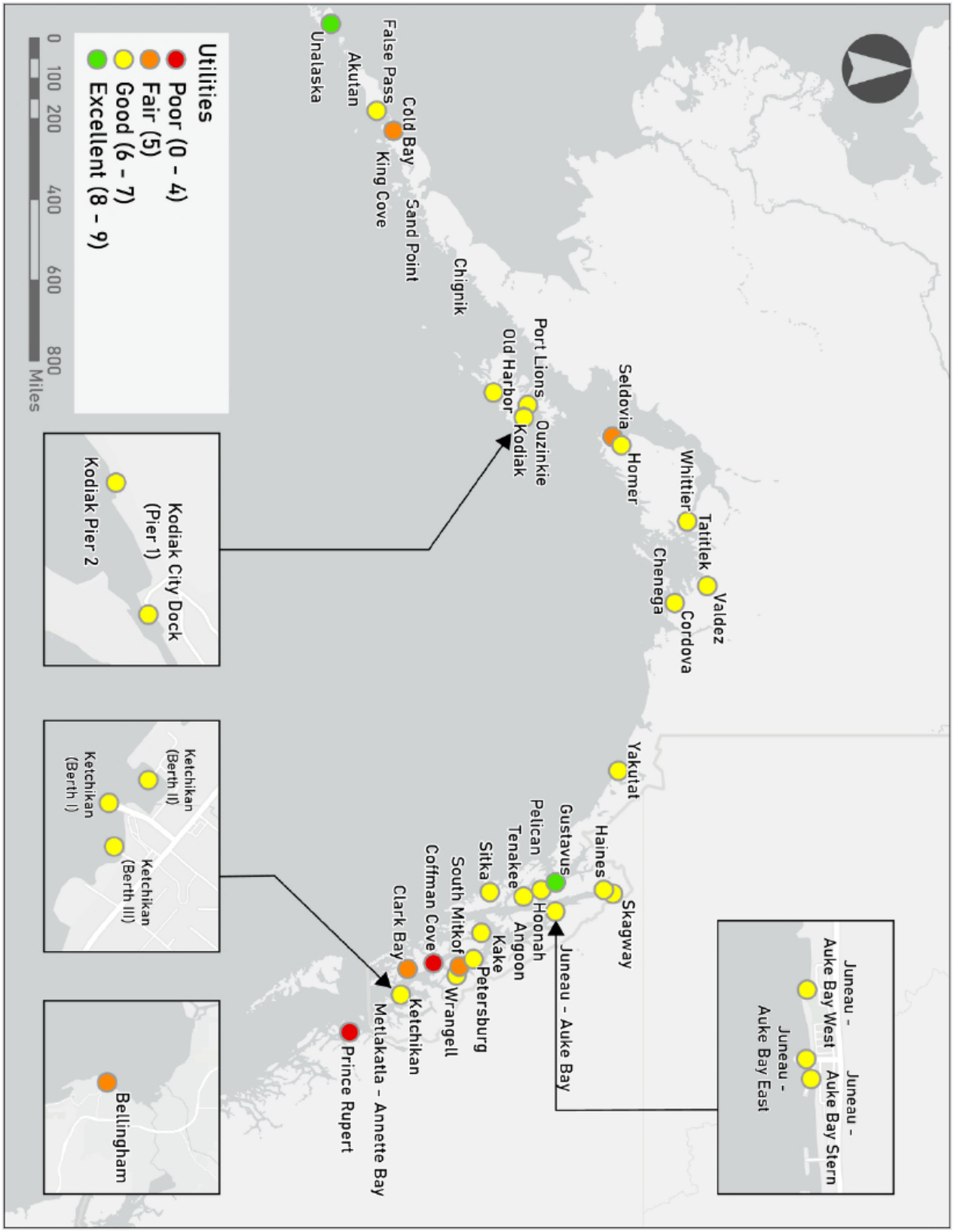

APPENDIX F1

WORKFORCE ANALYSIS

To: Alaska Marine Highway System (AMHS)
From: KPFF Consulting Engineers
Date: June 2025
Subject: AMHS 2045 Long-Range Plan Workforce Memo
Version: 4.0 (New)

PURPOSE

This memo summarizes the workforce analysis conducted as a part of the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP) effort. The workforce analysis was used to gather information, report on workforce initiatives underway and develop reasonable workforce related goals for the LRP and helped identify potential strategies and actions for supporting those goals.

BACKGROUND

AMHS is crucial for the state's transportation and economic infrastructure. Employing 493 individuals in its operation as of May 2024, the AMHS fleet connects remote communities, supports tourism, and plays a vital role in local economies. Unfortunately, AMHS is facing challenges in maintaining its workforce and has had to cancel sailings in recent years because of a shortage of qualified personnel. This issue predates the COVID-19 pandemic but worsened during the pandemic, leading to more sailing cancellations due to workforce-related issues. As of January 2024, AMHS is facing shortages in both Deck and Engineering Officers and mid-level Deck and Engineering crew.

Supporting operations outside of the vessel are the personnel managing budgets, procurement, grant management, recruitment, dispatch, scheduling, shoreside operations, planning and terminal maintenance and engineering. As with many statewide positions, many positions to support these administrative and operational functions of the AMHS system have continued to remain open or under-staffed, putting strain on the system.

APPROACH

This workforce analysis was conducted in four steps.

1. Identify key workforce challenges facing AMHS in the context of challenges facing the maritime industry nationwide.
2. Review characteristics of the current workforce to identify trends and develop a baseline understanding of the state of AMHS workforce.
3. Conduct an inventory of existing workforce strategies and initiatives being implemented nationally and by specific ferry operators to identify potential lessons learned.
4. Review current AMHS workforce strategic initiatives and identify potential future actions to ensure the long-term sustainability and efficiency of AMHS.

FINDINGS

OVERVIEW OF THE NATIONAL MARITIME WORKFORCE

The U.S. maritime industry is pivotal to global commerce and the transportation of people, yet it confronts numerous challenges that impact its workforce dynamics. Shifts in work conditions and career preferences have also influenced workforce demographics, prompting strategic efforts to attract and retain talent. This section provides an overview of the current state of the U.S. maritime workforce and the AMHS workforce, specifically as it relates to seafaring roles and highlighting demographic trends.

NATIONWIDE STATISTICS

Credentialed Mariners

93% Male

Captains & Operators

82% White

40.9 Years Old

Oilers, Sailors, & Ship Engineers

62% White

35 Years Old

NATIONWIDE DEMOGRAPHICS

While progress toward greater diversity is ongoing, the U.S. maritime industry remains predominantly comprised of male workers who identify as white, **underscoring the need for more inclusive recruitment practices.** As of 2022, only 7% of U.S. credentialed mariners are female (Kumar, 2022), and only 18% of U.S. ship captains and operators identify as other than white. Demographics of workers in crew positions such as oilers, sailors, and ship engineers show slightly greater ethnic diversity but are still predominantly white (62%).

The average age of a vessel captain/operator in the U.S. is 40.9 years old, while the national average for the oiler, sailor, and ship engineer occupational group is 35 years old (Deloitte, Datawheel, 2022). Nationwide, the maritime workforce is aging and experiencing a generational shift, with many baby boomers expected to retire. Increased aging and retirements can pose workforce shortage challenges, particularly for positions that require higher credentialing and more experience. For example, a nationwide study released by the U.S. Maritime Administration (MARAD) in 2017 found that the U.S. did not have enough mariners with unlimited tonnage credentials to sustain a full activation of the Ready Reserve Fleet (RRF) and commercially operated vessels to meet sealift needs (Phillips, 2023).

The maritime workforce is slowly changing, recognizing these key demographic elements are essential for addressing current workforce challenges and shaping future recruitment and retention strategies in the maritime industry.

AMHS WORKFORCE

As of May 2024, AMHS employed a total of 493 vessel crew employees, which includes both licensed and unlicensed personnel. Vessel personnel work in three different departments onboard (Deck, Engine, and Passenger Services) and are represented by three different collective bargaining

units (Inlandboatmen's Union [IBU], Marine Engineers' Beneficial Association Union [MEBA], and International Organization of Masters, Mates, and Pilots Union [MM&P]).[1]

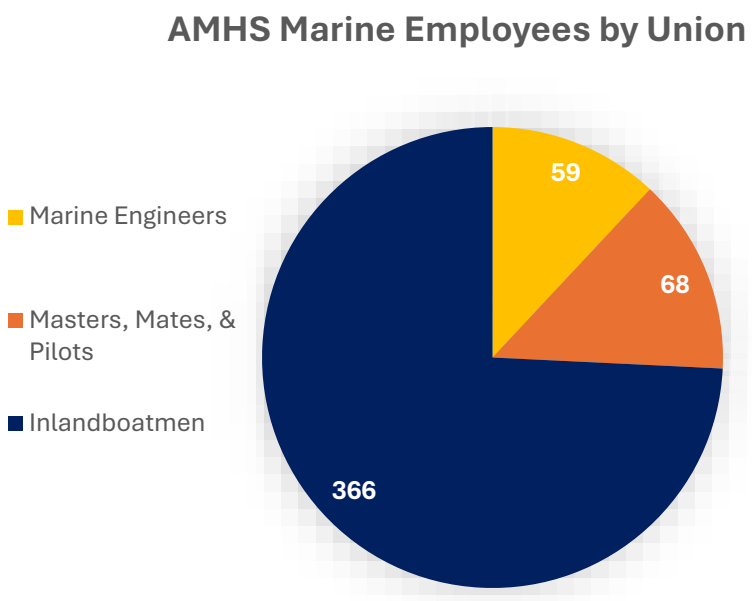

Figure 1: AMHS Vessel Crew by Union as of May 2024

Demographic information for AMHS vessel crew employees was analyzed at the union level, and it was observed that the AMHS workforce shares demographic similarities with the broader U.S. maritime workforce. The gender distribution is similar to that of the maritime industry as a whole, where engineering and deck officers are predominantly men, making up 92.73% and 96.54%, respectively. While there is a greater representation of women in the IBU, only 8.45% represent non-passenger service roles (i.e., Wiper, Junior Engineer, AB, and Ordinary Seaman). Detailed demographic breakdowns of each union by gender are shown in Figure 2.

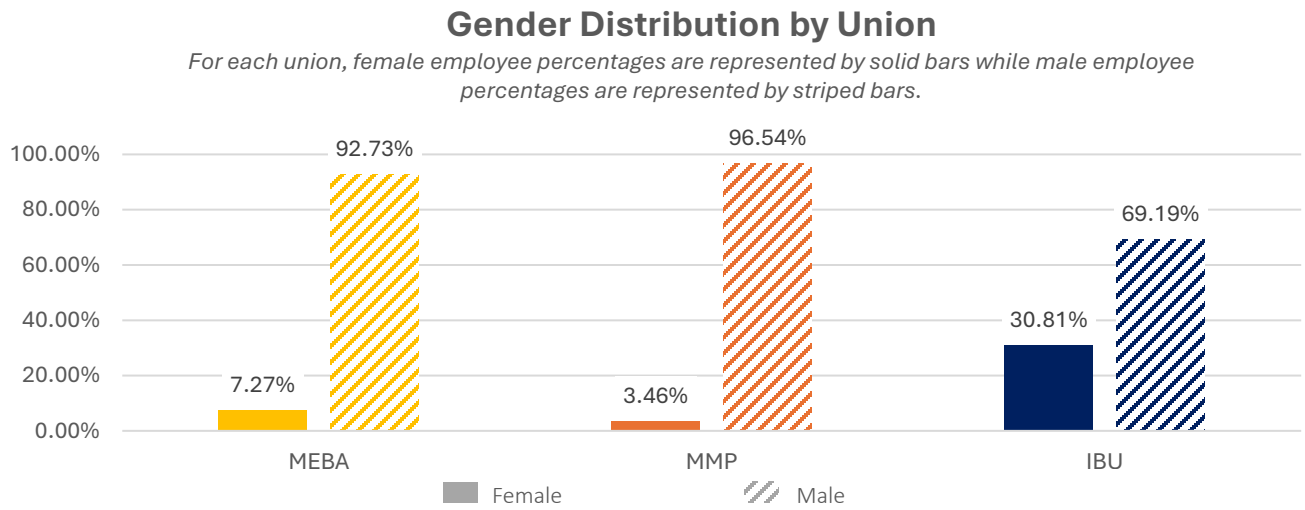

Figure 2: Gender Distribution of AMHS Employees by Union

Similar to the broader U.S. maritime workforce, the AMHS vessel crew workforce is also aging. The age distribution across the unions is illustrated in the figure below. The data reveals that the

[1] Deck Officers (Third Mate through Master) belong to MM&P, while Engineering Officers (Third Assistant Engineer through Chief Engineer) belong to MEBA; all other vessel personnel are a part of the IBU.

majority of deck officers are aged 45 and older, with close to 44% representing deck officers who are 55 and older. For engineering officers, the largest proportion falls within the age range of 45 to 54.

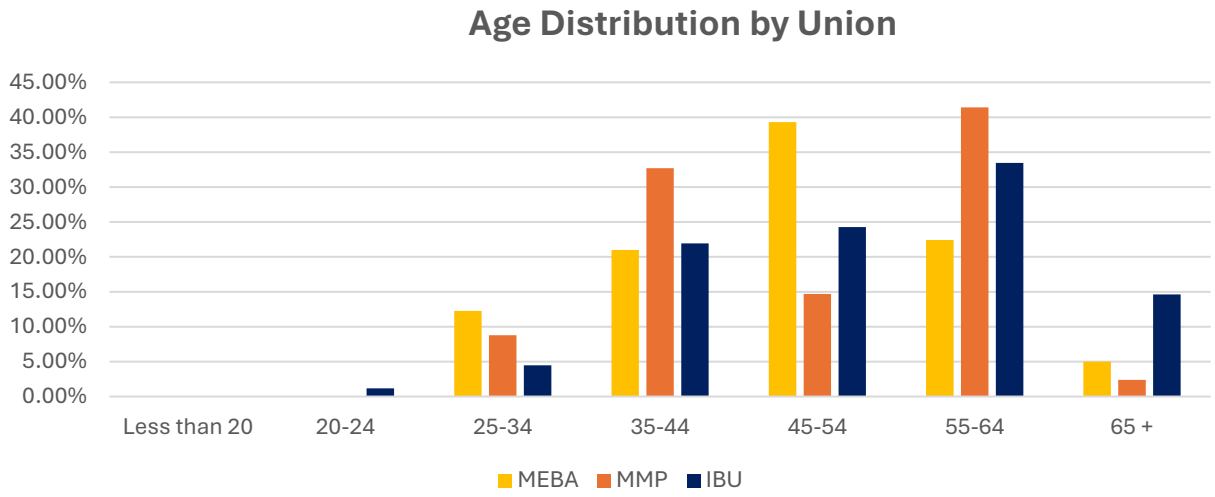

Figure 3: Age Distribution of AMHS Vessel Crew by Union[2]

GEOGRAPHY OF AMHS EMPLOYEES

In 2014, the Alaska Marine Highway System (AMHS) employed 1,017 Alaska residents, making up 95% of its workforce (McDowell Group, Inc., 2016). Employees came from 44 different communities across the state, with 82% from Southeast Alaska, 17% from Southcentral, and 1% from Southwest. Ketchikan and Juneau alone accounted for 60% of the workforce. With 318 employees located in Ketchikan, AMHS was one of the largest employers in Ketchikan.

As of May 2024, employee residence location differs little. As shown in Figure 4, 91% of vessel crew are from Alaska. The second most common state that vessel crew hail from is Washington, making up 4.7% of vessel crew employees.

[2] The data set includes only permanent employees in the Marine Bargaining Units of AMHS, as of May 28, 2024.

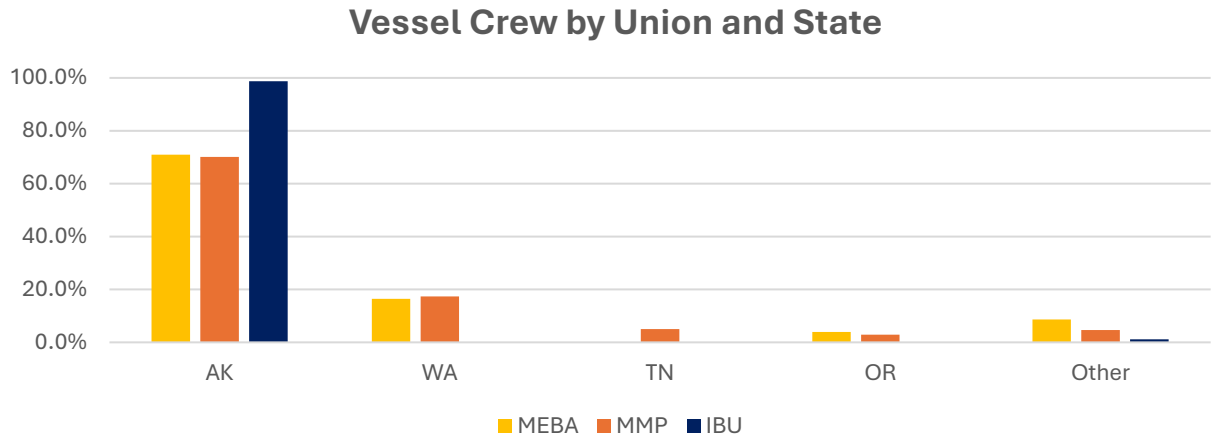

Figure 4: AMHS Vessel Crew by Union and State

NATIONWIDE WORKFORCE CHALLENGES

The maritime industry nationwide faces several significant challenges that threaten its future stability and growth. The COVID-19 pandemic exacerbated the existing workforce shortage.

AMHS experiences many of these same challenges. Workforce initiatives must address these broader trends along with the AMHS-specific challenges.

NATIONWIDE CHALLENGES

- Aging Workforce
- Lack of Diversity
- Shipboard Safety of Mariners
- Resource-Intensive Licensing Requirements
- Mental Health & Wellbeing
- Low Enrollment in Maritime Education
- Technical Advancements and Automation

AMHS-SPECIFIC CHALLENGES

- Remote and Isolated Working Conditions
- Lengthy Rotations
- High Cost of Living
- Competitors
- Aging Vessels
- Cumbersome Licensing Requirements and

Aging Workforce: The maritime workforce has been experiencing a generational shift, with many baby boomers retiring, leading to a significant departure of experienced workers exiting the industry.

Lack of Diversity: The maritime industry faces significant diversity challenges, as it remains predominantly white and male. Efforts to address imbalances include initiatives to promote opportunities for all and support underrepresented groups, but progress is slow. Bridging this gap requires an ongoing commitment to creating equitable opportunities and fostering an inclusive environment within the sector.

Resource-Intensive Licensing Requirements for Entry and Advancement: Entry into the maritime workforce requires specific licenses and certifications, which can be time-consuming and costly to obtain. While some operators will cover some or all expenses, this is not true across the board. Advancement requires sea time. These challenges can deter potential new entrants, posing a

barrier to workforce growth. Streamlining these processes and reducing costs could make maritime careers more accessible.

Low Enrollment in Maritime Education: In addition to the United States Merchant Marine Academy (USMMA), an institution federally funded and operated by MARAD, there are six state maritime academies. These academies provide four-year undergraduate programs, operate as colleges within the state university system, and "include all the instruction, theory, and at-sea training required to become a commissioned officer and Merchant Marine (a U.S. Coast Guard license)" (MARAD, 2024). However, enrollment and graduation rates across the board have been declining, as demonstrated in Figure 5.

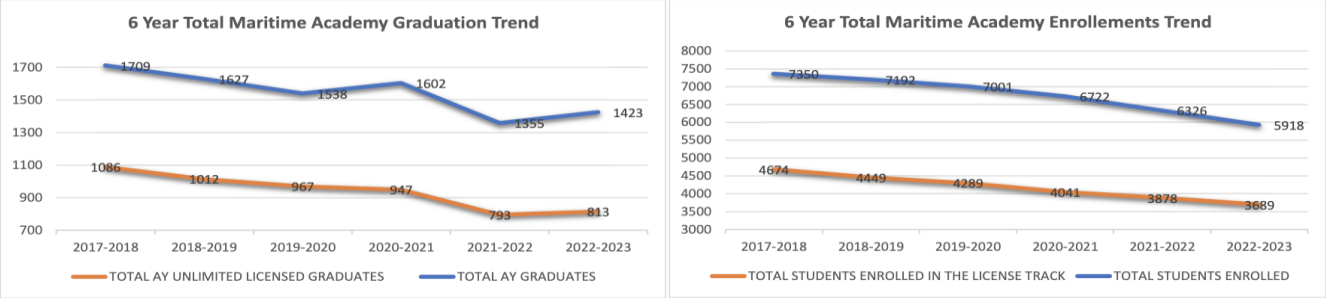

Figure 5: Six-Year Trend of Maritime Academy Graduation and Enrollment (MARAD, Office of Maritime Education and Training, 2023)

Technological Advancements and Automation: While technological advancements and automation promise increased efficiency, they also pose a challenge for the current workforce. Workers need to be retrained and upskilled to handle new technologies. Continuous education and training programs are essential to keeping the workforce updated on technological changes.

Mental Health and Wellbeing: The mental health and well-being of maritime workers have become growing concerns, particularly in light of the COVID-19 pandemic. Extended time at sea, isolation from family and friends, and high-stress environments can negatively impact mental health. Addressing and providing means to communicate with family and friends from aboard the ship is essential along with providing mental health resources.

Shipboard Safety of Mariners: Harassment aboard ships remains a significant issue in the maritime industry, with many crew members facing inappropriate behavior and unwanted advances. The isolated environment of vessels often exacerbates the problem, making it challenging to address and report such incidents effectively and contributing to a culture where harassment can persist unchecked. The U.S. passed the Safe Seafarers Act in December 2023 to make the maritime industry safer aboard U.S.-flagged ships. As a result of this act, several policies have been shared by the U.S. Coast Guard (USCG) to aid in compliance with the Act. The stakes have risen considerably, too: "failure to report a complaint or incident comes with a potential civil penalty of up to $50,000, a significant increase from the previous penalty amount of $5,000" (Pribyl, Skopec, & Kalogjera-Sackellares, 2023).

AMHS-SPECIFIC WORKFORCE CHALLENGES

Due in part to its unique geographic context, AMHS faces several significant challenges impacting its workforce, leading to chronic workforce shortages. In recent years, this has impacted the reliability of service schedules, as AMHS has had to cancel sailings because of a shortage of qualified personnel. This issue predates the COVID-19 pandemic but worsened during the pandemic, leading to more sailing cancellations due to workforce-related issues. As of January 30, 2025, to provide the desired seven vessel schedule with two vessels in layup, AMHS needs to fill 84 vessel crew vacancies. The labor shortages are across all crew departments.

Due to the demanding nature of the work and the remote conditions, high turnover rates are a significant issue for AMHS. A detailed discussion of AMHS workforce challenges follows.

Remote and Isolated Working Conditions: Working in remote areas can be isolating and physically demanding, requiring workers to adapt to extreme weather and challenging environments. These conditions can make the positions less attractive to potential recruits, especially those from out-of-state that are not accustomed to the climate.

Length of Rotations: Mariners for AMHS typically work on two-week rotations, which can be more attractive than a traditional offshore shipping industry schedule whereby a mariner would be gone for months at a time but can mean more time away from home than other nearby ferry operators. This extended time away from home can be a deterrent, negatively impacting family life and making the job less appealing compared to positions where mariners return home daily, such as those offered by Washington State Ferries (WSF). Despite this, the two-week rotation can still be highly appealing to many mariners.

High Cost of Living: The high cost of housing across Alaska, particularly in remote areas, makes attracting and retaining out-of-state workers challenging. Additionally, unlike private shipping companies, AMHS does not cover travel expenses to and from work, increasing the financial burden on employees.

Competitors: AMHS provides competitive pay for licensed officers residing in Alaska but offers lower compensation for out-of-state hires, making it less appealing compared to competitors when attracting mariners from outside the state. Other ferry operators, such as WSF, and many passenger-only ferry operators along the West Coast offer different working schedules and more competitive pay. BC Ferries, while also in the vicinity, requires its employees to be either Canadian citizens or permanent Canadian residents, a factor that generally precludes them from employment with AMHS. Another alternative for vessel crew is the private offshore sector, which, while the rotations may be longer, often offers more competitive pay. Compared to these competitors, AMHS' current salaries for licensed and certified positions are not as competitive. Moreover, current AMHS employees pay their own travel costs to reach work, while AMHS' competitors do not. Travel costs reduce effective take-home pay, further reducing competition.

Aging Vessels: The AMHS fleet is old by commercial standards, and maintaining and operating older marine vessels requires a lot of work. While not as restrictive as offshore work, vessel working conditions can be taxing and impose a high degree of structure. Many positions are critical to the ongoing provision of service, and an unexpected absence or a late-arriving crew member may delay or disrupt service. Employees must work as part of a team or crew and often work in close quarters. Additionally, terminal and deck positions must interact with customers routinely.

Cumbersome Licensing Requirements and Career Progression: AMHS has published a Career Pathways Guidebook[3] that describes not only the positions available on the vessels but also the respective growth pathways and the requirements and documents needed for each position.

Nearly all professional mariner certifications must comply with the "Standards of Training, Certification and Watchkeeping for Seafarers" (STCW) convention. However, U.S. mariners operating exclusively on inland waterways or near the coast on vessels under 200 gross tons are exempt from these requirements. As a result, WSF mariners are not required to obtain STCW certification. Unlike WSF, AMHS must comply with the STCW requirements. For entry-level AMHS deck and engine positions, the minimum STCW endorsements include:

- Proficiency in the Use of Survival Craft
- Basic Training (BT), Formerly Basic Safety Training (BST)
- Security Awareness

To work within any of the vessel departments aboard a vessel, applicants must have a Transportation Workers Identification Card (TWIC). For residents of remote Alaskan areas, they must travel by road, plane, or ferry to one of the twelve TWIC-designated application centers (Figure 6) within Alaska to apply for one. Additionally, sea-time and other training requirements specific to vessels and routes make career advancement often times a slow process. The cumbersome travel and the lengthy career advancement process can deter potential employees who prefer quicker promotion opportunities.

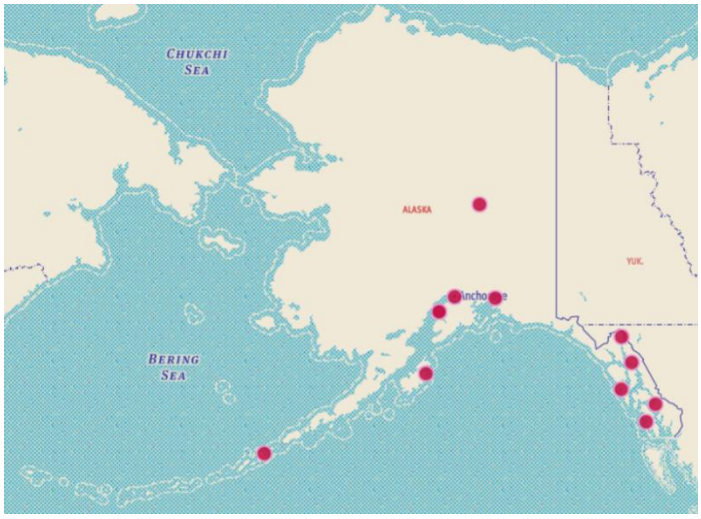

Figure 6: Designated TWIC application centers in Alaska (TSA Travel Tips, 2019)

The challenges associated with advancement opportunities within the vessel department discussed above, as well as the long lead times to full-time

[3] Alaska Marine Highway System, Career Pathways Guidebook: https://www.alaska.edu/fsmi/groups/mosi/Career%20Pathways%20-%20AMHS.pdf

employment for some positions, may disincentivize many potential employees who require more financial certainty and value quicker promotion opportunities.

By addressing these challenges, AMHS can work toward creating a more attractive and sustainable working environment for its employees.

OPERATIONAL CONSIDERATIONS

In addition to the challenges listed above, AMHS faces the following unique operational considerations that require strategic planning and management when addressing workforce issues:

- ***Crew Requirements:*** Due to food service demands and the extended duration of routes, additional crew members are needed.
- ***Long Runs and Logistical Challenges:*** The length of routes and the logistical hurdles of operating in remote areas require careful coordination.
- ***Work Schedules:*** Work schedules, such as two-week rotations, must be maintained to ensure efficient operation and crew well-being.
- ***Relief Crew Coordination:*** Effective coordination of relief crews at key terminals to maintain smooth operations and timely service.

These considerations are critical to maintaining efficient and reliable ferry services in Alaska's challenging environment.

INVENTORY OF CURRENT WORKFORCE INITIATIVES

The maritime industry is implementing various initiatives at both federal and organizational levels to address workforce challenges and enhance diversity, equity, and inclusion.

FEDERAL INITIATIVES

At the federal level, multiple organizations recognize the maritime shortage and are involved in addressing the issue and developing strategies to improve the situation. At the time of MARAD's publication of the Mariner Workforce Strategic Plan (FY 2023 to FY 2027) in August 2023, in the U.S. alone, “the maritime industry employs over 650,000 Americans who serve afloat and ashore, supporting Jones Act domestic cargo movement and international trade. Within the industry, there are about 200,000 U.S. Coast Guard credentialed mariners who possess a U.S. Coast Guard mariner credential” (MARAD, 2023). However, multiple industry segments “are facing shortages, both acute and chronic,” such as ferries. This strategic plan aims to bolster credentialed American mariners' recruitment, training, and retention. It outlines 13 objectives supported by strategies to achieve six primary goals:

- Strengthening workforce development programs
- Supporting maritime education and training institutions
- Improving workforce diversity
- Ensuring the availability of a skilled mariner workforce for national security
- Supporting maritime innovation

- Executing superior policy and stewardship of resources

The plan emphasizes enhancing online and remote learning options, providing grants to maritime academies, and updating curricula to include the latest industry standards and technologies. Additionally, it seeks to implement recruitment campaigns targeting underrepresented groups, develop mentorship programs, and establish diversity and inclusion councils within maritime organizations to drive cultural change.

Several initiatives that MARAD had already undertaken at the time of publication include:

- *Centers of Excellence for Domestic Maritime Workforce Training and Education (CoE):* Program to increase Federal support for institutions involved in mariner training.
- *Investment and Construction of Modern Training Ships:* Program in which U.S.-government-owned training ships used by the State Maritime Academies, which also serve as National Security Multi-Mission Vessels, will replace the legacy fleet at or beyond its service life.
- *"Every Mariner Builds a Respectful Culture" (EMBARC):* Program developed to prevent and address sexual assault and harassment aboard U.S.-flagged merchant vessels. It includes around 30 policies for onboard security and survivor support. MARAD also leverages financial assistance programs to encourage compliance with EMBARC standards, with penalties for non-compliance, including the potential loss of federal funding. While participation is mandated for certain programs, many operators voluntarily adopt EMBARC to help develop future maritime officers. As of April 11th, 2024, "21 commercial operators are enrolled in EMBARC; together, they operate more than 180 vessels" (MARAD, 2024).

ORGANIZATIONAL INITIATIVES

Various nonprofit and corporate organizations across the U.S. are also taking steps to address different facets of promoting inclusivity and diversity within the industry.

Women in Shipping and Trade Association (WISTA) International and WISTA USA: These organizations are working to close the gender gap and expand diversity within the maritime industry. They advocate for ensuring women's proportional income and participation in the labor force, highlighting women's work and achievements, and providing safety and support to women (WISTA International, 2020).

IMO-WISTA Women in Maritime Survey 2021: In 2021, the International Maritime Organization (IMO) and WISTA International conducted a survey "to examine the proportion and distribution of women working in the maritime sector" (IMO, 2021). The survey emphasizes the importance of visibility for achieving a more diverse workforce and calls for women to be prominently represented within the maritime community and in media representations of the sector. This visibility is essential to attract more women to the industry and to foster an inclusive environment. This survey is repeated every three years.

Cultural Change and Recognition Programs: Initiatives like the IMO's gender program, under the slogan "Training-Visibility-Recognition," aim to foster cultural change by providing training opportunities, increasing women's visibility in the industry in both shoreside and sea-going roles,

and recognizing their contributions (IMO, 2024). Similarly, WISTA International's Diversity Handbook offers practical guidance for organizations to implement effective diversity and inclusion practices (WISTA International, 2022).

INITIATIVES BY REGIONAL FERRY OPERATOR

Beyond national or federal level efforts, numerous regional ferry operators are undertaking their own initiatives to address workforce challenges. Washington State Ferries' current workforce initiatives were reviewed to provide context.

WASHINGTON STATE FERRIES (WSF)

WSF implements several initiatives on an ongoing basis to improve recruitment, retention, training, and staff management and create a more diverse and skilled workforce. Relevant initiatives that aim to build a robust and diverse workforce that meet current and future demands included in the 2024 Supplemental budget are also described below.

RECRUITMENT

WSF continues to expand its recruitment and outreach efforts. Funding was provided for the following two programs through the 2024 Supplemental Budget.

- *Double capacity for out-of-state recruitment:* The governor's budget allocates funds to increase the current program's capacity from 10 to 20 training positions (Office of the Governor, 2023).
- *Wiper to Oiler promotion program:* This program increases the number of wiper internship opportunities from 10 to 26. It supports recruitment by offering entry-level wiper positions, on-the-job training for the advancement to the Oiler position, attracting a wider range of skilled workers to address current and future staffing needs.

Other WSF initiatives include additional targeted outreach to tribes and communities, diversifying recruitment methods, and advertising strategies. High school recruitment initiatives include on-vessel career days, engagement with the Sea Potential program, and active maritime academy recruitment.

RETENTION

To enhance employee retention, WSF focuses on employee recognition and support. Initiatives include the 'Ferry Tales' employee newsletter, spotlight videos, and public recognition in newsletters. Additionally, the 'Customer Code of Conduct' aims to provide a supportive work environment for all employees.

The 2024 Supplemental Budget allocated additional funding to the AB to Mate development program. This program aims to support qualified internal unlicensed deck crew members, such as Able-bodied Seamen (ABs), in obtaining licenses as mates. With the new funding, the program will expand from 24 to 72 available spots.

STAFFING AND WORKFORCE AGREEMENTS

To ensure effectiveness, WSF reviews and analyzes its collective bargaining agreements and workforce impacts, tracks community workforce agreements, and monitors workforce development metrics through regular status reports.

TRAINING AND EDUCATIONAL PARTNERSHIPS

WSF has established partnerships with high schools through the Core Plus Maritime Partnership and with vocational academies such as Seattle Central Community College and Seattle Maritime Academy. These partnerships aim to recruit students from community and technical schools. Internal training programs, such as the Wiper Oiler Training, are also available.

The Career Opportunity Maritime Preparation and Support Services (COMPASS) program was developed in partnership with the Seattle Jobs Initiative that targets the recruitment of women, minorities, and other unrepresented individuals and prepares them for entry-level positions within WSF (McIntosh, 2023). The program offers "maritime trades training and preparation for inland waterways trades and support services to obtain necessary documents and USCG certifications to recruit, serve, train, and support the same target populations the Pre-Apprenticeship and Support Services (PASS) programs are designed to serve" (WSDOT, 2022).

WSF collaborates with the Seattle Maritime Academy (SMA), the region's sole publicly funded post-secondary maritime school, to enhance training and recruitment. This partnership grants WSF access to SMA's facilities and simulator equipment and supports joint recruitment initiatives that benefit both organizations (WSDOT, 2023).

In response to WSF's shortage of deck officers, WSF partnered with the Maritime Institute of Technology and Graduate Studies (MITAGS) in 2023 to offer a no-cost Maritime Apprenticeship Program (MAP), which offers a path to becoming a Mate in two years, fast-tracking career progression to address workforce shortages (MITAGS, 2023). The initial cohort was open to ten individuals with the 2024 WSF supplementary budget expanding the cohort size to 12 and including funding for a third cohort.

CURRENT AMHS WORKFORCE INITIATIVES

The Alaska Department of Transportation (Alaska DOT&PF) Workforce Plan 2030[4] outlines several strategies to enhance recruitment and retention for AMHS. Strategies are focused on one of five main focus areas but work together to support a holistic approach. These initiative areas are listed below and are also summarized in the callout box on the right side of this page.

- Growth and Development of the Future Workforce
- Recruitment
- Retention
- Training and Educational Partnerships
- Internal Organization Structures

Current AMHS workforce efforts within these focus areas and potential future actions to further advance them are detailed in the sections below.

GROWTH AND DEVELOPMENT OF THE FUTURE WORKFORCE

A long-term goal identified by AMHS is to develop and grow the future maritime workforce in Alaska. AMHS intends to do this through **increased opportunities for scholarships,** along with efforts to **develop a pipeline of Alaskan students entering the Alaska Marine Highway System** with the capability to advance throughout the rankings. A final component of this focus area is AMHS' efforts to **conduct youth engagement and outreach.**

INCREASED OPPORTUNITIES FOR SCHOLARSHIP

To support youth interest in maritime careers, AMHS can work to provide scholarships for maritime education.

POTENTIAL FUTURE ACTIONS:

Moving forward, AMHS can seek scholarship funding to support Alaska school graduates' attendance in maritime technical schools and academies. Example scholarships include:

- Scholarships for Alaskan students who want to attend maritime academies in the continental United States.
- 'Apprentice to Mate' scholarship programs.

CURRENT AMHS WORKFORCE INITIATIVES

GROWTH AND DEVELOPMENT
Focuses on engaging with youth and ***building a pipeline of future workers*** interested in maritime careers.

RECRUITMENT
Focuses on ***increasing hiring*** by expanding job advertising and providing benefits to entice workers.

RETENTION
Focuses on ***keeping current employees*** by improving employee satisfaction, recognition, and support.

TRAINING AND EDUCATION PARTNERSHIPS
Focuses on ***supporting internal career growth*** by investing in employee training opportunities.

INTERNAL ORGANIZATION STUCTURES
Focuses on ***increasing organizational capacity to meet workforce needs*** by updating staffing structure and streamlining internal processes.

[4] Alaska DOT&PF, https://alaskacrossindustryplan.org/2030/web/mission

- ‘Able Seafarer to Mate’ scholarship programs.
- Engineering Officer scholarship programs and career development aid.

DEVELOP A PIPELINE OF ALASKAN STUDENTS ENTERING THE ALASKA MARINE HIGHWAY SYSTEM

By attracting local candidates and providing the opportunity for advancement, AMHS will be able to draw on Alaska residents to fill licensed positions and contribute to the local economy of coastal communities. To accomplish this, AMHS is strategically implementing initiatives and partnerships within Alaska to provide youth education, including:

- Increasing attendance at Alaskan high school career days.
- Partnering with and increasing advertising to Alaskan high school guidance counselors.
- Memorandum of Understanding (MOU) with tribes and communities for development of their students.
- Working with students to assist with acquiring the required credentials before graduation so they are ready to go right to work.
- Providing in-state travel to allow students to continue living in their communities.
- Continuing and expanding partnerships with Alaska Vocational Technical Center (AVTEC) and University of Alaska Southeast (UAS) to provide training for USCG-required certifications for advancement.
- Enhancing engagement with maritime academics including partnering with Alaska Department of Labor and Workforce Development (DOLWD) to develop a program introducing the marine industry to Alaska high school coastal communities as a career option.

Current strategies that AMHS employs to promote the unique benefits of working with AMHS to maritime academy students include:

- Highlighting the regular two-week on and two-week off rotation, which allows more time at home compared to the months-long rotations that are common in the industry.
- Emphasizing increased pilotage opportunities for initial hires from maritime academies.
- Showcasing the natural beauty of Alaska and the community benefits of living in the state through "day-in-the-life" promotions.

POTENTIAL FUTURE ACTIONS:

By identifying the gaps in training and advancement opportunities for internal candidates, AMHS will be able to draw from a pipeline of local candidates. For these candidates to advance through ranks, eventually filling advanced positions within AMHS, increased opportunities for scholarships and training programs will be necessary.

AMHS has identified the following future initiatives for furthering this goal:

- Develop ‘Industry Career Cohort’ programs in Fairbanks and Anchorage.
- Advance and continue partnerships with Alaska Maritime Programs and out-of-state Maritime Training Centers.

CONDUCT YOUTH ENGAGEMENT AND OUTREACH

AMHS seeks to publicize maritime careers by having career opportunity information posted onboard and by hosting onboard education experiences for students to encourage them to explore maritime futures such as organizing vessel tour days to introduce high school (or younger) students to maritime careers.

RECRUITMENT

A series of initiatives are being implemented to increase the efficacy of AMHS recruitment. Recruitment initiatives aim to **grow and diversify methods of job advertisement, explore additional compensation and benefits, provide referral bonuses**, and **develop enhanced out-of-state recruitment materials** to entice candidates.

GROW AND DIVERSIFY JOB ADVERTISEMENT

Current initiatives are intended to spread the word about AMHS to as many people as possible and advertise the benefits of being part of the AMHS fleet. AMHS recruiters emphasize the beauty of Alaska and the opportunity to pursue a lifetime career within the system. These initiatives include:

- Increasing AMHS attendance at job fairs in and outside of Alaska.
- Creating a recruitment video for website and is currently diversifying and increasing advertisement methods for online recruitment in other ways such as:
  - Utilizing specific online targeting for ports-of-call in social media advertising.
  - Increasing community social media page participation for recruitment advertising.
  - Advertising AMHS job opportunities in print Alaska coastal publications.
  - Utilizing outside contracted hiring platforms to attract additional applicants (PeopleAK).

POTENTIAL FUTURE ACTIONS:

To further expand job advertising, AMHS can explore opportunities to reach new segments of the population and diversify audiences for outreach efforts. Strategies could be to:

- Engage with sports teams and other local organizations that use the ferry system to promote job opportunities.
- Engage with veterans and military groups.

EXPLORE ADDITIONAL COMPENSATION AND BENEFITS

AMHS currently provides benefits to its employees with prime examples including insurance, and a regular two-week-on and two-week-off rotation. However, AMHS aims to provide additional incentives to attract new employees.

AMHS is also currently expanding a program called ***Hire Alaska***, which is aimed at providing incentives to attract and retain applicants from Alaskan communities. A key component of ***Hire Alaska*** is a paid travel program for in-state employees that will help offset the high costs some current and potential future employees face in getting to work.

POTENTIAL FUTURE ACTIONS:

AMHS could explore the following measures to further increase benefits and entice new hires.

- Explore additional compensation and benefits such as wage increases and providing travel pay for out-of-state employees.

PROVIDE REFERRAL BONUSES

To increase applications and hirings, AMHS has undertaken an initiative to provide bonuses to current employees who have referred new hires to AMHS.

DEVELOP ENHANCED OUT-OF-STATE RECRUITMENT MATERIALS

To increase applications, AMHS has undertaken an initiative to update the application process for key positions. To further entice out-of-state employees, AMHS conducts the following:

- Showcasing the natural beauty of Alaska and the community benefits of living in the state through "day-in-the-life" promotions.
- Highlighting the regular two-week on and two-week off rotation, which allows more time at home compared to the months-long rotations used by commercial industry standards.

RETENTION

Employee retention is essential to AMHS' health. However, challenges inherent to the system can make crew retention difficult. AMHS is putting effort into addressing these challenges and improving retention. Current retention efforts primarily serve to continue to explore ways to increase employee satisfaction, though AMHS also aims to bolster retention through the following areas: emphasize employee recognition and support, support advancement opportunities, and provide compensation.

CONTINUE TO EXPLORE WAYS TO INCREASE EMPLOYEE SATISFACTION

Employee satisfaction is a key goal for AMHS. Many current initiatives to increase employee satisfaction focus on collecting and using employee feedback to make improvements. AMHS works to ensure employees' voices are heard and that the organization responds effectively through the following methods:

- Gathering employee feedback to inform crew-related policies and practices.
- Evaluating the satisfaction of crew members and identifying reasons for voluntary separation.
- Continuing and expanding upon existing mechanisms of gathering employee feedback.
- Administering programs based on employee feedback.

AMHS is also aware that employee schedules are a key factor in worker satisfaction. Currently, AMHS is addressing staffing needs in dispatch and fleet operations to determine a scheduling configuration that maximizes worker satisfaction and service efficiency.

One key existing AMHS program is the Wiper-to-Oiler Program which allows entry-level workers to start directly in deck and engineering departments, increasing retention by offering more desirable career paths.

EMPHASIZE EMPLOYEE RECOGNITION AND SUPPORT

Recognizing employees for their contributions shows how valuable they are to AMHS and creates a more positive work culture that will help them to retain more employees. AMHS also aims to provide additional support to employees, helping to address any employee challenges before they occur or before they cause employees to seek alternative opportunities.

POTENTIAL FUTURE ACTIONS:

To meet its employee recognition and support goals, AMHS has identified the following strategies to pursue:

- Cultivate a positive workspace culture to attract potential employees and increase satisfaction for current employees.
- Communicate with management structures and systems for employee feedback.
- Increase programs within AMHS and foster an employee culture of inclusion.
- Improve working conditions.
- Improve workplace culture.

SUPPORT ADVANCEMENT OPPORTUNITIES

AMHS has been supporting employee advancement through an ongoing initiative to document career pathways outlining clear steps to career goals. This clear 'Pathways to Progression' framework illustrates licensed, skilled positions within AMHS and requirements for prospective and current employees for advancement. More detailed information on career pathways provides guidance and direction, supporting employees in identifying and successfully achieving their goals.

POTENTIAL FUTURE ACTIONS:

To further support employee advancement, AMHS aims to provide additional mentorship opportunities.

PROVIDE COMPENSATION

Current AMHS salaries for licensed and certified positions are not as competitive as other maritime jobs on the market.

POTENTIAL FUTURE ACTIONS:

In the future, AMHS could explore potential alterations to its current compensation structure.

TRAINING AND EDUCATIONAL PARTNERSHIPS

A strong training program not only acts as a career attractant to prospective applicants but is also necessary to ensure that current employees have the resources to progress to higher roles, which are historically difficult positions to fill. It is important to note that many of the efforts initiated today will be progressively more fruitful in upcoming years as greater numbers of crew members progress through the system and obtain higher certification and licensure. AMHS' workforce initiatives in this area seek to provide additional opportunities for training programs, invest in employee safety training, and pursue additional funding to support career growth for employees and potential employees.

PROVIDE ADDITIONAL OPPORTUNITIES FOR TRAINING PROGRAMS

AMHS sponsors current employee training to provide career advancement opportunities and pathways to progression within AMHS and is currently working on the following strategies:

- Advancing and continuing partnerships with Alaska Maritime Programs and out-of-state Maritime Training Centers.
- Providing aid to candidates in procuring maritime documentation.
- Continuing and expanding employer-paid training opportunities to provide advancement within AMHS.
- Continuing employer-paid tuition and wage costs for 'Minimum Qualifications' training.
- Evaluating the feasibility of expanding employer-paid training courses to current employees to include wage costs during training course durations to encourage participation in advanced training and licensing development.
- Culinary training for stewards.

INVEST IN EMPLOYEE SAFETY TRAINING

AMHS safety-specific training initiatives include:

- New hire orientation and new hire training.
- Internal training and employee progression.
- Annual crew safety conferences.
- Annual terminal managers safety meeting.
- Implement a new incident reporting process.

POTENTIAL FUTURE ACTIONS:

AMHS exploration of additional safety training initiatives in the future could include:

- Develop training to educate crew and staff on root cause analysis, covering instances of incidents, failures, spills, and why they happened.
- Implement a Wheelhouse Assessment Plan.

PURSUE ADDITIONAL FUNDING

AMHS plans to develop partnerships with training institutions and establish a comprehensive funding strategy to bridge licensing and career progression gaps.

POTENTIAL FUTURE ACTIONS:

Future AMHS funding programs will likely include:

- ***Apprenticeship Partnerships:*** Comparable programs offer students scholarships to attend courses and gain the necessary sea-time for licensing. These programs allow entry-level mariners a pathway to licensed deck and engine room positions.
- ***AB to Mate Program:*** Comparable programs offer students with existing sea-time scholarship opportunities to be paid regular wages and cover tuition for necessary courses for career advancement from AB to Third-Mate license ratings.
- ***Engineering Advancement Program:*** Comparable programs in other operating systems offer students with existing sea-time scholarship opportunities to be paid regular wages

and cover tuition for necessary courses for career advancement in engine room licensing for career progression.

These proposed initiatives aim to ensure AMHS employees have clear and supported professional development and career growth pathways.

INTERNAL ORGANIZATION STRUCTURES

Improving internal structures can improve efficiency and AMHS internal capacity to monitor and update workforce items. AMHS has identified three key pathways for improvement in this focus area: **streamline internal processes, add dedicated positions and staff committees**, and **staff augmentation.**

STREAMLINE INTERNAL PROCESSES

AMHS is focused on improving the onboarding process to enhance efficiency and effectiveness and is currently undertaking the following strategies:

- Assessing the current onboarding approach to identify opportunities for increased efficiency and establish clear standards of efficacy.
- Modifying the current onboarding process to allow mariners to be placed into departments that match their interests, technical skills, and qualifications.
- Streamlining the application process for key positions.

POTENTIAL FUTURE ACTIONS:

Additional actions could be taken to further streamline onboarding, particularly for residents of rural Alaskan communities. AMHS intends to explore the following strategies in the future:

- Implement proactive pre-employment outreach to offer opportunities for Alaska residents to obtain necessary hiring documents, reducing wait times for onboarding.
- Continuous improvement in data collection on recruitment efforts and effectiveness of strategies. Identify and track reasons for schedule changes to identify future needs and actions.

ADD DEDICATED POSITIONS AND STAFF COMMITTEES

AMHS recognizes that a strong workforce is essential to its success and is committed to enhancing workforce development through dedicated personnel and strategic organizational changes. To support this commitment, AMHS has established and filled a dedicated recruitment coordinator position to lead recruitment initiatives. Additionally, AMHS has formed committees on the following topics:

- Management of Change.
- Quality Steering.

STAFF AUGMENTATION

AMHS aims to support departments when understaffed to reduce service delays or delays in key project milestones. AMHS is currently exploring the following initiatives to support staff augmentation.

- Instant expendability to contracted professionals when internal staffing is inadequate.
- Add a procurement position for AMHS.
- Move IT personnel back into AMHS.
- Seek additional resources for management financial reporting.
- Align Labor Relations with the AMHS business.

CONCLUSION

AMHS faces several key challenges, including workforce shortages, high turnover rates, lengthy rotations, high living costs, competition from other ferry systems, and the complexities of operating an aging fleet. Addressing these issues requires a multifaceted approach:

- Expanding recruitment outreach.
- Increasing employee retention.
- Streamlining onboarding processes.
- Developing robust training and educational partnerships.

Strategic investments in workforce development are crucial for ensuring the long-term sustainability of AMHS. By focusing on these areas, AMHS aims to build a resilient workforce capable of meeting future demands and ensure continuity of essential transportation services across Alaska. New vessel investment will also serve to attract new labor and provide advancement and training opportunities for employees.

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APPENDIX G1

FINANCIAL BACKGROUND AND FUTURE STRATEGIES

To: Alaska Marine Highway System (AMHS)
From: McKinley Research Group
Date: May 2025
Subject: AMHS Financial History and Funding Strategies
Version: 4.0 (New)

PURPOSE

This memo describes historical Alaska Marine Highway System (AMHS) operating and capital costs and system revenue sources between FY2014 and FY2023. This financial data provides a basis for describing funding sources to be used to fund capital and operations costs associated with projects as outlined in the AMHS 2045 Long-Range Plan (LRP).

AMHS FINANCIAL HISTORY

OPERATING EXPENDITURES

In FY2023, AMHS system-wide operating expenditures totaled $149.3 million, including all vessel operations, terminal operations, and administrative and overhead costs.

Labor costs are the most significant single operating cost for AMHS; in FY2023, personnel costs totaled about $100 million, 70% of the total operating budget.[1] These costs are significantly influenced by the functional labor requirements of operating the service, as well as several labor union agreements.

Marine vessel fuel costs are another significant component of AMHS' operating expenditures. The system spent about $20.4 million on vessel fuel in FY2023, representing 16% of total operating costs.[2]

These cost drivers are reflected in the relationship between operating expenditures and service levels across the system. As outlined in the chart below, total operating expenditures have declined over the last decade, mirroring the decline in AMHS port calls.

Figure 1 shows total systemwide annual operating expenditures and annual port calls from FY2014 through FY2023.

[1] Labor costs based on State of Alaska, Office of Management and Budget, FY2023 Management Plan budgeted costs.
[2] Alaska Marine Highway Fund Annual Financial Report FY2023.

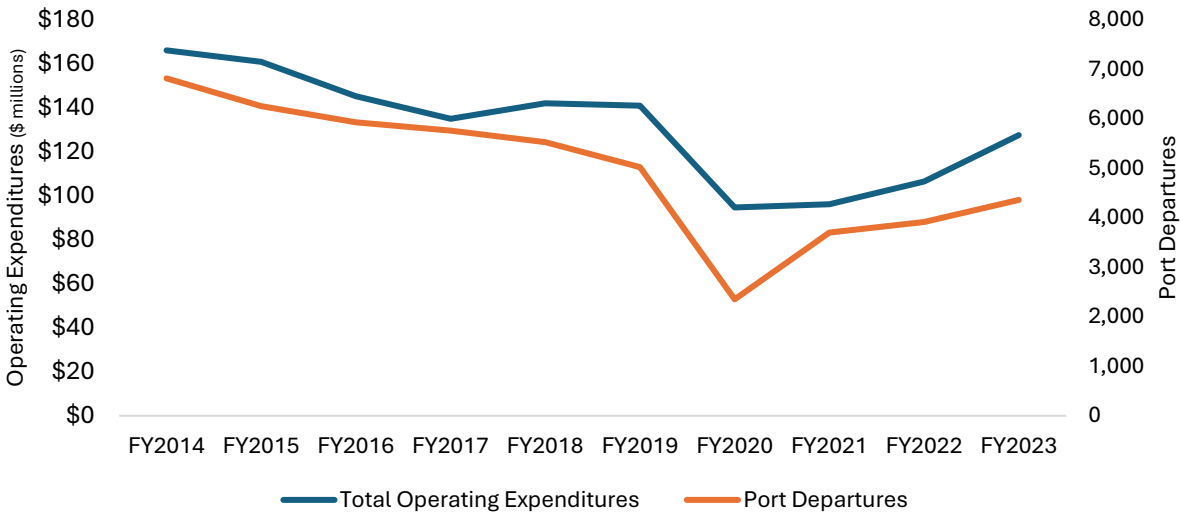

Figure 1: AMHS Total Operating Expenditures and Port Calls, FY2014-FY2023
Source: Alaska Marine Highway System

CAPITAL EXPENDITURES

Capital expenditures to support AMHS service are identified for vessels and terminals. Vessel capital costs account for overhaul costs of existing vessels, capital improvement projects to upgrade existing vessels, and design and construction of new vessels. Terminal capital costs include design, permitting and construction costs related to terminal engineering improvement or large maintenance projects. Vessel and terminal capital projects can vary significantly each year based on system needs. Between FY2014 and FY2024, AMHS-related capital expenditures totaled about $562.3 million.

Annual State of Alaska budget appropriations differ from actual expenditures as many vessel construction or significant terminal or vessel upgrades projects require a construction period beyond a single fiscal year. Between FY2014 and FY2023, AMHS-related capital appropriations totaled about $650.5 million. Annual appropriations required to fund capitalized vessel overhaul and capitalized terminal maintenance accounted for about $144.4 million (22%) of all appropriations, about $15-$20 million each year over the last decade. The remaining $506.1 million in funding was appropriated for terminal and dock improvement projects, vessel construction or refurbishment, fleet condition surveys, and other projects not included in annual overhaul and terminal maintenance. Total appropriations were highest in FY2018 due to the appropriations of $244 million to construction a new ocean-going vessel to replace the *Tustumena*.

Figure 2 shows total annual AMHS-related capital appropriations from FY2014 through FY2023.

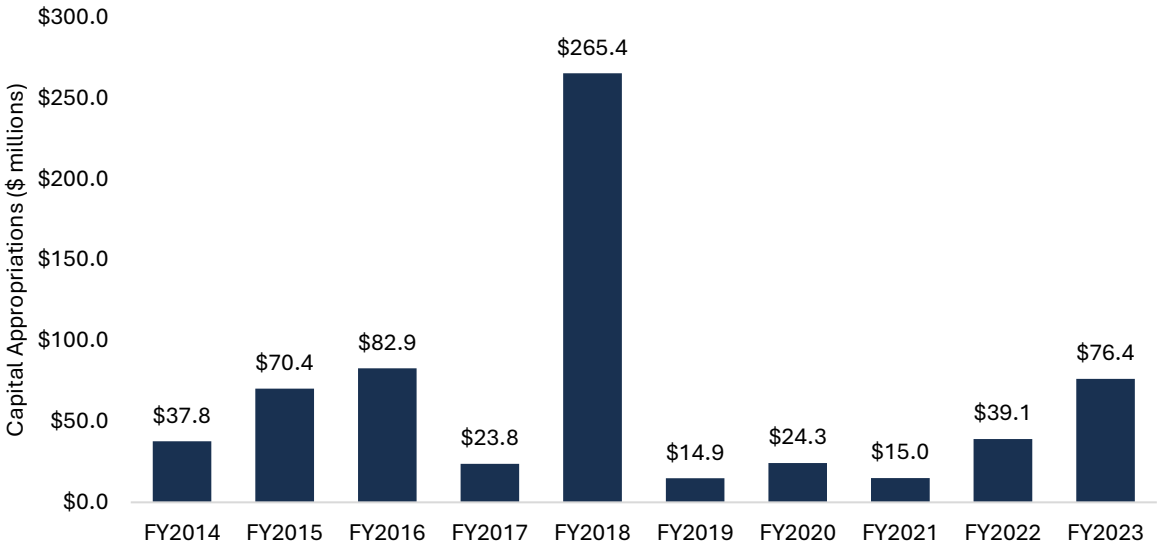

Figure 2: AMHS Total Capital Appropriations, FY2014-FY2023

Source: Alaska Office of Management and Budget and Alaska Department of Transportation and Public Facilities

REVENUE SOURCES

The following sections describe the primary AMHS operating and capital revenue sources. Figure 3 illustrates AMHS operating revenue by source between FY2014 and FY2023.

Within this timeframe, FY2014 and FY2021, State of Alaska appropriations from the General Fund and other state unrestricted revenue accounted for about two-thirds (67%) of AMHS operating funding, with AMHS operating revenue accounting for most other funding. In FY2022 and FY2023, federal funding sources from new, limited time federal programs authorized through the Infrastructure Investment and Jobs Act (IIJA) contributed significantly to AMHS operating revenue. The funding sources described below include revenue and appropriations to the AMHS Revenue Fund as published in the AMHS Statement of Revenues, Expenditures, and Changes in Fund Balance.

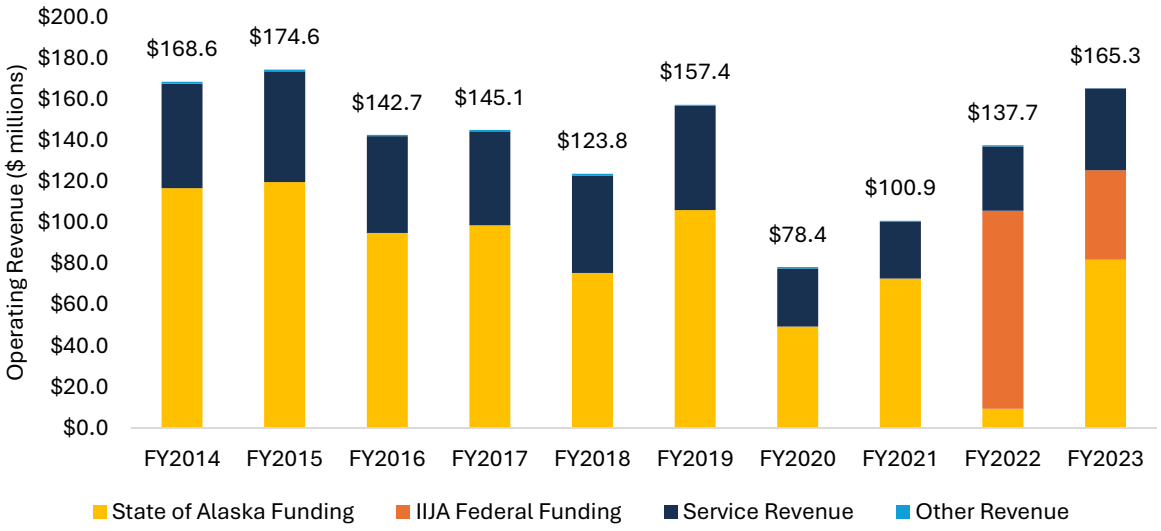

Figure 3: AMHS Operating Revenue Sources, FY2014-FY2023

Source: Alaska Marine Highway System

Note: State of Alaska Funding based on General Fund and other state funding deposited into the AMHS Revenue Fund.

Annual AMHS-related capital appropriations can vary significantly based on the type of projects required. Figure 4 illustrates AMHS capital appropriations by source between FY2014 and FY2023. Federal appropriations accounted for about two-thirds (68%) of AMHS-related capital appropriations over the last decade, with the State of Alaska appropriations accounting for about one-third (32%). Between FY2014 and FY2023, appropriations were highest in FY2018 due to significant federal appropriation for the *Tustumena* replacement project.

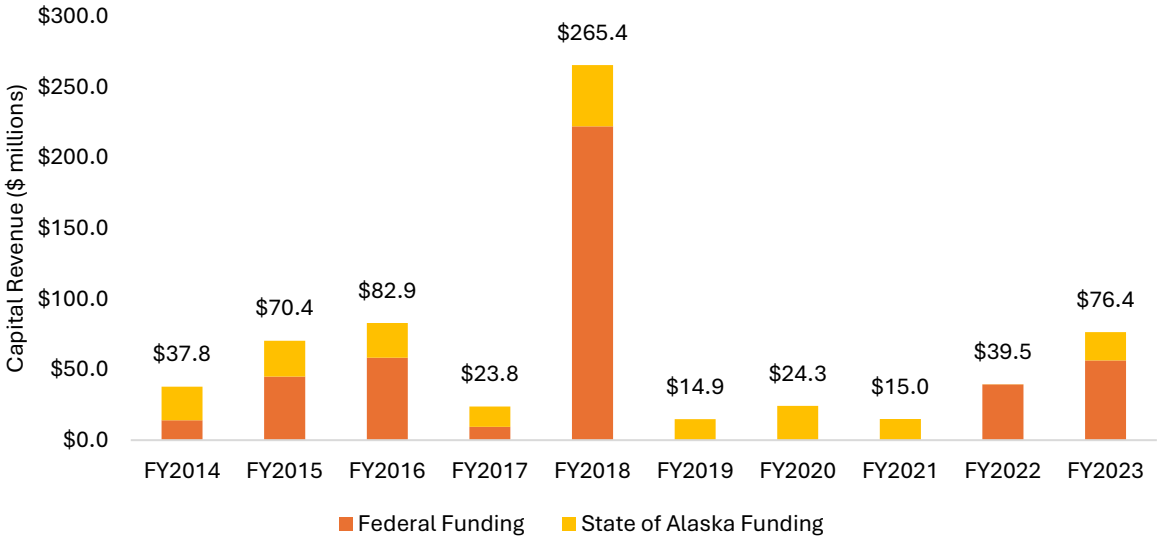

Figure 4. AMHS Capital Revenue Sources, FY2014-FY2023

Source: Alaska Office of Management and Budget and Alaska Department of Transportation and Public Facilities

AMHS SERVICE REVENUE

The AMHS system generates operating revenue through passenger and vehicle ticket sales, staterooms, and other passenger services. In FY2023, AMHS generated $39.7 million in operating revenue.[3] Ticket sales routinely account for more than 80% of system-wide operating revenue, followed by stateroom sales (about 10% of revenue). Passenger service sales including food service, pet fees, and others accounted for 7.5% of revenue in FY2023.

Service revenue generated by AMHS is deposited into the AMHS Revenue Fund, the proceeds of which are considered unrestricted general revenue subject to appropriation by the Alaska Legislature. The Alaska Legislature has historically appropriated revenue generated by AMHS service to pay for AMHS operating costs.

As with system operating expenditures, the level of AMHS operating revenue is highly related to service levels and the number of ticketed passengers. As outlined in the chart below, total operating revenues have declined over the last decade along with the number of port calls and other service changes. Revenue and expenditures declined most significantly in FY2020 and FY2021 amid service changes, pricing changes, and travel changes related to measures intended to minimize the spread of COVID-19. System operating revenue is also highly related to passenger and vehicle fare prices. Fare prices are updated infrequently, and AMHS has not adopted a formulaic approach to these increases.

Figure 5 illustrates the total AMHS systemwide operating revenue and annual port call departures between FY2014 and FY2023.

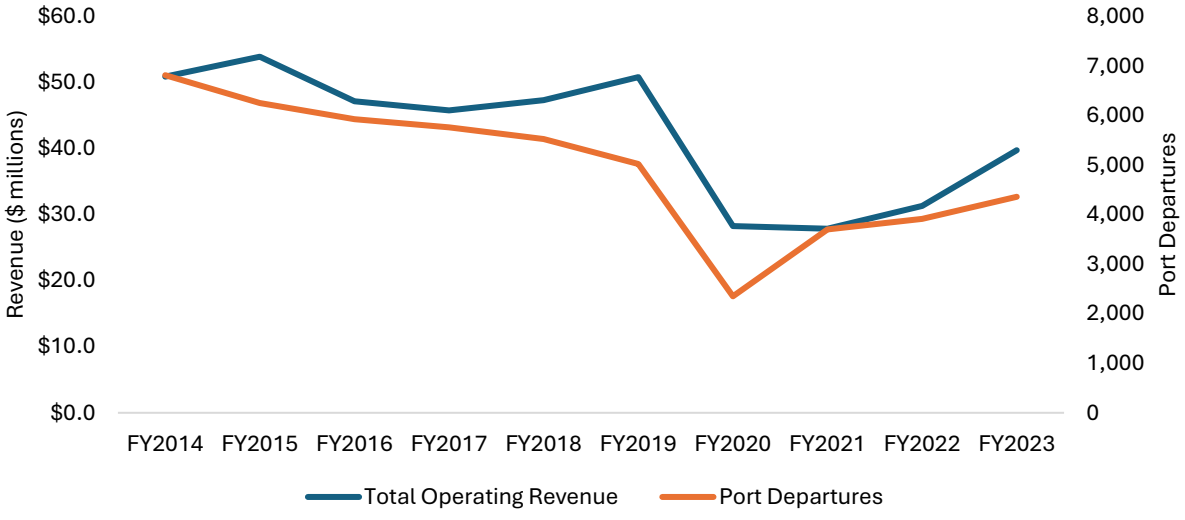

Figure 5: AMHS Total Operating Revenue and Port Calls, FY2014-FY2023
Source: Alaska Marine Highway System

[3] Ibid.

Known as the farebox recovery rate, the proportion of operating revenues to operating expenses is a standard financial measurement for ferry systems. AMHS' farebox recovery rate averaged 31% between FY2014 and FY2023.[4] Operating revenues accounted for 31% of operating expenditures on average, leaving the funding gap to provide this service to other means, as outlined below.

STATE OF ALASKA FUNDING

The State of Alaska has historically funded AMHS operating and capital expenditures through appropriation of state general funds and other unrestricted state revenues.

STATE OPERATING FUNDING

Due to the disparity between operating revenues and operating expenditures, AMHS requires significant public funding to remain in operation. In addition to appropriating revenue from the AMHS Revenue Fund to fund the system's operating expenditures, the Alaska Legislature has also funded AMHS over the last ten years through appropriation of state general funds, Motor Fuel tax receipts, the state's Constitutional Budget Reserve (CBR), and other sources.

In FY2023, the Alaska Legislature appropriated $82.0 million to fund AMHS, including $78.4 million in general funds and $3.6 million in Motor Fuel tax receipts.[5] The level of state funding appropriated for AMHS operations has fluctuated over the last decade based on system expenditures. The decline in the State of Alaska funding appropriated to pay for AMHS expenditures in FY2018 coincided with service level reductions across the system designed to reduce costs. Reduced state appropriations in FY2020 reflect a lower gap between AMHS operating expenditures and service revenue due to the impact of the COVID-19 pandemic on AMHS service.

State AMHS operations funding from the general fund was significantly reduced in FY2022 due to federal operations funding appropriated to the AMHS Revenue Fund from the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) passed in 2021, described in the next section.

Figure 6 shows State of Alaska funding appropriated to AMHS to pay for operational expenditures between FY2014 and FY2023.

[4] Based on operating revenue and expenditures as reported in AMHS Annual Reports.
[5] Alaska Marine Highway Fund Annual Financial Report FY2023.

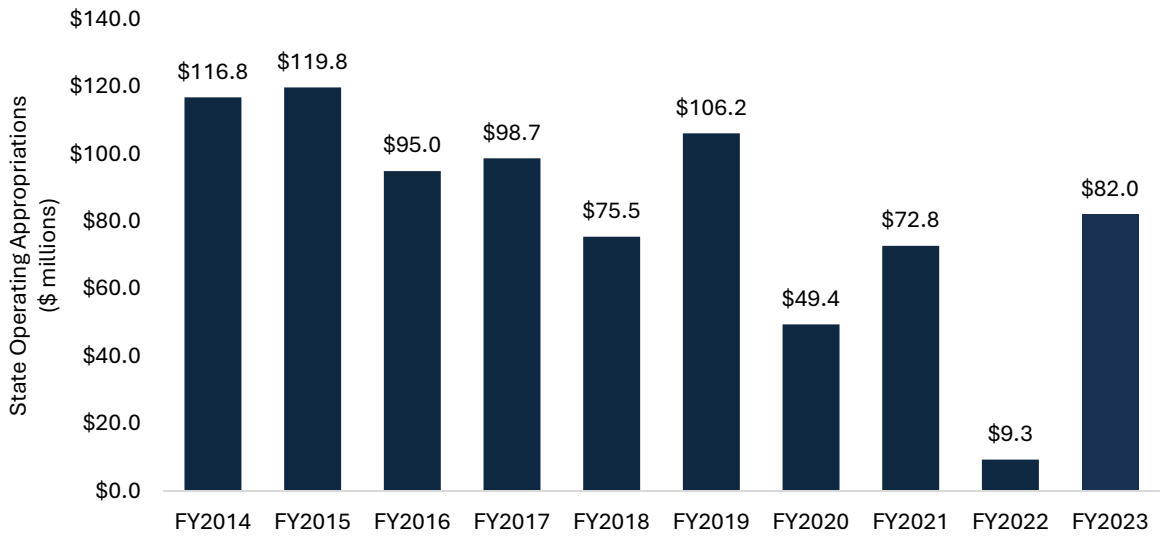

Figure 6: State of Alaska Funding Appropriated to AMHS Operations, FY2014-FY2023
Source: Alaska Marine Highway System

STATE CAPITAL FUNDING

Historically, the State of Alaska appropriated capital funds to pay for capitalized vessel overhaul and capitalized terminal projects, and to provide required match funding to access federal capital funding sources.

Between FY2014 and FY2021, State appropriations to fund capitalized vessel overhaul and terminal maintenance totaled $13.7 million annually. Federal appropriations available from new, limited time federal programs were used to fund capitalized vessel overhaul and terminal maintenance in FY2022, with the State again appropriating State funds for overhaul and terminal maintenance in FY2023.

Additional State appropriations to fund AMHS-related capital projects totaled about $76.4 million between FY2014-FY2023. These appropriations provided match-funding required to access federal grants for projects such as vessel system upgrades, major ferry terminal improvements, final completion of the Alaska Class ferry project, and *Tustumena* vessel replacement.

Figure 7 shows State of Alaska funding appropriated to AMHS capital projects between FY2014 and FY2023.

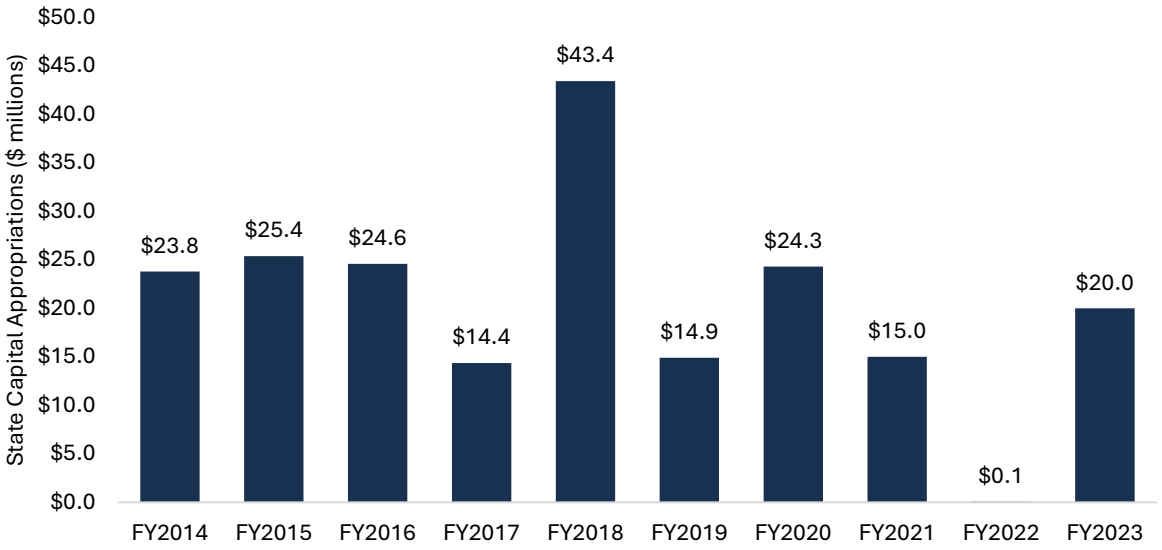

Figure 7: State of Alaska Funding Appropriated to AMHS Capital Projects, FY2014-FY2023
Source: Alaska Office of Management and Budget and Alaska Department of Transportation and Public Facilities

FEDERAL FUNDING

Federal funding is allocated to AMHS through two primary sources within the U.S. Department of Transportation - the Federal Highway Administration and the Federal Transit Administration. Historically, capital projects were eligible for funding through these federal sources. However, passage of the 2021 IIJA – sometimes referred to as the Bipartisan Infrastructure LAW (BIL) – created new funding programs and amended an existing program to allow federal funding to be used to fund public ferry operations. The following sections describe the primary federal funding sources for AMHS.

FEDERAL HIGHWAY ADMINISTRATION

The Federal Highway Administration (FHWA) Ferry Boat Program (FBP) allocates formula funding to public ferry operators based on the number of ferry passengers served, vessels carried, and total route nautical miles. Prior to passage of the federal IIJA, FBP funding was made available for construction of ferry boats and ferry terminal facilities. Allocated funding must be obligated to specific projects within three years of the original allocation. From the federal fiscal year (FFY) FFY2014 to FFY2021, between $16 million and $20 million in FBP funding was allocated to AMHS.

Passage of IIJA authorized additional FBP funding between FFY2022 and FFY2026, and about $35 million was allocated to AMHS between FFY2022 and FFY2024. In addition to increased funding, IJIA amended eligible uses of FBP funding to include system operating costs.[6] For most projects, FBP funding requires a 20% state match. Additional FBP program funding with authorized use for operating costs is available through FFY2026.

[6] Federal Highway Administration. *Ferry Boat Program Implementation Guidance*. April 21, 2023.

FEDERAL TRANSIT ADMINISTRATION

The Federal Transit Administration operates three competitive ferry funding programs:

- ***Ferry Services for Rural Communities Program***: Provides capital, operating, and planning funding to ensure basic essential service to rural areas. State match requirements for capital projects are 20%, while no state match is currently required for operating projects.
- ***Electric or Low-Emitting Ferry Pilot Program:*** Provides funding to support the purchase of electric or low-emitting ferries and electrification or other reduction of emissions from existing ferries. State match requirements are between 10% and 20%.
- ***Passenger Ferry Grant Program:*** Provides funding to support ferry systems in urbanized areas.

The two competitive programs for which AMHS is eligible – Electric or Low-Emitting Ferry Pilot Program and Ferry Services for Rural Communities Program – were created and funded with passage of IIJA in 2021. These programs provide discretionary funding based on a competitive FTA project selection process and are funded through FFY2026.

FERRY SERVICE FOR RURAL COMMUNITIES PROGRAM

IIJA authorized a cumulative $1.0 billion in funding upon creation of the Ferry Service for Rural Communities Program to be allocated between federal fiscal year (FFY) 2022 and FFY2026.[7] Funding may be used by states for capital or operating assistance. Between FFY2022 and FFY2024, a total of $548.2 million was awarded to AMHS through this program, including $149.4 million in operations funding and $398.8 million in funding for capital projects.

Funding for system operations was awarded through the Ferry Service for Rural Communities Program in FFY2023 and FFY2024 did not require a state match, though grants awarded for capital projects do require a 20% state match.[8] This program is authorized by IIJA through FFY2026.

Table 1: AMHS IIJA Rural Ferry Service Fund Allocations, FFY2022-FFY2024

	OPERATING FUNDING ($millions)	CAPITAL PROJECT FUNDING ($millions)	TOTAL FUNDING ($ millions)
FFY2022	$44.2	$194.6	$239.5
FFY2023	$38.5	$92.8	$131.3
FFY2024	$66.1	$111.4	$177.5
Cumulative Allocation	$149.4	$398.8	$548.2
Average Annual	*$49.8*	*$148.3*	*$182.7*

Source: Federal Transit Administration

ELECTRIC OR LOW-EMITTING FERRY PILOT PROGRAM

IIJA authorized a cumulative $250 million in funding upon creation of the Electric or Low-Emitting Ferry Pilot Program to be allocated between the federal fiscal year (FFY) 2022 and FFY2026.[9]

[7] Federal Transit Administration. *Fact Sheet: Ferry Service for Rural Communities*. Accessed September 2024.
[8] Federal Register Volume 88, No 96. May 19, 2023.
[9] Federal Transit Administration. *Fact Sheet: Ferry Service for Rural Communities*. Accessed September 2024.

Funding is allocated through a competitive grant process and may be used to purchase electric or low-emitting ferry vessels or on-board energy storage systems and related charging infrastructure. Grants require a maximum 20% state match.[10] This program is authorized by the IIJA through FFY2026.

In FFY2022, AMHS was awarded a $46.2 million grant through this program to build an electric ferry.

Table 2: Federal Ferry Funding Allocations to AMHS, FFY2014-FFY2024

FEDERAL FISCAL YEAR	FHWA – FERRY BOAT PROGRAM ALLOCATIONS ($millions)	FTA – FERRY SERVICE FOR RURAL COMMUNITIES PROGRAM ($millions)	FTA – ELECTRIC OR LOW-EMITTING FERRY PILOT PROGRAM ($millions)
FFY2014	$17.9	-	-
FFY2015	$17.7	-	-
FFY2016	$17.3	-	-
FFY2017	$16.9	-	-
FFY2018	$16.7	-	-
FFY2019	$16.3	-	-
FFY2020	$19.5	-	-
FFY2021	$16.2	-	-
FFY2022	$35.6	$239.5	$46.2
FFY2023	$35.5	$131.3	-
FFY2024	$35.0	$177.5	-

Sources: U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration

TOLL CREDITS

Toll credits may be used to reduce the state matching fund requirement to access federal capital or operations grants. Toll credits are accrued when agencies invest system revenue into building, improving, or maintaining infrastructure related to the system.

AMHS operating revenues are considered toll revenues given the system's designation as a federal highway. Investing this toll revenue in infrastructure related to the system (including vessels) results in the State of Alaksa earning toll credits, which can be used by the state to reduce the amount of state matching funds required to access federal grant funding. No toll credits are accrued if the state spends operating revenues on routine maintenance.[11]

[10] Federal Transit Administration. *Fact Sheet: Electric or Low-Emitting Ferry Pilot Program*. Accessed September 2024.
[11] U.S. Department of Transportation Federal Highway Administration. Letter to Alaska Department of Transportation and Public Facilities. April 2, 2024.
https://dot.alaska.gov/comm/pressbox/arch2024/Toll_Credits_Process_PannoneHaynes_04022024.pdf

The Alaska Department of Transportation and Public Facilities' Toll Credit Program was formally approved by the U.S. Department of Transportation FHWA in April 2024.[12] The State's enacted FY2025 budget includes about $23.2 million in toll credits allocated as a portion of the state's match requirement.[13]

CORONAVIRUS RESPONSE AND RELIEF SUPPLEMENTAL APPROPRIATIONS ACT

In FY2022, an additional $96.5 million in federal funding was deposited into the AMHS Revenue Fund based on appropriation of federal Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) funding awarded to the State of Alaska. This funding included $37.5 million in CRRSAA Federal Transit Administration funding and $59.0 million in Federal Highway Administration Funding. CRRSAA funding was allocated on a one-time basis and required no state match.

LONG-RANGE FINANCIAL PLANNING

APPROACH

The background financial information provided above is used as a basis for describing the specific funding strategies highlighted below. Data related to systemwide operating costs, capital costs, and revenue sources were provided by AMHS and are based on actual financial data as presented in the Alaska Marine Highway Fund Financial Reports between FY2014 and FY2023. Additional data sources used in this analysis include:

- Tariff rate and system financial studies commissioned by the Alaska Department of Transportation and Public Facilities,
- Project funding data and program resources published by the U.S. Department of Transportation, and
- Information released by the Alaska Office of Management and Budget.

FINANCIAL STRATEGIES

The following sections describe potential financial strategies to address Focus Area IV of the 2045 AMHS LRP: Promote Financial Efficiency and Sustainability.

AMHS OPERATING REVENUE

AMHS requires a significant level of State of Alaska General Funding to maintain operations. Over the last decade, state funding has been about twice the level of AMHS revenue appropriated to pay for operating costs. Given the current level of AMHS operating revenue and projected revenue under the target service scenario developed in this LRP, the opportunities to increase system revenue are limited. The following sections describe strategies to maximize AMHS operating revenue.

[12] Ibid.
[13] State of Alaska Office of Management and Budget. *FY2025 Enacted Budget*.

FARE STRUCTURE

AMHS operating revenue will continue to play an important role in funding AMHS operations and accessing toll credits to apply toward federal funding opportunities. System revenue is expected to increase proportionally along with ridership under the target service scenario.

Passenger and vehicle fare rates and cabin fees are an important factor driving AMHS revenue as these three revenue sources account for 90% of operating revenue.

AMHS last commissioned a tariff analysis to examine the system's current rate policy as compared to industry standards in 2015. The analysis recommended AMHS adopt a formulaic approach to setting tariffs.[14] Within this formulaic structure, the study recommends AMHS develop or adhere to the following:

- Adjust tariffs based on average rates per nautical mile by route distance and region.
- Differentiate tariffs by season, commercial versus passenger vehicle traffic, and dedicated or express routes.
- Set a target farebox recovery rate to be used in annual tariff review and update processes to reflect changes in operating and capital cost.

In response to this study, AMHS modified tariffs to reflect price-per-mile standards across the system. In FY2017, fares were adjusted significantly, with passenger fares decreased for the Southwest region and sailings to and from Bellingham, while fares increased for other routes.[15]

The 2020 *Reshaping the Alaska Marine Highway System* study further examined the potential impact of fare increases on the level of State of Alaska funding required to operate the marine highway system. The study finds that increased fare prices are likely to result in increased revenue on a systemwide level, given the inelasticity of ridership to past price changes.[16]

AMHS implemented a dynamic pricing structure to adjust tariffs based on the percentage of capacity currently booked by sailing in the winter 2019-2020 schedule. Passenger fares increased between 5% and 30% as bookings increased, with vehicle fares increasing between 10% and 50%.[17] The new pricing schedule also included fare increases during special events in the region. AMHS ended the use of dynamic pricing, reinstating flat rates, in fall 2022.[18]

AMHS currently has no rate setting policy or procedure to increase rates based on system financial targets or impacts to customers. Creating a formulaic rate structure, developing an annual review

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[14] *Alaska Marine Highway System Tariff Analysis*. Prepared for: Alaska Department of Transportation & Public Facilities. Prepared by: Northern Economics, Inc. in association with Kittelson and Associates, Inc. January 2015.

[15] *Reshaping the Alaska Marine Highway System*. Prepared for: Alaska Department of Transportation and Public Facilities. Prepared by: Northern Economics. January 2020.

[16] Ibid.

[17] Alaska Department of Transportation and Public Facilities, Alaska Marine Highway System. *AMHS Winter 2019-20 Schedule Press Release*. September 5, 2019.

[18] Alaska Department of Transportation and Public Facilities. *Charting the Course to Thriving Communities Program Starts with Flat Rate Pricing and Focus on Reliable Service Press Release*. September 9, 2022.

process, and setting system financial targets will all be required to increase operating revenue as a share of system costs equitably.

OTHER PASSENGER SERVICES AND REVENUE

Passenger services, excluding cabin revenue, account for about 7.0% to 8.0% of AMHS operating revenue each year. Services which generate added operating revenue include food service, alcohol sales, and retail. All passenger services currently offered are provided by employees of AMHS and subject to the system's current marine union agreements.

The 2020 *Reshaping the Alaska Marine Highway System* study examined the potential labor cost savings related to privatizing onboard services, including housekeeper services. The study estimates privatization of these services would yield an estimated $2.4 million in net savings based solely on labor cost expectations and concludes that private contractors would likely require payment from AMHS to provide such services.[19] In addition to this low level of expected cost savings, privatization of these services is currently not a practical financial strategy under current AMHS union agreements.

Insufficient financial data exists to assess the full cost of goods sold, and therefore profitability, of these services. Development of timely, detailed financial reporting to assess service profitability will be required prior to implementing any changes to passenger services.

In addition to current passenger services, a number of additional services have been recommended as potential methods to increase AMHS operating revenue. Examples include offering advertising space on vessels or in terminals, allowing commercial gaming on vessels, and increasing retail offerings. Implementing some of these revenue strategies may have additional benefits to residents outside of revenue generation. For example, selling the work of local artists at stores on ships may be one way to engage community members while increasing revenue. Each of these revenue-generating strategies would require financial feasibility studies to establish market demand and profitability expectations.

FEDERAL FUNDING

FEDERAL OPERATING GRANT FUNDING

IIJA expanded the Ferry Service for Rural Communities program to allow federal appropriations to be used as funding for ferry operating expenditures. Between FFY2022 and FFY2024, AMHS was awarded a cumulative $149.4 million in operating funds through this program. This program is authorized through FFY2026, with no expected reauthorization or extensions as of this LRP. Therefore, the financial plan proposed in this LRP assumes State of Alaska funding will be appropriated to fund AMHS operating expenditures not paid for with AMHS service revenue.

[19] *Reshaping the Alaska Marine Highway System*. Prepared for: Alaska Department of Transportation and Public Facilities. Prepared by: Northern Economics. January 2020.

TOLL CREDIT MAXIMIZATION

Alaska's Toll Credit Program was approved by FHWA in 2024, allowing the state to apply credits towards the state's match requirement to access federal funding. Toll credits are accrued by the state when it spends AMHS operating revenue on systemwide capital projects. The state should continue to allocate revenue from the AMHS Revenue Fund toward the highest and best use of funding based on operating revenue requirements and ability to maximize accrual of toll credits.

OPERATING COSTS

In FY2019, the Alaska Department of Transportation and Public Facilities (DOT&PF) commissioned a study to examine the financial impact of several options related to system operational changes. Published in January 2020, the study was intended to identify opportunities to reduce the level of State of Alaska funding required to operate the AMHS system. Options to reduce the level of state subsidy included:

- Structural changes to property ownership from selling, leasing, or giving vessel or terminal assets to a private entity at a system or community-specific level.
- Organizational changes from transferring AMHS assets to a public corporation or port authority.
- Service level changes from reducing service and contracting with a private service provider.
- Privatizing onboard services, or developing alternative, land-based infrastructure.
- Increasing fares.
- Renegotiating union contracts.

A main finding of the analysis was, "Reducing the AMHS operating subsidy to $24.0 million will be extremely difficult if there is also a desire to provide minimum levels of service to existing AMHS communities."[20] The option with the highest potential to reduce state subsidy required converting AMHS into one or more public corporation, an 8.7% wage reduction, and service level changes.

Several options addressed in the report do not align with the target service levels in this LRP or would require renegotiation of current marine union contracts. Few substantial operating cost savings strategies are available given the target service levels determined within this long-range plan and the goals and strategies outlined in Focus Area III: Continue to Build and Support a Reliable Workforce.

Continuing to pursue the capital and major maintenance milestones as outlined in this long-range plan will be an important strategy to minimize the impact of high capital and major maintenance costs required to maintain the current, aging fleet.

[20] *Reshaping the Alaska Marine Highway System*. Prepared for: Alaska Department of Transportation and Public Facilities. Prepared by: Northern Economics. January 2020.

APPENDIX G2

FINANCIAL PLAN

To: Alaska Marine Highway System (AMHS)
From: McKinley Research Group
Date: May 2025
Subject: AMHS 2045 Long-Range Plan Financial Plan
Version: 4.0 (New)

PURPOSE

This memo details the Alaska Marine Highway System (AMHS) 2045 Long-Range Plan (LRP) Financial Plan based on infrastructure, employment, commodities, and other requirements to meet the service levels as outlined in the LRP.

CAPITAL INVESTMENTS

The following describes vessel and terminal capital projects proposed in the plan.

VESSEL CAPITAL REQUIREMENTS

The 2045 LRP outlines a new vessel build schedule necessary to meet the 2045 service level targets. Across the plan horizon, vessels currently owned by AMHS will also require maintenance and overhaul.

Projects in this vessel capital plan are inclusive of those currently funded through the State of Alaska Statewide Transportation Improvement Program (STIP). AMHS vessel capital projects included in the state's FY2024-FY2027 STIP total $801.0 million. The plan proposes $1.4 billion in new vessel capital projects between 2025 and 2045. The total vessel-related capital investments outlined in the LRP are $2.2 billion. These capital costs include design, project management, and shipyard costs.

Table 1 illustrates the length of each new vessel construction project. New vessel capital costs illustrated in Table 2 are assigned annually based on this project schedule.

Table 1: Vessel Build Project Duration

TYPE	TOTAL PROJECT DURATION
Mainliner	48 months
Mainliner SW	48 months
Dayboat	36 months
Shuttle	30 months

Table 2 illustrates total vessel-related capital costs annually for the short-, mid-, and long-term phases of the plan.

Table 2: AMHS LRP Vessel Capital Costs, 2025-2045

CALENDAR YEAR	NEW VESSEL CONSTRUCTION ($millions)	CAPITALIZED MAINTENANCE/ OVERHAUL ($millions)	TOTAL VESSEL CAPITAL REQUIREMENT ($millions)
2025	$1.8	$93.2	$95.0
2026	$110.6	$21.3	$131.8
2027	$244.0	$29.8	$273.8
2028	$227.4	$24.0	$251.3
Cumulative Short-Term Costs (2025-2028)	$583.8	$168.2	$751.9
2029	$114.4	$26.1	$140.5
2030	$142.5	$26.5	$169.0
2031	$70.9	$19.0	$89.9
2032	$46.5	$15.6	$62.2
2033	$103.1	$18.4	$121.5
2034	$113.1	$31.2	$144.3
2035	$114.2	$18.0	$132.2
Cumulative Mid-Term Costs (2029-2035)	$704.7	$154.8	$859.5
2036	$114.3	$7.8	$122.1
2037	$28.9	$64.5	$93.4
2038	$0.0	$21.7	$21.7
2039	$0.0	$16.1	$16.1
2040	$0.0	$21.4	$21.4
2041	$0.0	$88.8	$88.8
2042	$0.0	$38.0	$38.0
2043	$0.0	$71.6	$71.6
2044	$0.0	$30.3	$30.3
2045	$0.0	$116.5	$116.5
Cumulative Long-Term Costs (2036-2045)	$143.2	$476.8	$620.0
Total LRP Capital Requirement	$1,431.6	$799.8	$2,231.4

TERMINAL CAPITAL REQUIREMENTS

The plan also outlines a schedule of terminal improvement projects across AMHS-owned terminals to support standardization of mooring and other operational processes. These projects include major terminal improvements and capitalized terminal maintenance projects.

Projects in this terminal improvement schedule are inclusive of those currently funded through the STIP.[1] Capital projects associated with AMHS-owned terminals already included in the state's FY2024-FY2027 STIP total $161.7 million. This 2045 LRP proposed $677.9 million in new terminal capital projects between 2025 and 2045. The total terminal-related capital investments outlined in the LRP are $839.5 million.

Table 3 illustrates the length of each terminal project based on project type. Terminal capital costs illustrated in Table 4 are assigned annually based on this project schedule.

Table 3: Terminal Project Duration

PROJECT PHASE	TERMINAL IMPROVEMENT PROJECTS	CAPITALIZED MAINTENANCE PROJECTS
Design, Planning, Permitting, and Contracting Phase	36 months	18 months
Construction Phase	18 months	9 months
Total Project Duration	54 months	27 months

Table 4 illustrates total terminal-related capital costs annually for the short-, mid-, and long-term phases of the plan.

[1] Terminal lease payments or project costs related to the proposed Cascade Point Ferry Terminal are not included in the 2045 LRP due to timing of the 2045 LRP and recent decisions to move forward with the terminal facility.

Table 4: AMHS LRP Terminal Capital Costs, 2025-2045

CALENDAR YEAR	STIP PROJECTS ($millions)	TERMINAL IMPROVEMENT PROJECTS ($millions)	CAPITALIZED MAINTENANCE PROJECTS ($millions)	TOTAL TERMINAL CAPITAL REQUIREMENT ($millions)
2025	$13.9	$0.8	$2.3	$17.0
2026	$14.3	$11.8	$8.6	$34.8
2027	$19.0	$12.7	$9.0	$40.8
2028	$59.5	$17.5	$4.1	$81.1
Cumulative Short-Term Costs (2025-2028)	$106.7	$42.9	$24.0	$173.6
2029	$32.3	$57.9	$1.6	$91.8
2030	$5.6	$39.7	$4.5	$49.8
2031	$3.2	$23.3	$8.9	$35.4
2032	$9.2	$27.2	$10.7	$47.1
2033	$4.6	$43.7	$10.1	$58.4
2034	$0.0	$44.6	$7.4	$52.0
2035	$0.0	$34.3	$4.5	$38.8
Cumulative Mid-Term Costs (2029-2035)	$55.0	$270.7	$47.6	$373.3
2036	$0.0	$25.3	$5.6	$30.9
2037	$0.0	$21.2	$7.1	$28.4
2038	$0.0	$25.7	$7.0	$32.7
2039	$0.0	$25.7	$5.8	$31.5
2040	$0.0	$24.2	$5.3	$29.5
2041	$0.0	$30.2	$6.0	$36.2
2042	$0.0	$27.7	$6.6	$34.2
2043	$0.0	$23.2	$7.1	$30.3
2044	$0.0	$22.2	$5.7	$27.9
2045	$0.0	$7.8	$3.2	$11.0
Cumulative Long-Term Costs (2036-2045)	$0.0	$233.3	$59.3	$292.6
Total LRP Capital Requirement	$161.7	$546.9	$131.0	$839.5

TOTAL CAPITAL REQUIREMENTS AND FUNDING

The state FY2024-FY2027 STIP includes $962.6 million in AMHS-related vessel and terminal projects. The plan proposes $2.12 billion in additional capital projects between 2025 and 2045.

Including all vessel- and terminal-related capital projects, capital investments outlined in the LRP total $3.07 billion over the twenty-year plan horizon. Table 5 illustrates total capital costs annually for the short-, mid-, and long-term phases of the plan. Figure 1 shows the annual vessel and terminal capital requirements from 2025 to 2045.

Table 5: AMHS LRP Total Capital Costs, 2025-2045

CALENDAR YEAR	VESSEL CAPITAL REQUIREMENT ($millions)	TERMINAL CAPITAL REQUIREMENT ($millions)	TOTAL CAPITAL REQUIREMENT ($millions)
2025	$95.0	$17.0	$112.0
2026	$131.8	$34.8	$166.6
2027	$273.8	$40.8	$314.5
2028	$251.3	$81.1	$332.4
Cumulative Short-Term Costs (2025-2028)	$751.9	$173.6	$925.6
2029	$140.5	$91.8	$232.3
2030	$169.0	$49.8	$218.8
2031	$89.9	$35.4	$125.3
2032	$62.2	$47.1	$109.3
2033	$121.5	$58.4	$179.9
2034	$144.3	$52.0	$196.2
2035	$132.2	$38.8	$170.9
Cumulative Mid-Term Costs (2029-2035)	$859.5	$373.3	$1,232.8
2036	$122.1	$30.9	$153.0
2037	$93.4	$28.4	$121.8
2038	$21.7	$32.7	$54.4
2039	$16.1	$31.5	$47.6
2040	$21.4	$29.5	$50.9
2041	$88.8	$36.2	$125.0
2042	$38.0	$34.2	$72.3
2043	$71.6	$30.3	$101.8
2044	$30.3	$27.9	$58.2
2045	$116.5	$11.0	$127.5
Cumulative Long-Term Costs (2036-2045)	$620.0	$292.6	$921.6
Total LRP Capital Requirement	$2,231.4	$839.5	$3,071.0

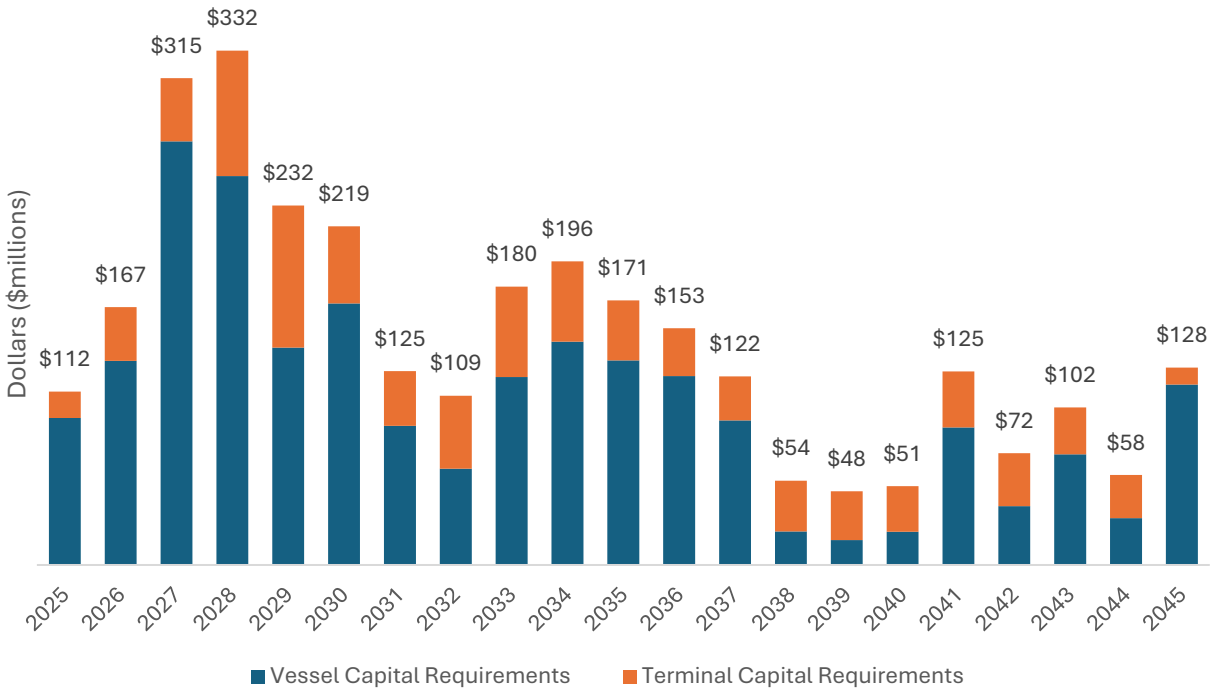

Figure 1: AMHS LRP Capital Commitments by Year, 2025-2045

The State of Alaska has historically funded non-maintenance/overhaul vessel and terminal capital projects through a mix of federal grant funding and state appropriations to meet federal match requirements. Federal grant programs such as the Federal Highway Administration (FHWA) Ferry Boat Program, the Federal Transit Administration (FTA) Electric or Low-Emitting Ferry Pilot and Ferry Service for Rural Communities programs, and the Maritime Administration (MARAD) Port Infrastructure Development Grant program generally fund a maximum of 80% of total project cost.

Vessel overhaul and terminal capitalized maintenance projects have historically been funded through State of Alaska appropriations.

Based on program match requirements and projects currently funded through Alaska's Statewide Transportation Improvement Program (STIP), the following table describes the total federal and state capital costs associated with AMHS capital projects by LRP phases.

Table 6 illustrates capital costs by expected funding sources annually for short-term projects, and in aggregate for the short-, mid-, and long-term phases of the plan.

Table 6: AMHS LRP Total Capital Costs by Funding Source, 2025-2045

	SHORT TERM (2025-2028) ($millions)	MID TERM (2029-2035) ($millions)	LONG TERM (2036-2045) ($millions)	TOTAL LRP CAPITAL REQUIREMENT ($millions)
Federal Share	$586.7	$824.3	$301.2	$1,712.1
New Vessel Construction	$467.0	$563.7	$114.6	$1,145.3
Terminal Improvement Projects	$119.7	$260.5	$186.6	$566.8
State of Alaska Share	$338.9	$408.5	$611.4	$1,358.8
New Vessel Construction	$116.8	$140.9	$28.6	$286.3
Capitalized Vessel Overhaul	$168.2	$154.8	$476.8	$799.8
Terminal Improvement Projects	$29.9	$65.1	$46.7	$141.7
Capitalized Terminal Maintenance Projects	$24.0	$47.6	$59.3	$131.0
Total Capital Requirement	$925.6	$1,232.8	$912.6	$3,071.0
Annual Average Capital Requirement	*$231.4*	*$176.1*	*$91.3*	*$146.2*

Toll credits accrued by the State of Alaska spending of AMHS service revenue on capital expenses may be used as the required local match to access these grants, effectively reducing the State's capital appropriation requirement to access federal funds. However, the capital costs as described in the previous tables represent the total cost to design, build, and construct this infrastructure; total grant funding sought from federal programs would have to be adjusted upward to provide adequate funding if toll credits are used as part of match funding.

OPERATING BUDGET

The following describes AMHS operating expenditures, service revenue, and required appropriation projected based on the 2045 service level scenario proposed in the AMHS LRP.

OPERATING EXPENDITURES

AMHS operating expenditures are expected to increase over the LRP horizon as service levels increase and the number of vessels in revenue service increases. Table 7 illustrates average annual operating expenditures by category for the short-, mid-, and long-term phases of the plan, all calculated in 2024 dollars and not accounting for inflation.

Marine engineering, reservations and marketing, marine shore operations, and other AMHS support services are held constant throughout the planning time horizon.

Table 7: Average Annual AMHS Operating Expenditures by Category and LRP Phase, 2025-2045

BUDGET CATEGORY	SHORT-TERM (2025-2028) ($millions)	MID-TERM (2029-2035) ($millions)	LONG-TERM (2036-2045) ($millions)
Marine Vessel Operations	$125.5	$134.9	$159.0
Marine Vessel Fuel	$21.7	$22.4	$22.7
Marine Engineering	$3.3	$3.3	$3.3
Reservations and Marketing	$1.5	$1.6	$1.6
Marine Shore Operations	$10.0	$10.0	$10.0
Vessel Operations Management	$5.8	$5.9	$5.9
Overhaul	$2.1	$2.4	$2.7
Other AMHS Support Services	$2.0	$2.0	$2.0
Total AMHS Operating Expenditures	$172.0	$182.3	$207.2

Figure 2 shows total systemwide annual operating expenditures and annual port departures from 2025 to 2045.

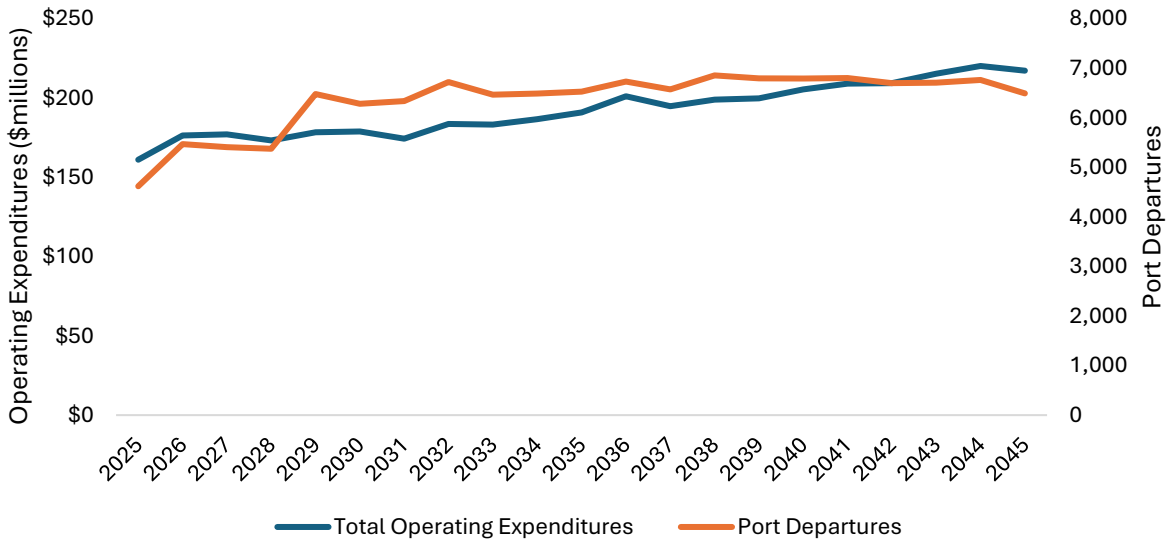

Figure 2: Total AMHS Operating Expenditures and Port Calls, 2025-2045

Historically, labor costs are the most significant single AMHS operating cost, accounting for about 70% of the total operating budget each year. These costs are significantly influenced by the functional labor requirements of operating the service, as well as several labor union agreements. The maritime labor union agreements include specific pay rate increases, and this financial plan assumes that vessel operations personnel costs will grow at the rate set forth in the contracts that is based on the rate of inflation as measured by the Consumer Price Index (CPI) over the LRP horizon. Based on the service levels proposed in the plan, labor costs are expected to account for 73% of total AMHS operating expenses in 2045.

Marine vessel fuel purchase represents about 16% of total AMHS operating costs each year. AMHS' total annual fuel consumption is expected to grow as the AMHS fleet size grows from six to eight vessels. Fuel costs have been assumed to be $3 per gallon for the duration of the plan. Based on the service levels and vessel design proposed in the plan, vessel fuel costs are expected to account for 12% of total AMHS operating expenses in 2045.

OPERATING REVENUE

AMHS SERVICE REVENUE

AMHS generated an average of $42 million in operating revenue between FY2014 and FY2023. Passenger and vehicle ticket sales (fares) routinely account for more than 80% of system-wide operating revenue, followed by stateroom sales (about 10% of revenue). AMHS operating revenue is expected to increase over the LRP horizon due to increased passenger and vehicle use generated by increased service levels. If AMHS' passenger and vehicle fares are held constant at 2023 prices, AMHS annual service revenue is expected to increase proportionally along with ridership under the 2045 LRP service scenario. In the short-term (2025-2028), service revenue will average $56.8 million annually and will increase to a projected $58.5 million in the long term.

AMHS fare prices have been changed inconsistently over the system's operating history. Passenger and vehicle fare rates and cabin fees are an important factor driving AMHS revenue as these three revenue sources account for 90% of the operating revenue. The plan proposes that AMHS set a fare policy and structure to align with revenue targets to manage the level of state or federal appropriations required to fund system operations.

Table 8 below provides AMHS service revenue projections based on annual fare price adjustments equal to inflation expectations.[2] Adjusting fares using an expected inflation rate of 2.3% is intended to demonstrate how service revenue and state or federal appropriation requirements could be impacted by implementing annual rate increases. Based on annual rate increases consistent with inflation expectations, service revenue is projected to average $60.5 million in the short term, increasing to $84.9 million in the long term.

Table 8: Average Annual AMHS Service Revenue, 2025-2045

REVENUE	SHORT TERM (2025-2028) ($millions)	MID TERM (2029-2035) ($millions)	LONG TERM (2036-2045) ($millions)
AMHS Service Revenue	$60.5	$69.7	$84.9

Figure 3 illustrates the total AMHS systemwide operating revenue and annual port departures between 2025 and 2045.

[2] Inflation expectations in the 2045 LRP are based on the U.S. Federal Reserve Bank of St. Louis 20-Year Breakeven Inflation Rate as of September 2024. https://fred.stlouisfed.org/series/T20YIEM

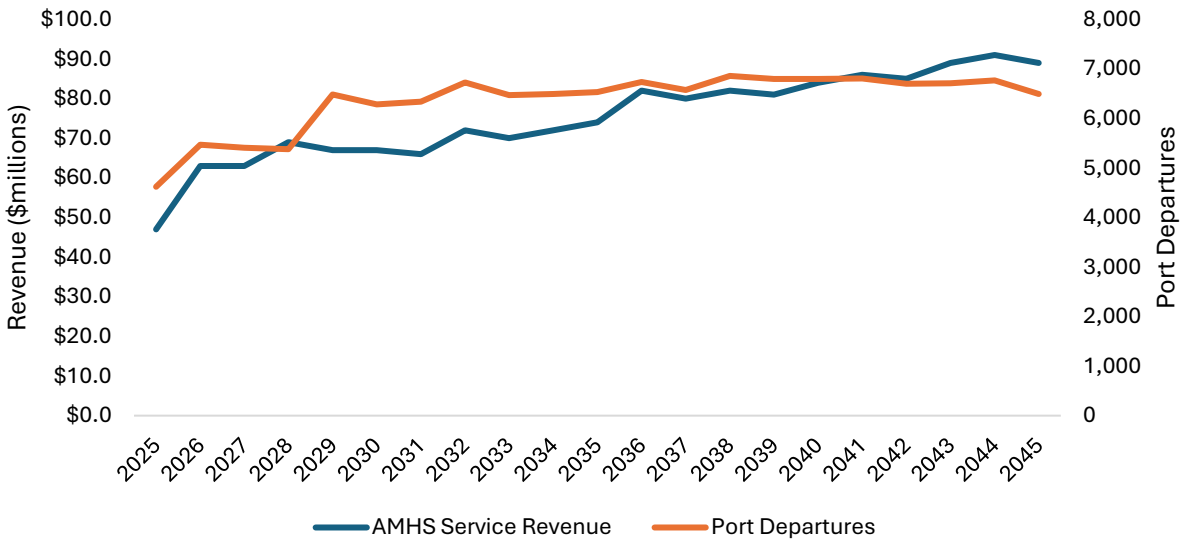

Figure 3: Total AMHS Operating Revenue and Port Calls, 2025-2045

Other passenger services such as food and bar sales contribute to AMHS service revenue. The profitability (revenue less cost of goods sold) of other passenger services is currently unknown. However, AMHS operating revenues have potential to increase with enhanced visitor services such as fee-for-use Wi-Fi, additional food and bar options, and retail sales.

FAREBOX RECOVERY RATE

The farebox recovery rate (FBR) provides a measure of service revenue as compared to operating expenditures. AMHS farebox recovery averaged 31% between FY2014 and FY2023. Adjusting fare prices at the rate of inflation to meet expected increases in labor expenditures results in a projected farebox recovery rate of 35% in the short-term (2025-2028), escalating to 41% in the long-term. Table 9 shows average farebox recovery rates for the short-, mid-, and long-term phases of the plan.

Table 9: Average Annual AMHS Farebox Recovery Rate, 2025-2045

FAREBOX RECOVERY RATE	SHORT-TERM (2025-2028)	MID-TERM (2029-2035)	LONG-TERM (2036-2045)
Farebox Recovery Rate	35%	38%	41%

STATE OR FEDERAL APPROPRIATION

AMHS requires public funding to pay for annual operating costs. Between FY2014 and FY2023, the Alaska Legislature appropriated an average of $82.6 million each year to fund the difference between AMHS service revenue and operating expenditures. Historically, this state appropriation has been paid for using state general funds, Motor Fuel tax receipts, or funding from the state's Constitutional Budget Reserve (CBR).

Passage of the 2021 federal Infrastructure Investment and Jobs Act (IIJA) authorized funding awarded through the Federal Transit Administration's (FTA) Ferry Services for Rural Communities

Program to be used to pay for operating costs. Between the federal fiscal year (FFY) 2022 and FFY2024, AMHS was awarded a total of $149.4 million in operating funds through this federal program. This program is authorized through FFY2026, and the plan assumes that funding required to operate AMHS beyond AMHS service revenue will be appropriated by the State of Alaska.

If AMHS passenger and vehicle fare prices are adjusted annually to reflect increased operating costs, an annual average appropriation of $111.5 million will be required to fund AMHS operations in the short-term (2025-2028). This annual appropriation requirement is expected to increase to $122.3 million in the long-term (2036-2045).

The level of appropriation required to fund AMHS operations described in the following table assumes that all AMHS service revenue is available to fund operating expenditures. Required operating appropriations would be higher than the projections below if a portion of AMHS service revenue were used to fund AMHS-related capital projects in order to accrue federal toll credits.

Table 10 illustrates the average annual operating expenditures, AMHS service revenue, and required appropriation for the short-, mid-, and long-term phases of the plan.

Table 10: Average Annual AMHS Operating Appropriation Requirement, 2025-2045

	SHORT-TERM (2025-2028) ($millions)	MID-TERM (2029-2035) ($millions)	LONG-TERM (2036-2045) ($millions)
AMHS Operating Expenditures	$172.0	$182.3	$207.2
AMHS Service Revenue	$60.5	$69.7	$84.9
Average Annual Appropriation Requirement	$111.5	$112.6	$122.3

Figure 4 shows the annual systemwide service revenue, operating expenditures, and required appropriation between 2025 and 2045.

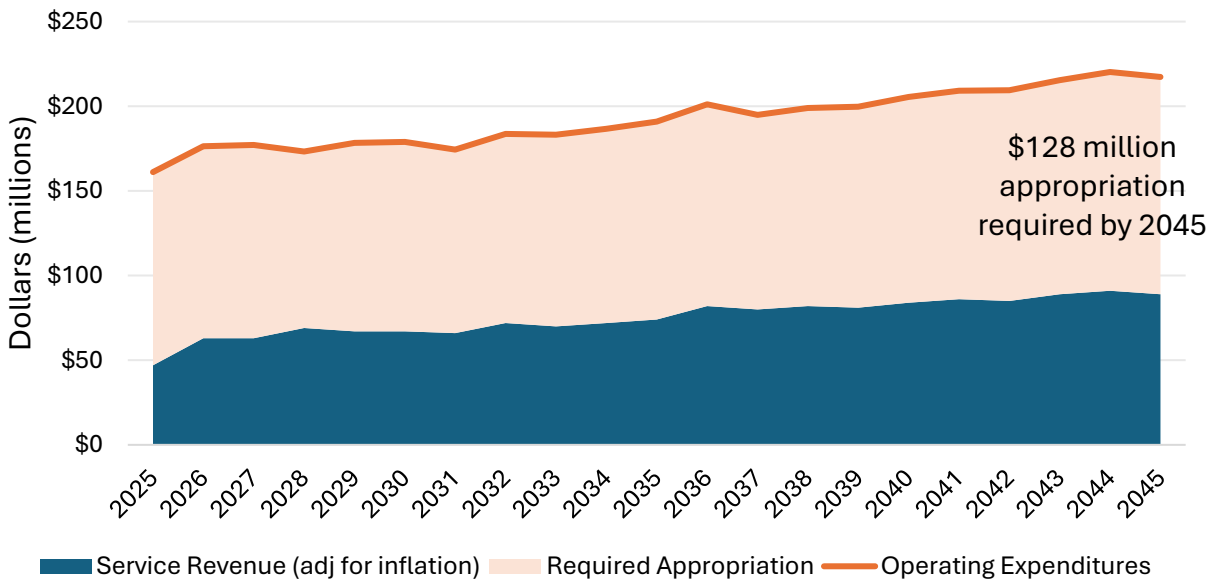

Figure 4: Annual AMHS Service Revenue, Operating Expenditures, and Required Appropriation Assuming Inflation-Based Fare Adjustments, 2025-2045

TOTAL OPERATING REVENUE, EXPENDITURES, AND REQUIRED APPROPRIATION

Table 11 illustrates annual AMHS service revenue, operating expenditures, and required appropriation for the short-, mid-, and long-term phases of the plan.

Table 11: AMHS Service Revenue, Operating Expenditures, and Appropriation Requirement, 2025-2045

CALENDAR YEAR	AMHS SERVICE REVENUE ($millions)	OPERATING EXPENDITURES ($millions)	OPERATING APPROPRIATION REQUIREMENT ($millions)
2025	$47.0	$161.1	$114.1
2026	$63.0	$176.4	$113.4
2027	$63.0	$177.2	$114.2
2028	$69.0	$173.3	$104.3
Average Annual Short-Term (2025-2028)	$60.5	$172.0	$111.5
2029	$67.0	$178.4	$111.4
2030	$67.0	$179.0	$112.0
2031	$66.0	$174.4	$108.4
2032	$72.0	$183.6	$111.6
2033	$70.0	$183.2	$113.2
2034	$72.0	$186.7	$114.7
2035	$74.0	$190.9	$116.9
Average Annual Mid-Term (2029-2035)	$69.7	$182.3	$112.6
2036	$82.0	$201.1	$119.1
2037	$80.0	$194.9	$114.9
2038	$82.0	$199.0	$117.0
2039	$81.0	$199.8	$118.8
2040	$84.0	$205.5	$121.5
2041	$86.0	$209.1	$123.1
2042	$85.0	$209.4	$124.4
2043	$89.0	$215.4	$126.4
2044	$91.0	$220.2	$129.2
2045	$89.0	$217.3	$128.3
Average Annual Long-Term (2036-2045)	$84.9	$207.2	$122.3
LRP Average	$75.2	$192.2	$117.0