



Alaska Marine Highway System

Department of Transportation and Public Facilities

Interim Long-Range Plan (CY2024-CY2026) - DRAFT-AUGUST 2023

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ACRONYMS

ABS	American Bureau of Shipping
ACF	Alaska Class Ferry
AMHOB	Alaska Marine Highway Operations Board
AMHS	Alaska Marine Highway System
AMOS	Asset Management Operating System
BC	British Columbia
CIP(s)	Capital Improvement Project(s)
COI	Certificate of Inspection
COLA	Cost-of-Living Differential
CPI	Consumer Price Index
CPI-U	Consumer Price Index for all Urban Consumers
CPP	Controllable Pitch Propeller
CTC	Charting the Course
CY	Calendar Year
DOLWD	Alaska Department of Labor and Workforce Development
DOT&PF	Alaska Department of Transportation and Public Facilities
FCS	Fleet Condition Survey
FFG	Ferry Focus Groups
FY	Fiscal Year
HB 63	House Bill 63
IBU	Inlandboatmen's Union
IIJA	Infrastructure Investment and Jobs Act
ISM	International Safety Management
ISO	International Standards Organization
LOS	Level of Service
LRP	Long Range Plan
L RTP	Long Range Transportation Plan
MEBA	Marine Engineer's Beneficial Association
MMP	International Organization of Masters, Mates, and Pilots
MRV	Mainliner Replacement Vessel
PE	Professional Engineer
Ro-Ro	Roll on, roll off
SEC	Southeast Conference
SEEMP	Ship Energy Efficiency Management Plan
SOLAS	International Convention for Safety of Life at Sea
SMS	Safety Management System
STIP	Statewide Transportation Improvement Program
SWAMC	Southwest Alaska Municipal Conference
TRV	Tustumena Replacement Vessel
USCG	United States Coast Guard
WA	Washington



1. Introduction

1.1 Alaska Marine Highway System

The Alaska Marine Highway System (AMHS) is a state-owned ferry system that has provided essential transportation to Alaska’s remote coastal communities since commencing operations in 1963. AMHS currently operates nine vessels over 3,500 miles of routes serving 33 Alaskan communities and 2 communities outside of Alaska at Prince Rupert, British Columbia (BC), and Bellingham, Washington (WA). The system stretches from Metlakatla, north to Prince William Sound and the Kenai Peninsula, and east to the Aleutian chain, as shown in in Figure 1. AMHS is the only marine route recognized as a National Scenic Byway and All-American Road and is vital for communities of all socioeconomic statuses. Only five of the communities served by AMHS are connected to Alaska’s road system and AMHS provides a critical transportation link for Alaska residents and businesses, as well as visitors to the state.¹



Figure 1: AMHS Port Communities

1.1.1 Existing Mission

The Mission of AMHS is to provide safe, reliable, and efficient transportation of people, goods and vehicles among Alaska 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.

Under the Alaska Department of Transportation and Public Facilities (DOT&PF) Strategic Plan², the intended impact of AMHS is threefold:

¹ Economic Impacts of Alaska Marine Highway System, McDowell Group Inc.
https://issuu.com/alaskamarinehighwaysystem/docs/econ_15?e=32410890/67331148

- Serve every Alaskan every day.
- Provide a safe and efficient transportation system for Alaska to thrive.
- Provide Alaskans with access to goods, services, economic opportunities, each other, and the world.

1.1.2 Existing Vision

AMHS, as an agency acting under the umbrella of DOT&PF, works toward the vision of “moving beyond Alaska’s challenges while meeting Alaskans’ distinct transportation needs through trust, teamwork, and results.”²

The vision is supported by four core values:

- **Integrity**—Doing the right thing even when no one is watching. Doing what you say you are going to do.
- **Excellence**—Commitment to continually improve.
- **Respect**—Positive regard for customers, stakeholders, investors, and colleagues.
- **Safety**—Commitment to safeguarding transportation systems and users while promoting a safety culture in the workplace.

1.1.3 AMHS Operating Principles

AMHS aims to provide the “preeminent marine travel experience that exceeds the expectations of the communities and users we serve, while connecting with other intermodal components of state, federal and international transportation systems.”³

AMHS provides accessible transportation to the residents of Alaska's coastal communities that may not have road or air access to the rest of the state. It serves as a lifeline for these communities, connecting them to essential services, supplies, and economic opportunities.

Safety is a paramount principle in operating AMHS. The safety of the crew and passengers takes priority over schedule and cost. AMHS strives to maintain a reliable and consistent ferry service schedule and works to minimize delays and cancelations whenever possible, with the goal of providing dependable transportation for passengers and cargo.

AMHS recognizes the importance of sustainable practices in its operations and has been working with Green Marine⁴, the leading environmental certification program for North America’s maritime industry, since 2018 to reduce their environmental footprint. This includes efforts to minimize

² https://dot.alaska.gov/comm/strategic_plan.shtml. Accessed 06/21/23.

³ AMHS Governance Study: Phase 1 Final Report, <https://www.amhsreform.com/sites/amhsreform.com/files/AMHS%20Reform%20Final%20Report.pdf>

⁴ State Ferry Operator Becomes First Green Marine's Participant in Alaska, <https://green-marine.org/stayinformed/news/state-ferry-operator-becomes-first-green-marines-participant-in-alaska/>



environmental impact, such as reducing emissions, managing waste responsibly, and promoting energy-efficient practices.

AMHS focuses on providing quality customer service to its passengers. This involves courteous and helpful staff, clear communication, and efficient handling of passenger needs, inquiries, and concerns.

AMHS works collaboratively with various stakeholders, including local communities, government agencies, and businesses, to understand and address the marine transportation needs of Alaska that would otherwise be unmet.

1.2 Purpose of the Long-Range Plan

The AMHS Long-Range Plan (LRP) is developed by AMHS, a division of the Alaska State DOT&PF, in consultation with Alaska Marine Highway Operations Board (AMHOB) and the communities it serves with the purpose to guide capital and operating investments to incrementally achieve the 2045 vision for the system. The LRP serves as a guide for AMHS, identifying goals and priorities and outlining investments to make those goals a reality. This plan will guide investments in the fleet, terminals, and operational elements vital to AMHS success such as its workforce, management infrastructure and operational tools.

The requirements of the Long-Range Plan are set forth in Alaska Statute (AS) 19.65.011.

***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.*

Through robust public and stakeholder engagement, the LRP, when finalized, will set out a mission, vision, and goals for AMHS. The recommendations in the LRP are intended to guide the operations and investments of AMHS for the next twenty years, with regular updates occurring at least every five years.



1.2.1 Organization of the Long-Range Plan

The AMHS LRP will be developed and rolled out in the following phases (Figure 2).

Phase 1 of the LRP will result in a Three-Year Interim LRP provided to the Legislature in August 2023 and will provide recommendations for a three-year Capital and Operational Budget through calendar year 2026.

This Interim Long-Range Plan (CY2024-CY2026) presents the findings from Phase 1.

Phase 2 of the LRP effort will switch from short-term to long-term assessment, and will forecast out 20+ years, with operational and capital budget recommendations to support the future fleet and service envisioned in 2045. This phase of the work will show the incremental steps for AMHS to achieve the 2045 vision with short-, medium- and long-term strategies and investments.

Phase 3 of the LRP effort will conclude in 2024 with the development of the Final LRP, encompassing elements from the Three-Year and 20-Year Interim Plans, as well as additional sustainability and resiliency considerations.

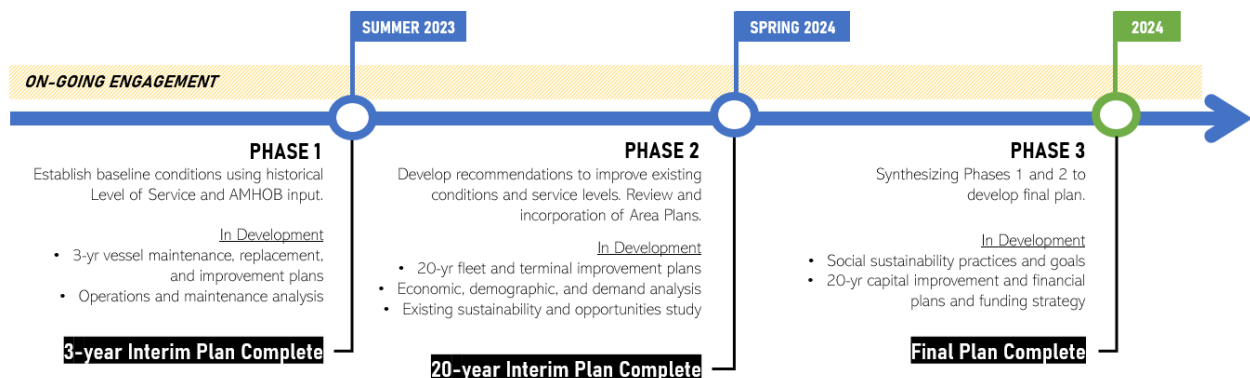


Figure 2: Long-Range Plan Phases

1.3 Alaska Marine Highway Operations Board

House Bill 63 (HB 63) was signed into law on August 16, 2021, repealing the Marine Transportation Advisory Board and establishing the 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 at DOT&PF's AMHOB website⁵.

⁵ <https://dot.alaska.gov/amhob/>

According to HB 63, in consultation with AMHOB, DOT&PF will prepare a comprehensive LRP 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 DOT&PF 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 LRP, the board may prepare a report recommending corrective action. They may also recommend performance measures.



2. Current State of AMHS

2.1 AMHS Organization and System Overview

AMHS helps to meet the social, educational, health, and economic needs of Alaskans by connecting communities to each other, regional centers, and the continental road system. Without AMHS, many communities would be cut off from the rest of the state and the nation.

AMHS provides year-round ferry service throughout Southwest, Southcentral and Southeast Alaska, extending south to Prince Rupert, BC, and Bellingham, WA. The system is divided into three major regions: the Southwest Region covering the area from Cordova west to Unalaska, the Southcentral Region including the communities in Prince William Sound and the Kenai Peninsula, and the Southeast Region including the communities between Bellingham, WA, north to Yakutat. Additionally, there is also a Cross Gulf service that connects these regions.

AMHS operates nine vessels, including four mainline vessels that provide overnight accommodations and serve the longer routes with multi-day trips, four-day boat vessels with no overnight accommodations that connect smaller communities to each other on trips that take less than a day, and one shuttle vessel that operates on a short 45-minute route.

2.1.1 AMHS Organization

Operationally, AMHS is divided into three divisions:

- Business Enterprise & Development: includes financial services, accounting, scheduling, marketing, reservations, and terminal managers.
- Operations: includes the environmental program, passenger services, port captains, safety, dispatch, training, information technology, and the vessel masters.
- Marine Transportation Services: includes vessel construction managers, port engineers, facilities managers, maintenance, and stock - parts and service.

Section 19.65.050 of the Alaska Budget and Funding legislation outlines the purpose and intent of AMHS across each division. These findings provide a framework to guide the agency's direction. The legislative findings outline the following:

- AMHS is an essential part of the state transportation system and it warrants continued and predictable state support.
- Many communities' economies are dependent on a steady and stable marine highway system service level.
- The state's tourism industry is greatly enhanced by a dependable marine highway transportation network.
- Efficient and prudent management of the system will benefit the state's economy and foster economic development.



- It is the purpose of AS 19.65.050 - 19.65.100 to:
 - Enable AMHS to manage and operate in a manner that will enhance performance and accountability by allowing the system to account for and spend its generated revenue.
 - Provide the management tools necessary to efficiently operate AMHS.
 - Within constitutional constraints, provide for a predictable funding base for system operations.
 - Provide predictability and stability in the service level furnished to communities served by the system.

2.1.2 Technical, Legal, and Financial Capacity

2.1.2.1 Technical

AMHS currently operates nine vessels of varying sizes that are specifically designed for coastal transportation in Alaska. The technical capacity of AMHS includes safe and efficient operations, vessel maintenance and repair capabilities to keep the fleet in operational condition.

2.1.2.2 Legal

AMHS operates within the legal framework established by the State of Alaska and applicable U.S. codes and regulations. It complies with relevant maritime laws, safety regulations, and environmental standards. AMHS is subject to oversight and regulation by government agencies responsible for transportation and maritime affairs. All vessels except the *M/V Lituya* are classed by the American Bureau of Shipping (ABS) and are regularly inspected by ABS and the United States Coast Guard (USCG).

The USCG issues a Certificate of Inspection (COI) for each vessel every year. The COI includes the minimum crew requirements for specific licensed and unlicensed positions onboard, the maximum number of passengers the vessel can carry, the maximum number of people allowed onboard, the geographical boundaries the vessel is approved to operate in, the types and quantities for the lifesaving equipment that must be onboard, and the type and quantity of fire extinguishers that must be on board. The USCG crewing requirement is the minimum crew required for safe vessel operations.

2.1.2.3 Financial Capacity

AMHS receives funding from the State of Alaska and revenue from passenger operations, as well as federal funding for both capital and operating costs. The AMHS budget is determined through state annual legislative processes. The financial capacity of AMHS influences its ability to maintain and upgrade vessels, provide services, and cover operational expenses.



2.2 Existing Service

Operations within Alaska are broken down into three major service regions: Southwest (Figure 4), Southcentral (Figure 5) and Southeast (Figure 6). A Cross Gulf service (Figure 7) connects the three service regions. These service regions can be broken down further into ten service areas: Aleutian Chain, Kodiak Island, Prince William Sound, Cross Gulf, North Lynn Canal, Northern Inside Passage, Southern Inside Passage, Metlakatla, Prince Rupert, and Bellingham. The AMHS fleet currently consists of nine vessels; discussed in more detail in Section 2.3.1.

2.2.1 Historical Service Levels

AMHS service levels fluctuate annually, especially in recent years. This is due to various factors such as funding, crew and vessel availability, and the COVID-19 pandemic. Figure 3 shows the number of operating weeks and port calls for each fiscal year (FY) beginning in July between 2009 and 2022. A port call is the number of times any vessel stops in a port. Annual operating weeks are calculated for each vessel by dividing the annual number of operating days of that vessel by seven. The total annual operating weeks is the summation of each vessel's operating weeks.

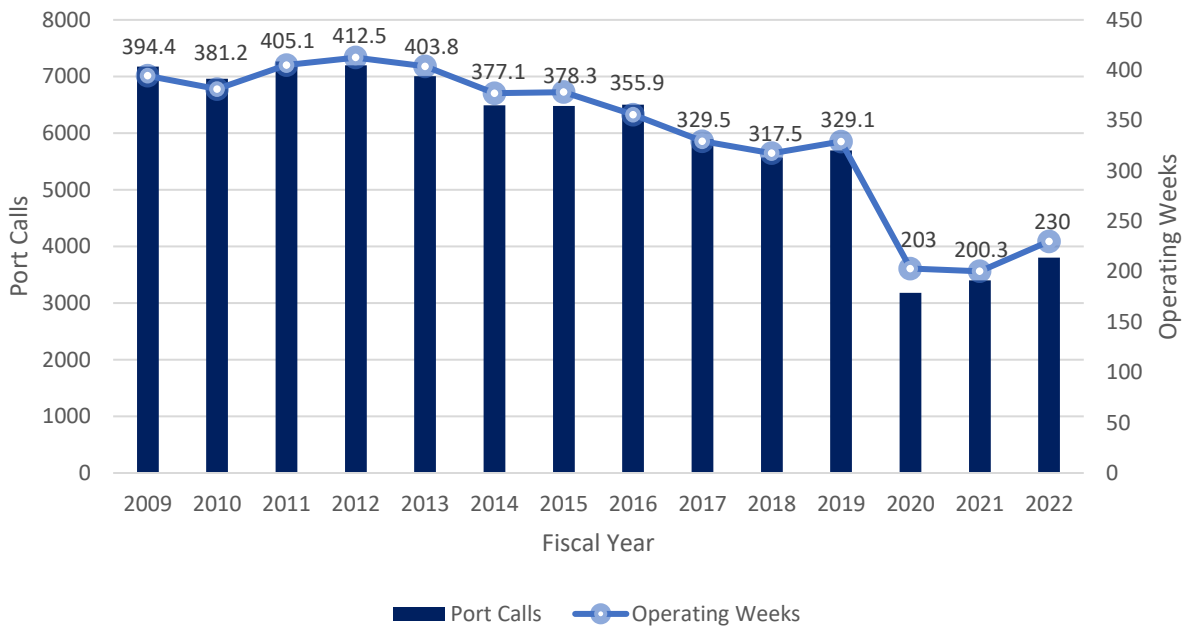


Figure 3: Operating Weeks & Port Calls FY2009-2022

Service reduction began in 2014 due to reduced funding levels as the state faced budget constraints. This pattern continued through the next five years as operating budgets remained reduced and a lack of capital investment in vessel maintenance and replacement projects resulted in fewer vessels to provide service. Also, a union strike took place in 2019 which affected the amount of service. In 2020 and 2021 service levels continued to decline as the COVID-19 pandemic required reduced or suspended service to prevent the spread of the virus. For those routes that



continued service, ridership numbers were lower. As the pandemic progressed, schedules were adjusted in response to changing travel demand and restrictions.

2.2.2 Southwest Region

The Southwest Region route includes the Aleutian Chain. The mainliner, *M/V Tustumena* provides service from Homer to Kodiak and the Aleutian Chain. Service is provided year-round to Homer, Seldovia, Kodiak, Ouzinkie, and Port Lions. However, weather restrictions prevent ferry service in the winter to the chain communities of Old Harbor, Chignik, Sand Point, King Cove, Cold Bay, False Pass, Akutan, and Dutch Harbor.

Figure 4 shows the Southwest Region routes.

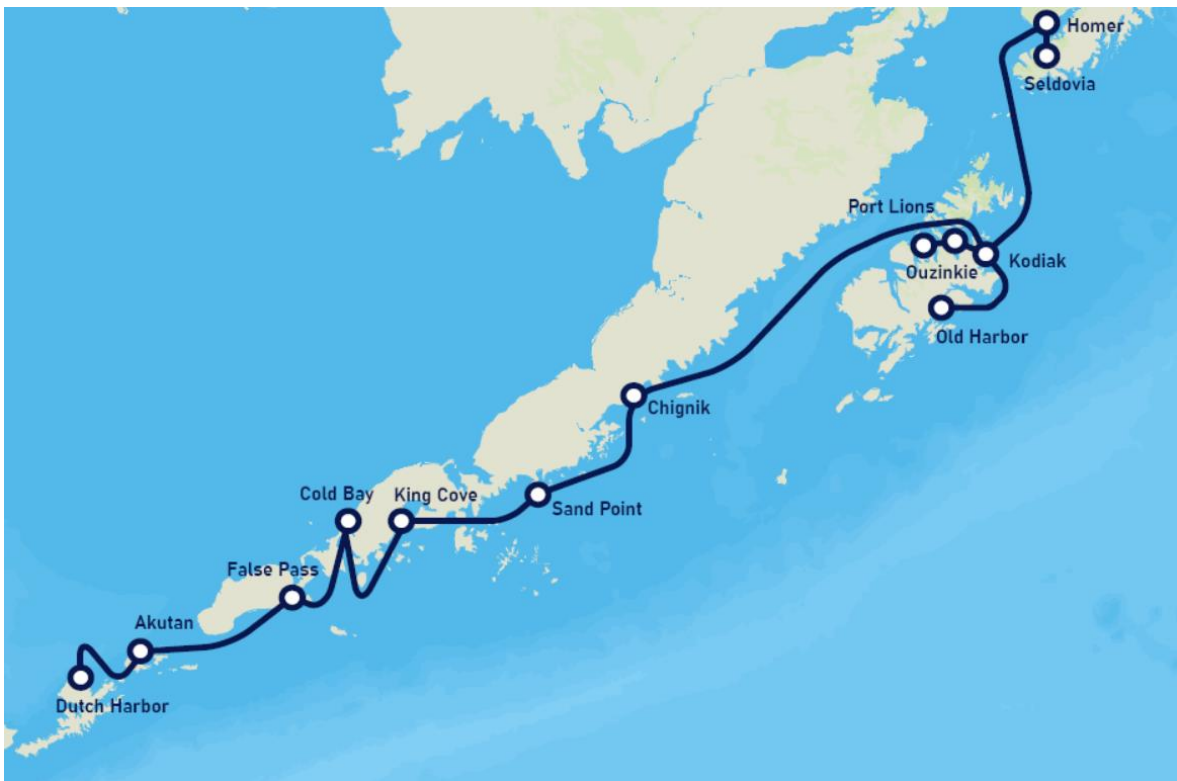


Figure 4: Southwest Region Ports

Table 1 lists the approximate number of times typical Southwest Region sailings were run by the system from 2010 to 2020.



Table 1: Approximate Annual Southwest Region Sailings

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<i>Sailings between Prince William Sound and Kodiak Island</i>	29	51	2	0	0	0	0	0	0	0	7
<i>Sailings between Kodiak Island Communities</i>	315	291	233	155	268	235	85	76	140	105	45
<i>Sailings between Homer and Dutch Harbor with Connections to Kodiak Island and the Aleutian Chain</i>	1	0	2	2	2	0	0	0	0	3	8
<i>Sailings between Kodiak and Dutch Harbor with Connections to Kodiak Island and the Aleutian Chain</i>	0	0	0	1	0	0	0	0	0	9	0
<i>Sailings between Seldovia and Dutch Harbor with Connections to Kodiak Island and the Aleutian Chain</i>	21	24	22	2	20	20	0	0	0	0	0

2.2.3 Southcentral Region

The Southcentral Region routes Figure 5 include the communities in Prince William Sound and the Kenai Peninsula. These routes provide connections by road to Valdez, Whittier, and Homer. The day boat *M/V Aurora* currently provides service between Whittier, Valdez, Cordova, Chenega (Bay), and Tatitlek. Service is provided to these communities year-round. The *M/V Kennicott* provides service between the Prince William Sound area and the Kenai Peninsula on the Cross Gulf route.

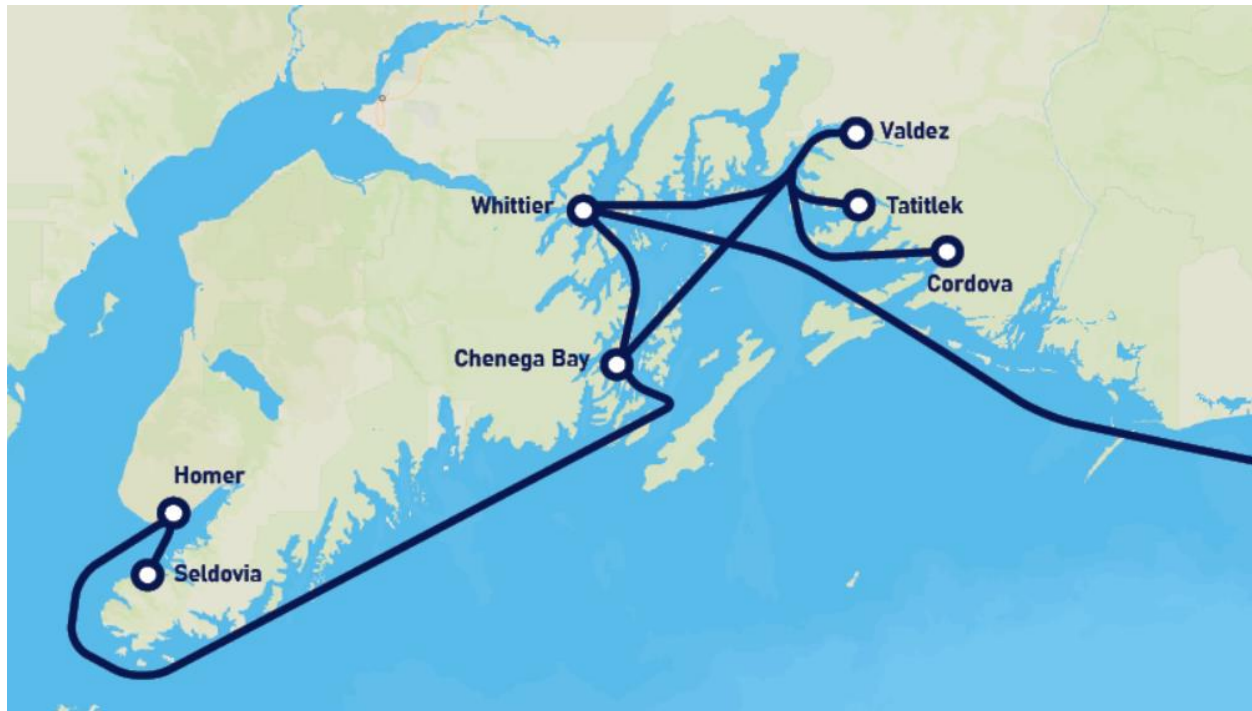


Figure 5: Southcentral Region Ports

Table 2 lists the approximate number of times typical Southcentral Region sailings were run by the system from 2010 to 2020.



Table 2: Approximate Annual Southcentral Region Sailings

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<i>Sailings between Prince William Sound Communities</i>	1035	853	882	830	816	652	290	93	97	85	1
<i>Sailings between Prince William Sound and Kodiak Island</i>	29	51	2	0	0	0	0	0	0	0	7

2.2.4 Southeast Region

The Southeast Region connects communities from Bellingham, WA, and Prince Rupert, BC, through the inside passage to Skagway. Most communities receive year-round service with mainliners serving larger communities and day boats and shuttle boats connecting the smaller communities. The larger communities served by the mainliners, *M/V Columbia* and *M/V Matanuska* include Bellingham, Prince Rupert, Ketchikan, Wrangell, Petersburg, Juneau, Haines, Skagway, and Sitka. The smaller communities currently served by the day boats, *M/V Hubbard* and *M/V LeConte* include Angoon, Gustavus, Hoonah, Haines, Skagway, and Juneau. The shuttle boat, *M/V Lituya* provides service between Ketchikan and Metlakatla. Figure 6 shows Southeast Region routes.

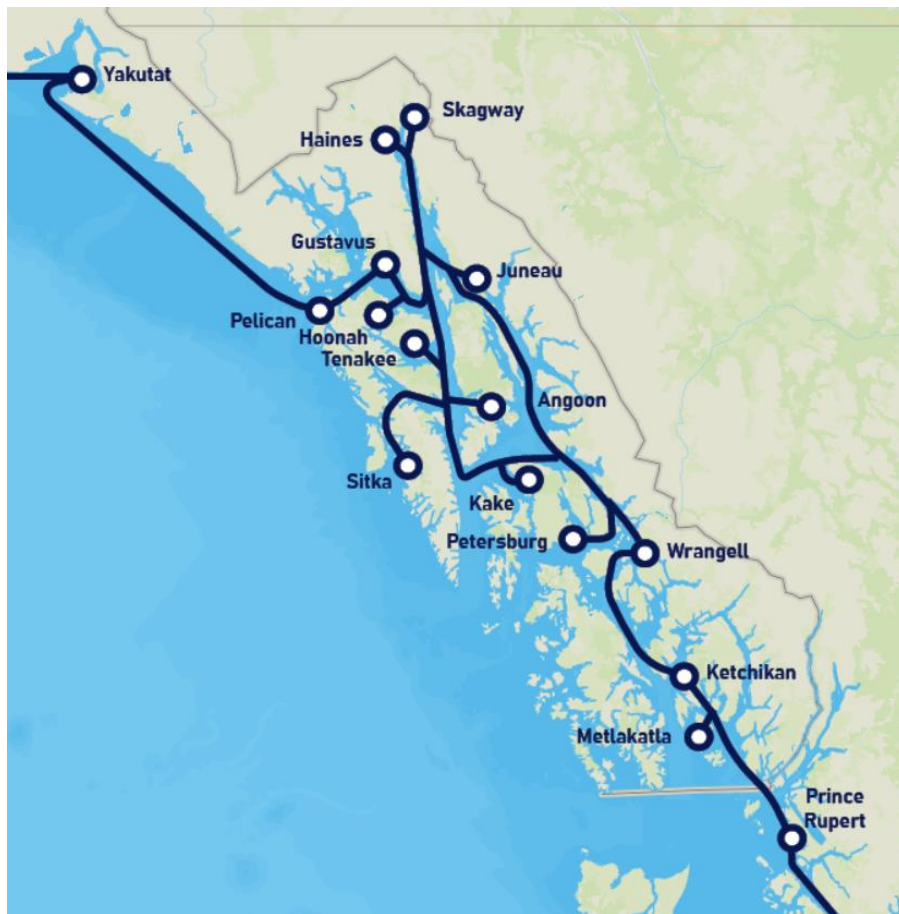


Figure 6: Southeast Region Ports

Table 3 below lists the approximate number of times that typical Southeast Region routes were run between 2010 and 2020.



Table 3: Approximate Annual Southeast Region Sailings

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<i>Sailings between Ketchikan and Metlakatla</i>	841	1036	1030	1006	1036	977	970	1032	957	723	266
<i>Sailings between Ketchikan, Haines and Skagway with Connections to SE</i>	5	10	4	31	33	31	19	0	0	0	0
<i>Sailings between Juneau and Ketchikan with Connections to SE</i>	11	4	18	33	32	27	15	0	1	0	0
<i>Sailings between Juneau, Haines, and Skagway</i>	571	622	445	480	416	394	68	0	0	104	47
<i>Sailings between Juneau and Angoon with Connections to SE</i>	204	224	122	163	187	155	46	0	1	4	30
<i>Sailings between Juneau and Gustavus with Connections to SE</i>	0	90	124	120	126	142	20	0	0	0	0
<i>Sailings between Juneau and Hoonah with Connections in SE</i>	148	65	96	166	112	76	24	1	0	0	10
<i>Sailings between Juneau and Kake with Connections to SE</i>	29	4	0	0	2	0	10	1	0	0	2
<i>Sailings between Juneau and Pelican with Connections to SE</i>	36	34	36	36	33	28	6	2	0	0	12
<i>Sailings between Juneau and Petersburg with Connections to SE</i>	70	74	28	28	22	20	0	0	0	0	0
<i>Sailings between Juneau and Sitka with Connections to SE</i>	258	238	260	282	158	168	0	4	2	0	2
<i>Sailings between Juneau and Tenakee Springs with Connections to SE</i>	98	74	86	2	24	18	0	0	0	0	0
<i>Sailings to Bellingham with Connections to SE</i>	120	115	107	104	105	106	41	6	6	7	5
<i>Sailings to/from Prince Rupert with Connections to SE</i>	313	303	257	199	196	154	61	46	33	20	0

2.2.5 Cross Gulf Service

The Cross Gulf service connects the Southwest routes to the Southeast routes with sailings from Bellingham, WA, to Homer, with additional stops along the coast of Alaska. The mainliner *M/V Kennicott* typically provides year-round service on this route. Figure 7 shows the Cross Gulf route.



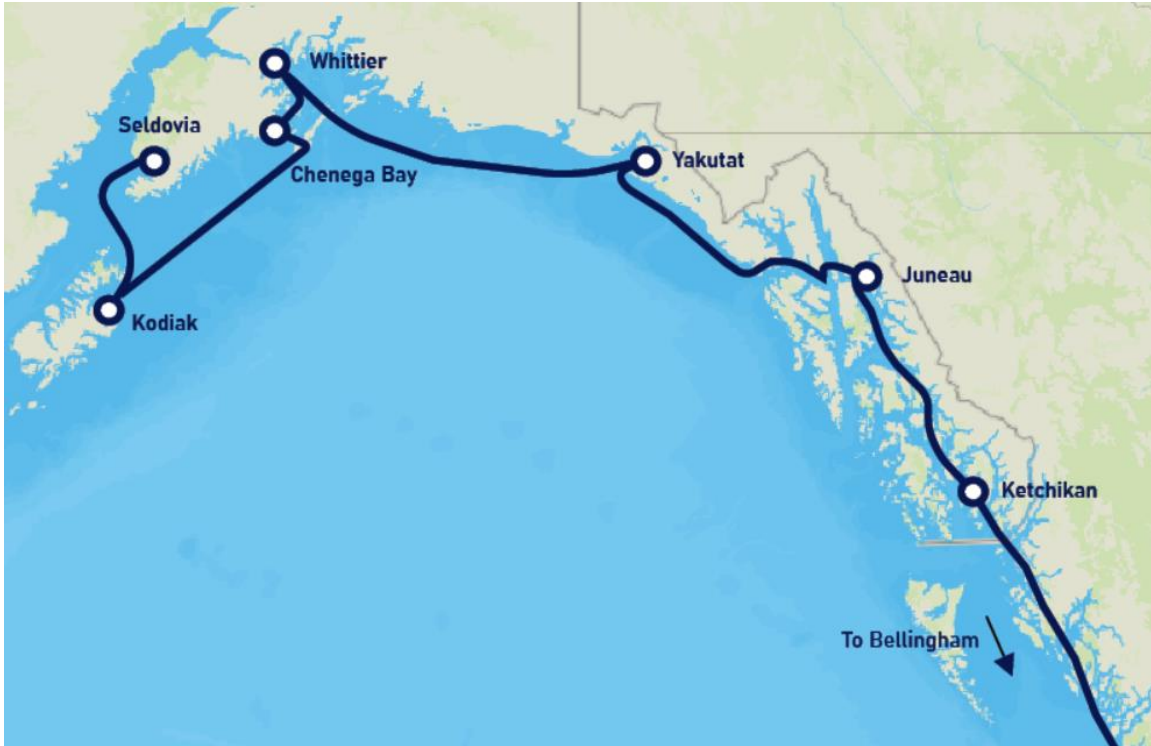


Figure 7: Cross Gulf Ports

Table 4 lists the approximate number of times typical Cross Gulf sailings were run by the system from 2010 to 2020.

Table 4: Approximate Annual Cross Gulf Sailings

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<i>Sailings to Bellingham with Connections to SE and SW</i>	0	20	22	18	28	30	2	21	24	25	26
<i>Sailings to Prince Rupert with Connections to SE and SW</i>	24	4	14	8	0	0	0	1	0	0	0
<i>Sailings between Juneau and Homer with Connections in SE and SW</i>	0	0	0	3	3	0	6	0	2	0	0
<i>Sailings between Ketchikan and Homer with Connections in SE and SW</i>	0	0	0	7	0	0	0	0	0	1	0
<i>Sailings between Juneau and Kodiak with Connections in SE and SW</i>	0	0	0	3	3	5	4	0	0	0	0
<i>Sailings between Juneau and Seldovia with Connections in SE and SW</i>	0	0	0	1	2	1	1	0	0	0	0
<i>Sailings between Juneau and Whittier with Connection in Yakutat</i>	3	3	0	1	0	0	0	0	0	0	0
<i>Sailings between Ketchikan and Whittier with Connections to Juneau and Yakutat</i>	2	1	1	0	0	0	0	0	0	0	0
<i>Sailings between Juneau and Whittier</i>	2	1	0	0	0	0	0	0	0	0	0



2.3 Pillars of Service

Operating a ferry service in a unique maritime environment to a diverse set of terminals requires a reliable fleet of vessels, a skilled workforce to operate service and manage the dynamic environment, and terminal facilities to connect the service to coastal communities. Support for these essential services is established through budgetary and funding strategies. These four pillars of AMHS service—Fleet, Shore Facilities, Workforce, and Budget and Funding Framework—are outlined in more detail in the sections below.

2.3.1 Fleet

The fleet currently consists of nine vessels, four mainline, four-day boats, and one shuttle vessel. Table 5 contains a summary of current fleet characteristics by vessel. Additional details for each vessel are provided in the following sections.

Table 5: Fleet Summary⁶

	Mainline Ferries				Day Boat & Shuttle Ferries				
	Columbia	Kennicott	Matanuska	Tustumena	Aurora	Hubbard	LeConte	Lituya	Tazlina
<i>Year Built</i>	1974	1998	1963	1964	1977	2019	1974	2004	2019
<i>Length (feet)</i>	418	382	408	296	235	280	235	181	280
<i>Beam (feet)</i>	85	85	74	59	57	67	57	50	67
<i>Displacement (long tons)</i>	7684	7504	5569	3081	2132	3016	2132	647	3016
<i>Service Speed (knots)</i>	17.3	16.75	16.5	13.3	14.5	.5	14.5	11.5	16.5
<i>Normal Crew Capacity</i>	63	55	48	38	24	24	24	5	14
<i>Passengers</i>	499	450	450	160	250	280	225	125	280
<i>Vehicles (linear feet)</i>	2660	1560 SE 1340 SW	1675	680	660	850	660	300	850
<i>Quantity of 20-foot vehicles</i>	133	78 SE 67 SW	83	34	33	40	33	15	40
<i>Commercial Vans</i>	16	17	10	6	7	4	8	2	4
<i>Staterooms (4 berth)</i>	45	48	5	6					
<i>Staterooms (3 berth)</i>	-	-	21	-	-	-	-	-	-
<i>Staterooms (2 berth)</i>	56	56	79	17	-	-	-	-	-
<i>ADA Staterooms (4 berth)</i>	-	3	-	-	-	-	-	-	-
<i>ADA Staterooms (2 berth)</i>	3	2	1	1	-	-	-	-	-
<i>Total Passenger Staterooms</i>	104	109	106	24	-	-	-	-	-
<i>Total Passenger Berths</i>	298	320	243	60	-	-	-	-	-

⁶ AMHS Vessel Information Table, https://dot.alaska.gov/amhs/doc/vess_info_table.pdf



2.3.1.1 M/V Columbia

The *M/V Columbia* is a mainline vessel that was built in 1974 and is 49 years old. It is the largest vessel in the fleet at 418 feet, 85 feet wide, and has a displacement of 7,684 long tons. It is also the fastest vessel with a service speed of 17.3 knots. It was designed to carry 499 passengers and has a vehicle capacity of 2,660 linear feet which is equal to approximately 133 twenty-foot vehicles. It has port and starboard roll-on, roll-off (Ro-Ro) doors and a stern Ro-Ro door. Additionally, the vessel has two vehicle elevators that are capable of hoisting 19-foot vehicles to the upper deck vehicle storage area. It is equipped with 104 staterooms for passengers and crew. It is operated by a crew of 63 and has crew staterooms that allow it to operate on routes longer than 12 hours. It services the Southeast route from Bellingham, WA, to Skagway, AK. Due to its age, it needs the centralized fire detection and alarm system and controllable pitch propeller (CPP) system replaced.

2.3.1.2 M/V Kennicott

The *M/V Kennicott* is a mainline vessel that was built in 1998 and is 25 years old. It is 382 feet long, 85 feet wide, and has a displacement of 7,504 long tons. Its service speed is 16.75 knots. In the event of an incident such as an oil spill, the vessel can be transformed into a command center for emergency team response. It has port and starboard Ro-Ro doors, a vehicle elevator that is capable of loading and unloading without a ramp regardless of tide levels, and a vehicle turntable. It is one of two vessels in the fleet that is a certified ocean class ferry in the fleet. It is also one of two International Convention for Safety of Life at Sea (SOLAS) approved vessels in the fleet. It provides the Cross Gulf service that links Southwest and Southeast Alaska and is the only vessel that services Yakutat. Given its SOLAS approval, it can also provide service to Prince Rupert, BC. It was designed to carry 499 passengers and has a vehicle capacity of 1,560 linear feet (78 twenty-foot vehicles) when operating in Southeast Alaska and 1,340 linear feet (67 twenty-foot vehicles) when operating in Southwest Alaska where capacity is reduced due to having to use the elevator in Yakutat, Kodiak, and Whittier. It is equipped with 109 passenger staterooms and 320 total berths. It is operated by a crew of 55 and has crew staterooms. It currently doesn't require any work to maintain the SOLAS certification, but it does require maintenance to be completed on the vehicle lift system, accommodation ladders, boiler base plate, stabilizer, EPA required generator upgrades and exhaust system.

2.3.1.3 M/V Matanuska

The *M/V Matanuska* is a mainline vessel that was built in 1963 and is 60 years old. It is 408 feet long, 74 feet wide and has a displacement of 5,569 long tons. Its service speed is 16.5 knots. It is the only remaining vessel of the three ships that were the original AMHS fleet. It is one of two SOLAS approved vessels in the fleet. It is designed to carry 450 passengers and has a vehicle capacity of 1,675 linear feet which accommodates approximately 83 twenty-foot vehicles. It has port and starboard Ro-Ro doors and one stern Ro-Ro door. It is equipped with 106 passenger staterooms and 243 total berths. It is operated by a crew of 48 and has crew staterooms which



allow it to operate on routes longer than 12 hours. It normally operates the Southeast route between Bellingham and Skagway with a monthly trip between Prince Rupert and Skagway. Given its SOLAS classification, the *M/V Matanuska* could continue to provide service to Prince Rupert, BC. However, it would require significant work to maintain its SOLAS approval, including refurbishing the entire Cabin Deck stateroom area to remove dead-end corridors; converting the Chief Mate stateroom into a SOLAS-compliant Safety Center; and completing Phase 2 and 3 of the main vertical zone insulation upgrades. In addition to the work required to maintain SOLAS approval, the steel in some of the tanks and voids are severely corroded and need to be replaced.

2.3.1.4 M/V Tustumena

The *M/V Tustumena* is a mainline vessel that was built in 1964 and is 59 years old. It is 296 feet long, 59 feet wide, and has a displacement of 3,081 long tons. Its service speed is 13.3 knots. It is the smallest AMHS vessel with passenger cabins and is one of only two certified ocean-class ferries in the fleet. It was designed to carry 160 passengers and has a vehicle capacity of 680 linear feet, which is equal to approximately 34 twenty-foot vehicles. It has port and starboard Ro-Ro doors, an elevator that is capable of loading and unloading vehicles without a ramp, and a vehicle turntable. It is equipped with 24 passenger staterooms and 60 total berths. It is operated by a crew of 38 and has crew staterooms. It operates the Southwest route and, in the summer, connects the communities along the Aleutian chain to Kodiak and Homer. In the winter it provides service to Homer, Kodiak, Uuzinkie, and Port Lions. The other communities along the Aleutian chain are not serviced in the winter due to weather restrictions. Due to its age and the environment in which it operates, it requires significant steel refurbishment and various upgrades to the steering and control systems to add modern equipment.

2.3.1.5 M/V Aurora

The *M/V Aurora* is a day boat that was built in 1977 and is 46 years old. It is 235 feet long, 57 feet wide and has a displacement of 2,132 long tons. Its service speed is 14.5 knots. It is the same class of vessel as the *M/V LeConte* and like the *M/V LeConte* its small size enables it to provide service to the smaller communities. It was designed to carry 225 passengers and has a vehicle capacity of 660 linear feet, which is approximately 33 twenty-foot vehicles. It has port and starboard Ro-Ro doors and a stern Ro-Ro door that includes a vehicle ramp. It is operated by a crew of 24 and it has crew staterooms. It currently services the Prince William Sound communities. It needs an expensive repower and is currently planned to be replaced by the *M/V Hubbard* or *M/V Tazlina* once terminal modifications have been made to three of the Prince William Sound communities to allow them to be used by the Alaska Class Ferry (ACF) vessels. The terminal modifications are planned to be completed in fiscal year FY2026 with the *M/V Hubbard* or *M/V Tazlina* taking over for the *M/V Aurora* in 2027.



2.3.1.6 M/V Hubbard

The *M/V Hubbard* is an ACF vessel that was built in 2019 and entered service in May 2023. It is the newest vessel of the fleet and the same class of vessel as the *M/V Tazlina*. It is 280 feet long, 67 feet wide, and has a displacement of 3,016 long tons. It has a bow door and ramp, a starboard forward Ro-Ro door, a port aft Ro-Ro door, and a stern Ro-Ro door. The *M/V Hubbard* recently had crew quarters added which allows it to operate on routes over 12 hours, but it does not have any passenger staterooms. It was designed to carry 280 passengers and has a vehicle capacity of 850 linear feet, approximately 40 twenty-foot vehicles. It is operated by a crew of 24 and it is currently serving the North Lynn Canal communities. It needs additional vehicle tie-downs added to the vehicle deck for securing vehicles and containers.

2.3.1.7 M/V LeConte

The *M/V LeConte* is a day boat that was built in 1974 and is 49 years old. It is 235 feet long, 57 feet wide, and has a displacement of 2,132 long tons. Its service speed is 14.5 knots. Given its small size, it can provide service to the smaller communities on AMHS routes. It was designed to carry 225 passengers and has a vehicle capacity of 660 linear feet, which is approximately 33 twenty-foot vehicles. It has port and starboard Ro-Ro doors and a stern Ro-Ro door that includes a vehicle ramp. It is operated by a crew of 24 and it has crew staterooms. It currently services the Northern Inside Passage communities. It needs the centralized fire detection and alarm system replaced and upgrades made to the ventilation system to improve the air flow in the crew quarters on the Gallery Deck.

2.3.1.8 M/V Lituya

The *M/V Lituya* was built in 2004 and is 19 years old. It is the smallest vessel in the fleet at 181 feet long, 50 feet wide, and has a displacement of 647 long tons. It exclusively provides shuttle service between Ketchikan and Metlakatla. It is the only ferry dedicated to a single route and the only vessel in the fleet with an open car deck. It was designed to carry 125 passengers and has a vehicle capacity of 300 linear feet, which is approximately 15 twenty-foot vehicles. It can load vehicles from the starboard side or the stern. It does not have any passenger or crew staterooms and is operated by a crew of seven. In summer of 2022, the exterior coating system was replaced. It currently needs steel work completed on the bridge deck.

2.3.1.9 M/V Tazlina

The *M/V Tazlina* is an ACF vessel that was built in 2019 and is the only AMHS vessel wholly constructed in Alaska. It is 280 feet long, 67 feet wide, and has a displacement of 3,016 long tons. It was designed to carry 280 passengers and has a vehicle capacity of 850 linear feet, which is approximately 40 twenty-foot vehicles. It has a bow door and ramp, a starboard forward Ro-Ro door, a port aft Ro-Ro door, and a stern Ro-Ro door. It does not currently have any passenger or crew staterooms which limits its operation to routes less than 12 hours. It is operated by a crew of 16. The *M/V Tazlina* needs modifications completed to the hawsepipes, isolation mounts added to



the generator sets, and crew quarters added to allow it to operate on routes longer 12 hours. After the crew quarters are added and terminal modifications are completed in Prince William Sound, it will take over for the *M/V Hubbard* servicing the North Lynn Canal area or for the *M/V Aurora* servicing the PWS area. After the crew quarters are added, it will be operated by a crew of 24.

2.3.1.10 Fleet Age

As vessels age, they require more maintenance which increases costs and requires more time out of service. Older vessels are more prone to mechanical failures due to aging systems and components that can result in unexpected breakdowns, propulsion problems, or other mechanical malfunctions, leading to delays or cancellations, as AMHS has experienced. Additionally, older vessels 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 have become more stringent, retrofitting existing vessels to comply with the latest standards can become increasingly costly and challenging. Furthermore, operating an older ferry fleet can impact the reputation of the ferry company. Passengers may perceive older vessels as less safe or less reliable, leading to a decline in customer trust.

AMHS mitigates the risks of operating older vessels through regular inspections and maintenance programs. For asset management and fleet planning purposes, AMHS defines the prime life of its vessels to be 30 years, beyond which vessels are anticipated to require additional maintenance to remain in service. Figure 8 shows the ages of each vessel compared to their prime life. Based on the age and condition of the vessels in the fleet, AMHS has created a preliminary vessel retirement and replacement schedule.

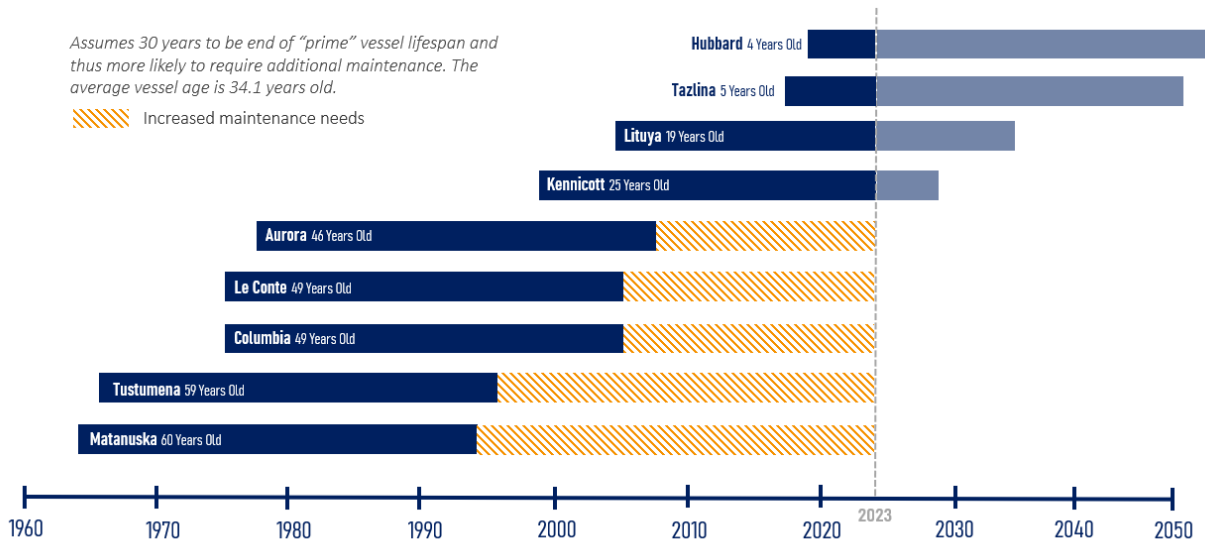


Figure 8: AMHS Vessel Ages

2.3.1.11 Fleet Maintenance

Each vessel within the fleet is unique and has different maintenance needs. The condition of the fleet is determined by the annual Fleet Condition Survey (FCS). The FCS describes each vessel's condition and creates a database of each vessel's maintenance needs. The FCS contains a matrix summarizing work items for each vessel, including an estimated cost and a priority for each item. Priority levels are based on urgency of the maintenance need and type of work:

- Priority 1 – Immediate
- Priority 2 – Problematic
- Priority 3 – Preventative
- Priority 4 – Lifecycle
- Priority 5 – Upgrades (Recommended)

Figure 9 shows the distribution by vessel of priority items identified in the 2022 FCS and their associated costs. The work identified in the 2022 FCS, much of which was considered a high priority, had an estimated cost of \$224 million⁷.

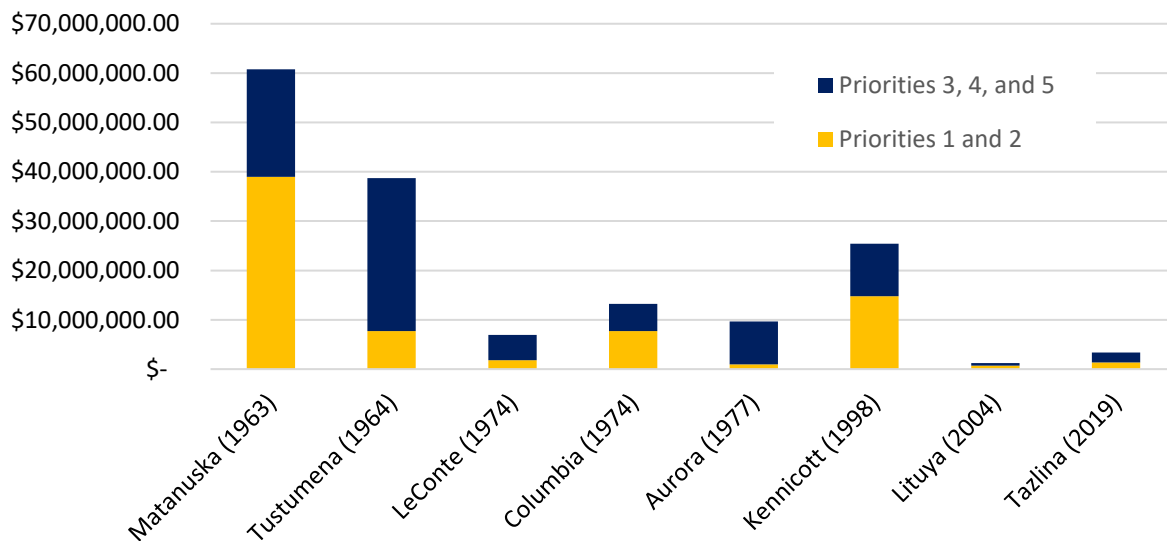


Figure 9: Distribution of Priority Items

There were 467 defects identified fleetwide, an increase of 106 defects over 2020. Thirteen percent of the defects were deemed mission critical (Priority 1). Figure 10 shows the number of defects found on each vessel for each category.

⁷ Required work on the *M/V Hubbard* was not included in the 2022 FCS since the vessel had not been in service.



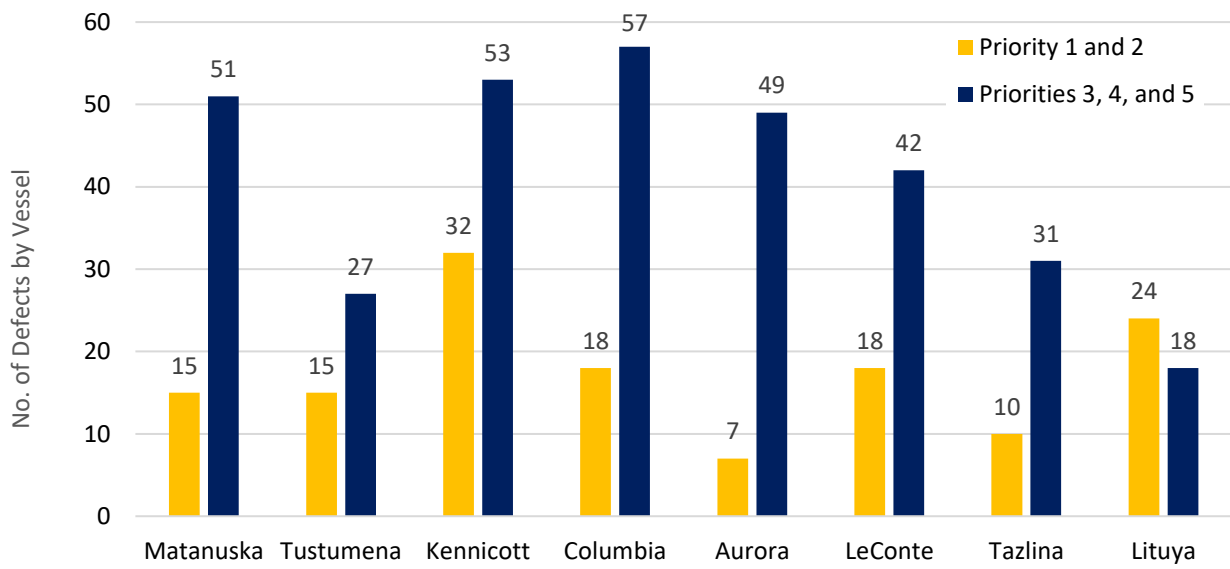


Figure 10: 2022 FCS Identified Defects

Other than the FCS, AMHS does not have a fleet-wide maintenance strategy to address equipment reliability or an asset management system to track the lifecycle of each vessel component to facilitate proactive maintenance planning. Furthermore, AMHS does not have a root cause analysis program to identify if there are issues with vessel design and systems after an incident or a comprehensive risk management framework to identify and mitigate potential hazards and vulnerabilities.

2.3.2 Shore Facilities

AMHS vessels call on a total of 35 different terminals, including two ports outside the state, in the three operating areas: 17 in the Southeast, seven in Southcentral, and 11 in Southwest. The terminals are owned by either DOT&PF, cities, boroughs, private entities, or foreign entities. DOT&PF maintains most of the ferry facilities served by AMHS and has a dedicated marine design group, environmental staff, and a marine engineering department who directly design and/or manage design efforts for refurbishments, replacements, repairs, and maintenance on the terminals.

Shore facilities have been developed based on the characteristics of the vessels serving each port. As a result, there is limited flexibility within the system for vessels to serve different routes for either regular or emergency operations. Developing a common set of design standards to allow more flexibility has been identified as a long-range goal for AMHS.

Each terminal has been designed to work with the vessels that have been serving that community, but much of the terminal infrastructure cannot serve other vessels, limiting the ability of AMHS to redeploy vessels to meet emergency or short-term service needs. The vessel loading systems generally fall into one or more of the following categories:



- **Load via ship’s vehicle elevator:** All the terminals in the Southwest area are served by a vessel which loads and unloads vehicles using an elevator that can accommodate wharfs with a large range of elevations and tides. The wharves themselves are fixed structures and can accommodate other vessels.
- **Ro-Ro via stern doors:** These facilities have a floating structure that supports the lower end of a transfer bridge and a hydraulically operating apron. The upper end of the gangway is supported by a fixed wharf or pier at approximately the same elevation as the local road system.
- **Ro-Ro via side doors:** These facilities operate using a similar system to the stern door loading except that vessel access is through side doors (port or starboard).

A summary of each terminals’ ownership, vessel compatibility, and the quantity of each loading system is provided in Table 6

Table 6: Terminal/Vessel Compatibility

Terminal	Owner	Vessels									Loading		
		Columbia	Matanuska	Aurora	LeConte	Tustumena	Lituya	Tazlina	Hubbard	Kennicott	Elevator	Ro-Ro Stern	Ro-Ro Side
Southeast Facilities													
Angoon	AK DOT&PF	-	-	+	+	-	+	-	-	-		1	
Auke Bay (Juneau)	AK DOT&PF	+	+	+	+	+	+	+	+	+		1	2
East Beth													
West Berth													
Stern Berth													
Bellingham, WA	Port of Bellingham	+	+	+	+	-	+	+	+	+		1	
Gustavus	AK DOT&PF	+	+	+	+	-	+	+	+	+			1
Haines	AK DOT&PF	+	+	+	+	-	+	+	+	+		1	1
Hoonah	AK DOT&PF	-	+	+	+	-	+	+	+	-			1
Kake	AK DOT&PF	-	+	+	+	-	+	+	+	-			1
Ketchikan	AK DOT&PF	+	+	+	+	+	+	+	+	+		2	1
Berth 2													
Berth 3													
South Tongass Terminal													
Annette Bay (Metlakatla)	AK DOT&PF	+	+	+	+	+	+	+	+	+			1
Port Chester (Metlakatla)	Out of Service	<i>No longer in service</i>											
Pelican	AK DOT&PF	-	-	+	+	-	+	-	-	-		1	
Petersburg	AK DOT&PF	+	+	+	+	-	+	+	+	+			1
Prince Rupert, BC	City of Prince Rupert	-	+	+	+	-	+	+	+	+		1	
Sitka	AK DOT&PF	+	+	+	+	-	+	+	+	+			1
Skagway	AK DOT&PF	+	+	+	+	-	+	+	+	+			1
Tenakee	AK DOT&PF	-	-	+	+	-	-	+	+	-			1
Wrangell	AK DOT&PF	+	+	+	+	-	+	+	+	+			1
Yakutat	AK DOT&PF	-	-	-	-	+	-	-	-	+			1



Terminal	Owner	Vessels									Loading		
		Columbia	Matanuska	Aurora	LeConte	Tustumena	Lituya	Tazlina	Hubbard	Kennicott	Elevator	Ro-Ro Stern	Ro-Ro Side
Southcentral Facilities													
Chenega	North Pacific Rim Housing Authority	-	-	+	+	+	-	-	-	+		1	1
Cordova	AK DOT&PF	-	-	+	+	-	-	-	+	+		1	1
Homer	City of Homer	-	-	-	-	+	-	-	-	+		1	2
Seldovia	City of Seldovia	-	-	-	-	+	-	-	-	+			1
Tatitlek	North Pacific Rim Housing Authority	-	-	+	+	+	-	-	+	+		1	
Valdez	AK DOT&PF	-	-	+	+	+	+	-	+	+			1
Whittier	AK DOT&PF	-	-	+	+	+	+	-	+	+		1	
Southwest Facilities													
Akutan	Aleutians Borough East	-	-	-	-	+	-	-	-	+	X		
Chignik	Trident Seafoods	-	-	-	-	+	-	-	-	-	X		
Cold Bay	Aleutians Borough East	-	-	-	-	+	-	-	-	+	X		
False Pass	Village of False Pass	-	-	-	-	+	-	-	-	-	X		
King Cove	Aleutians Borough East	-	-	-	-	+	-	-	-	+	X		
Kodiak	City of Kodiak	-	-	-	-	+	-	-	-	+	X		
Pier 1											X		
Pier 2											X		
Old Harbor	City of Old Harbor	-	-	-	-	+	-	-	-	+	X		
Ouzinkie	City of Ouzinkie	-	-	-	-	+	-	-	-	+	X		
Port Lions	City of Port Lions	-	-	-	-	+	-	-	-	+	X		
Sand Point	City of Sand Point	-	-	-	-	+	-	-	-	+	X		
Unalaska (Dutch Harbor)	City of Unalaska	-	-	-	-	+	-	-	-	+	X		

With changes in area populations and travel demand as well as developments in technology, new terminals can be considered to improve the level of service (LOS), reduce operating costs, or reduce environmental impacts. Two new terminals are currently being considered but additional analysis is required before they would be included in the LRP.

- A new terminal at Cascade Point, several miles north of the current Juneau terminal at Auke Bay, could provide significant travel time savings for trips in the Lynn Canal. The cost and environmental impacts of the new terminal need additional study to fully understand the costs and benefits of a new facility.
- Travel times from Ketchikan to Metlakatla could be reduced from a new South Tongass terminal near Saxman, which could also reduce energy requirements if a new low-emission hybrid-electric ferry were constructed for this service. The feasibility and impacts of this new terminal and service also need additional study.

2.3.2.1 Facility Maintenance

Surveys of the above-water components of each facility are completed biennially and underwater inspections are performed over a five-year cycle. Facility inspections include a Shore Condition Survey (SC) for regular updates on and recommendations for marine facilities, a Routine Bridge Inspection (RB) to ensure bridge structures meet FHWA standards, an Underwater Inspection (UW) for monitoring in-water structures, and a Fracture Critical (FC) inspection for facilities with critical structural elements lacking redundancy. The Shore Facilities report rates the in-place condition as compared to as-built condition of various components. Descriptions of condition ratings are provided in Table 7.

Table 7: Shore Facility Inspection Condition Ratings

Condition Rating		Description
0	<i>Failed</i>	Out of service, beyond corrective action.
1	<i>Imminent Failure</i>	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.
2	<i>Critical</i>	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 correction action is taken.
3	<i>Serious</i>	Corrosion, deterioration, cracking, and chipping, erosion of piers or abutments have seriously affected deck, superstructure, or substructure. Local failures are possible.
4	<i>Poor</i>	Advanced corrosion, deterioration, cracking or chipping. Also significant erosion of piers or abutments.
5	<i>Fair</i>	All primary structural elements are sound but may have minor section loss, cracking, spalling or corrosion.
6	<i>Satisfactory</i>	Structural elements show some minor deterioration.
7	<i>Good</i>	Some minor problems.
8	<i>Very Good</i>	No problems.
9	<i>Excellent</i>	New, no problems.

Figure 11 and Figure 12 show the location and overall ratings of terminals in Southeast and Southwest regions, respectively from the 2022 SCS.



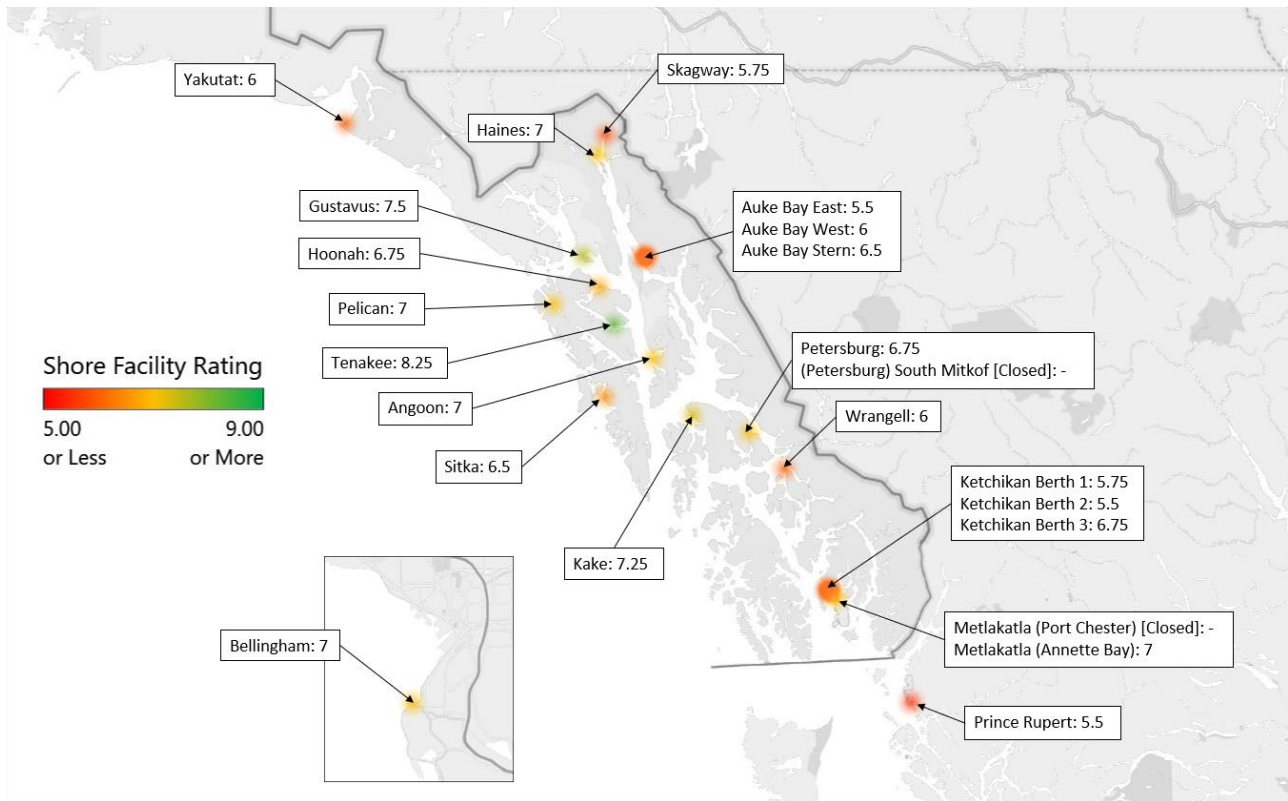


Figure 11: 2022 Southeast Terminal Inspections and Ratings

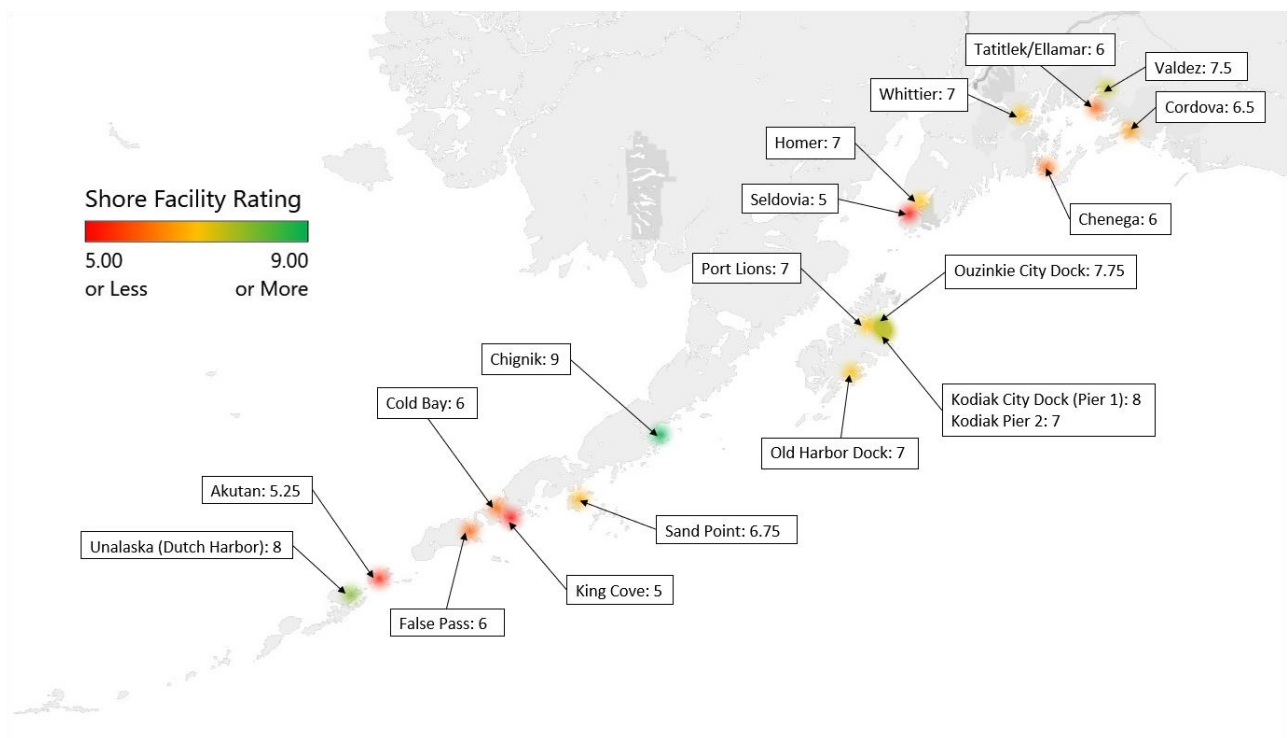


Figure 12: 2022 Southwest and Southcentral Terminal Inspections and Ratings



General terminal maintenance is funded by three “parent” projects: mooring system improvements, upland improvements, and transfer bridge improvements. These annual budgets cover much of the work required to maintain the terminals in a general state of good repair. Specific tasks are developed based on the periodic inspections or in response to specific incidents in which facility components are damaged.

More significant projects necessary to address modifications driven by changes in vessel deployment, demand, or demographics are considered capital improvements. These larger, stand-alone projects are included in the STIP when funding is available for design, permitting, right-of-way acquisition, and construction. Terminal capital improvement projects (CIP) currently under development include the following:

- Alaska Class Ferry Compatibility: The planned deployment of the *M/V Hubbard* and *M/V Tazlina*, once they have had crew quarters installed, will require improvements to the terminals at Angoon, Chenega (Bay), Cordova, Pelican, and Tatitlek.
- General Terminal Upgrades: The need for improvements larger than those covered by the annual “parent” maintenance budgets have been identified at Angoon, Auke Bay (Juneau), Pelican, and Yakutat.
- Cascade Point Terminal: A new terminal at Cascade Point is being considered to improve service on the Lynn Canal between Juneau, Haines, and Skagway, as discussed in Section 2.
- South Tongass Terminal: A new terminal at Saxman is being considered to improve service between Ketchikan and Metlakatla, as discussed in Section 2.3.2.
- Skagway Float: The existing float at the Skagway terminal is at the end of its useful service life and a new float is required. Studies are also underway to determine the costs and benefits of relocating the Skagway terminal to a new location. If the terminal were to be relocated, a new float would be included in that project.
- Cold Bay Dock: The existing dock at Cold Bay is owned by the Aleutians Borough East but is in need of replacement as it is a critical facility for the supply of potable water to the village. Replacement of the existing pier is being considered as part of an effort to improve the city’s marine facilities.
- Prince Rupert: The Prince Rupert terminal provides the most direct road access to the Lower 48 but service was discontinued during the COVID-19 pandemic and has not been reestablished. Studies and discussions are underway to determine whether the existing AMHS facility should be improved or operations should be shifted to a facility shared with BC Ferries.

2.3.3 Workforce

AMHS relies upon a dedicated workforce to keep vessels running, provide passengers with services, book reservations, maintain schedules, and keep AMHS in regulatory compliance. DOT&PF is



fortunate to have a staff committed to making a difference and creating a functioning and thriving system. AMHS staff can be grouped into three categories: vessel personnel, terminal staff and management/administrative staff. Vessel personnel must meet specific requirements, established by the USCG, for physical fitness, training, and experience. The training requirements include the Standards of Training, Certification of Watchkeeping for Seafarers (STCW). 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 Union [MEBA], and International Organization of Masters, Mates, and Pilots Union [MMP]).

Unfortunately, due to current staffing shortages in both the maritime industry and within AMHS, staff are largely overworked and vessels are often in layup status due to crewing shortages. The shortage of qualified crew members threatens the ability of AMHS to fully utilize its fleet. Being short-staffed results in vessels that are sailed with a crew operating on extensive holdovers and significant overtime status, leading to low morale. Since 2019, AMHS has lost more staff annually than recruitment efforts can replace. For every person hired, 1.8 people separated from AMHS. Figure 13 shows the total number of employees hired and separated from AMHS between 2019 and 2021. "Total Hired" includes employees from the Deck, Engine, Passenger Services, Terminals, and Shoreside departments. "Total Separated" accounts for retirements, resignations, and terminations.

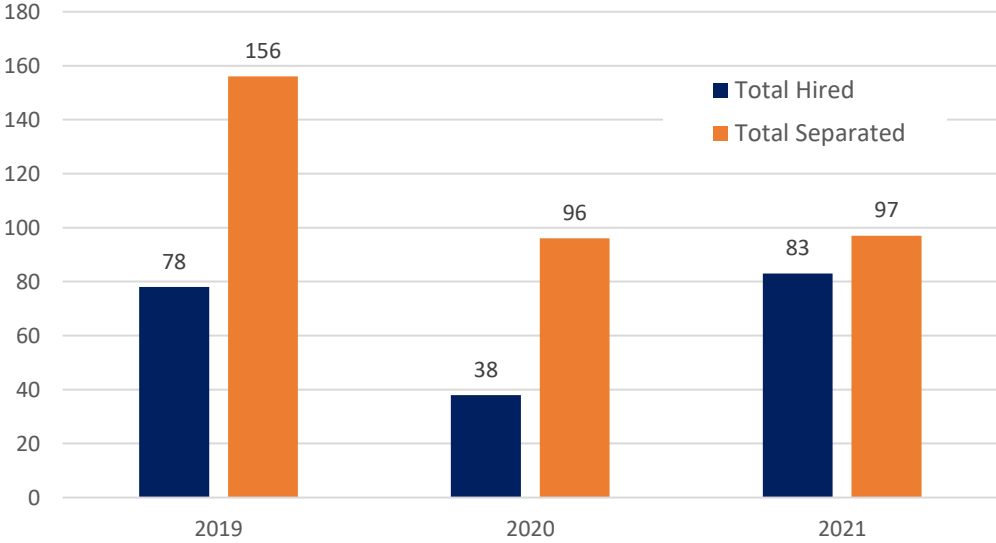


Figure 13: Employees Hired and Separated 2019 to 2021

Currently, the fleet is experiencing a crew shortage across all departments: Deck, Engine, and Passenger Services. Figure 14 shows fleetwide staffing levels in winter 2023. When shortages occur in any individual department, vessels are at risk of being taken out of service.

The nationwide competition for licensed crew has intensified in recent years. The pay that AMHS presently offers out of state crew members is out of step with other maritime employers and the federal government.

One issue currently affecting AMHS crew retention is the process through which new crew are hired. All unlicensed entry level new hires, regardless of their intended eventual departments, must enter AMHS as a steward, regardless of whether they aspire to work in

the Deck, Engine, or Passenger Services departments. After gaining seniority, these employees are able to apply for other internal postings. Employees often leave AMHS before progressing out of service as a steward. Furthermore, all crew members, regardless of department, are minimally required to receive a Merchant Mariner Credential to work aboard a vessel. The application process and time to receive the document may take up to six months. This lengthy wait-time can lead to employees separating from AMHS before starting any work with the fleet.

To move to higher positions in the fleet, both sea time and additional training is required. The time necessary for these promotions can again act as a demotivator for crew members to stay with AMHS. Additionally, it is difficult for AMHS to directly hire into these higher positions due to competition with commercial companies in the industry.

Currently, AMHS has several initiatives in place to close the gap between hires and separations. These initiatives include increasing hiring outreach through a variety of methods, such as job fairs, advertising, and social media outreach, as well as implementing changes to improve current employee satisfaction.

2.3.4 Budget and Funding Framework

AMHS's operating budget is based on the service levels approved annually by the legislature. In recent years, AMHS has seen reduced revenue due to a loss of ridership and other services. Simultaneously, contracted crew levels and vessel availability have made it challenging for AMHS to scale up service levels to appropriate levels. Table 8 shows the revenue/funding source and operating expenses for AMHS from FY2019 through FY2022. More information can be found on the "AMHS Annual Financial Report for 2022" on the AMHS website.

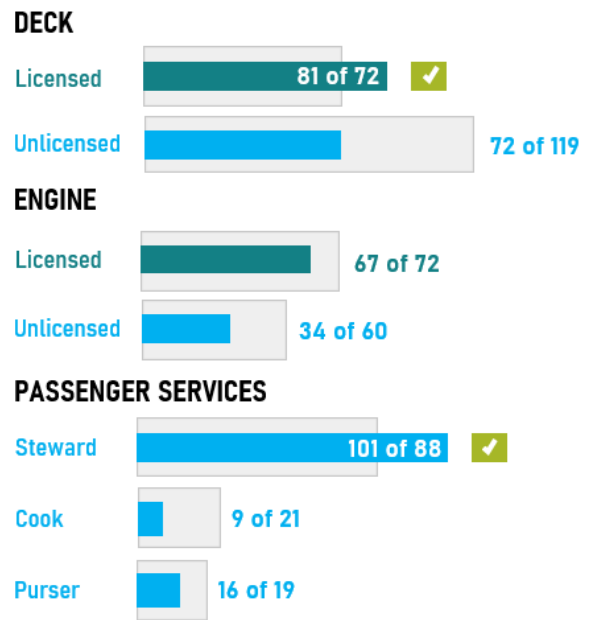


Figure 14: Winter 2023 Staffing Levels (actual vs preferred)



Table 8: Revenue and Expenditure FY2019 – FY2022

<i>(Expressed in actual \$ Millions)</i>	2019	2020	2021	2022
REVENUE				
<i>Customer Fares</i>	50.8	28.3	27.9	31.3
<i>General Fund Allocation</i>	86.0	45.8	53.1	7.5
<i>AK Motor Fuel Tax Fund</i>	3.6	3.6	3.6	1.8
<i>Federal Highway Administration</i>	-	-	-	59.0
<i>Federal Transit Administration</i>	-	-	-	37.5
<i>Gaming Tax Appropriation</i>	10.1	-	-	-
<i>Transfer from Inv Loss Trust</i>	-	-	1.6	-
<i>Transfer from AIDEA</i>	-	-	14.5	-
<i>Overhauls (capital)</i>	-	-	(15.0)	-
<i>Restricted Funds</i>	0.4	0.7	0.3	0.6
<i>Additional Appropriation</i>	5.1	(5.0)	5.5	(2.6)
Total Revenue	156.0	73.4	91.5	135.1
OPERATING EXPENSES				
<i>Vessel Operations</i>	120.8	79.8	81.0	89.1
<i>Shoreside Costs</i>	16.9	12.7	13.0	15.4
<i>Allocated Costs</i>	3.2	2.1	2.1	1.9
Total Operating Expenses	140.9	94.6	96.1	106.4

2.3.4.1 Historical Funding Sources

Historically, AMHS has been funded by a combination of user revenues and funding support from the government. The latter has traditionally included allocations from the State general fund and a portion of the State’s fuel tax. Between 2015 and 2020, the allocation of State funding decreased each year. In FY2022, the State funding was proposed at \$55.2 million and the actual spend in FY2022 was only \$7.5 million due to an infusion of \$96.5 million in federal funds: \$59.0 million from the Federal Highway Administration (FHWA) and \$37.5 million from the Federal Transit Administration (FTA). Table 9 shows the annual State appropriation each year from FY2012 to FY 2021.



Table 9: Annual State Appropriation History FY2012 to FY 2021⁸

(Expressed in actual \$ Millions)	Unrestricted General Funds	AMHS Fund	Other	Supplemental	Total Budget
FY2012	\$116.8	\$60.3	\$2.1	-	\$179.2
FY2013	\$123.8	\$55.1	\$2.3	-	\$181.2
FY2014	\$116.8	\$54.4	\$2.2	-	\$173.5
FY2015	\$119.7	\$54.4	\$2.1	-	\$176.2
FY2016	\$96.7	\$60.4	\$2.8	-	\$159.9
FY2017	\$88.7	\$54.5	\$1.9	-	\$145.1
FY2018	\$81.5	\$60.4	\$2.2	-	\$144.1
FY2019	\$86.0	\$55.3	\$2.2	-	\$143.5
FY2020	\$46.0	\$51.6	\$1.9	\$7.0	\$106.5
FY2021	\$54.0	\$56.4	\$0.9	-	\$111.3

The ratio of revenues compared to total operating cost is used as a performance measure by many transportation agencies. Known as the Fare Box Recovery Rate, this varies widely for ferry systems. For example, Washington State Ferries has averaged 75 percent fare box recovery for the past 10 years. The average farebox recovery rate for AMHS between 2010-2020 was approximately 30 percent⁹.

2.3.4.2 Infrastructure Investment and Jobs Act

The Infrastructure Investments and Jobs Act (IIJA) is the largest federal investment ever made in public transit. It provides \$550 billion dollars over five years for repairs and upgrades to infrastructure in the U.S. Of those funds, \$1 billion is allocated to ferry-specific projects, including funds for rural ferry services restricted to services with an eligible route segment greater than 50 miles, which allows Alaska to collect a majority of the funds. The bill also sets aside \$250 million dollars for a pilot project electric or low emission ferry, with a provision requiring one of the pilot tests to occur in AMHS. Next, \$342 million is set aside for the construction of ferry boats and ferry terminals facilities, of which Alaska is expected to receive \$73 million.

2.3.5 Charting the Course Towards Thriving Communities Initiative

The status of each of the four pillars of service is being monitored as part of the Charting the Course (CTC) initiative that looks to educate, provide information and updates on progress, and gather feedback from the public on the health of the system. Like many agencies in Alaska and the U.S., the system is facing unprecedented challenges related to its aging fleet and terminal facilities and workforce shortages which make it difficult to provide sufficient crew to meet a basic, baseline service schedule with minimal vessel assets.

⁸ AMHS Operating Budget Overview Presentation, June 24, 2020, https://dot.alaska.gov/comm/amh-reshaping-workgroup/docs/Presentation_AMHS-Operating-Budget-Overview_6_24_2020.pdf

⁹ AMHS Fare Box Recovery Rate 1991-2022 Gov., https://omb.alaska.gov/html/performance/ABS/index_kpm_dept_25.html



Charting the Course Towards Thriving Communities was established in October 2022 as an agency initiative to monitor and improve communication of the health of the system’s critical elements. The CTC initiative regularly reports on fleet, budget, and crew metrics, and presents current service levels for each of the 10 AMHS service areas. Community engagement efforts including general outreach, public comment, and/or Ferry Focus Groups (FFGs) help to identify service needs and existing community resources that could inform future AMHS schedules and provide opportunity for communities to hear directly from AMHS leadership on current system challenges, risks, and opportunities.

In addition to reporting on the health of critical system elements such as fleet, crew and budget, CTC identifies stages as the health of each critical system element improves. The first stage is identified as **Stabilization** where investments and initiatives are focused on improving the reliability of baseline service schedules. The second phase is **Recovery** where system improvements and investments begin to take hold and provide a positive impact on reliability. **Full Steam Ahead** is achieved when reliability is stable, service is restored, and critical system health elements support increased service levels.

2.4 Needs Assessment

As a pre-requisite of long-range planning, identifying gaps/needs in existing infrastructure and operational elements can shed light to future initiatives, strategies, metrics, or investments needed to meet the priorities, goals, mission and vision of AMHS. The LRP will serve to bridge these gaps with short-, medium- and long-term strategies and investments that will be identified in Phase 2 of the LRP with an outlook to 2045. As part of the 3-year outlook of Phase 1 of the LRP, documented in this report, each of the needs and proposed investments are focused on stabilization of the system. The list below identifies the key needs to be addressed in the Interim Long-Range Plan (CY2024-CY2026).

Fleet

- Vessel retirement and replacement schedule.
- Fleet-wide maintenance strategy to address equipment reliability.
- Asset management system to track the lifecycle of each vessel component and facilitate proactive maintenance planning.
- Root causes of deficiencies program in vessel design and systems.
- Fleetwide environmental sustainability program that promotes energy-saving measures in operations.
- Comprehensive risk management framework to identify and mitigate potential hazards and vulnerabilities.

Shore Facilities

- Integrated terminal program planning within AMHS.



- Comprehensive facility asset management plan for terminals. The current system of inspection and repairs is adequate for short-term maintenance but a plan with a longer forecasting timeframe would help establish future maintenance budgets to support long-range budget forecasting.
- Shore facility resiliency plan to address specific risks presented by sea level rise and climate change and mitigation at each terminal.

Workforce

- Continued work within Labor Relations, in collaboration with union partners, to develop a strategy for addressing crew wage and benefits gaps relative to market conditions.
- Targeted and amplified recruitment efforts to increase the number of new hires.
- Evaluation of the issues experienced by current employees to inform strategies to mitigate the number of separations.
- Implementation of intensive safety training to foster an overarching culture of both crew and passenger safety and wellbeing.

Technology

- Improved internet connectivity onboard for both crew and passengers.
- Improved reservation system that aligns with the industry best practices.
- Implementation of scheduling software for the crew and the fleet.
- Integrated scheduling scenario tool to assist with budgeting, crewing, and level of service decisions.

Budget and Funding Framework

- Integrated long-range infrastructure capital program plan.
- Improved financial forecasting and financial reporting.



3. Engagement Plan

The LRP will be strengthened through engagement with stakeholders from the diverse communities AMHS serves. Collaboration with a variety of stakeholder groups will occur throughout all phases of LRP development, and feedback will be used to inform development and review of the LRP. Feedback and updates will be shared between stakeholder groups using a strategy of cascading information to ensure that engagement is efficient and productive.

Many existing community resources have participated and will continue to provide input throughout the development of the LRP. Some of these resources include:

- **AMHS Technical Advisory**

This group of internal stakeholders serves as the core technical advisory committee for the development of the LRP. This group is regularly engaged in the development and review of LRP elements, and provides guidance based on AMHS’ existing conditions.
- **DOT&PF Advisory**

The DOT&PF Advisory group includes representatives from various departments to provide oversight and assurance that the direction of the LRP is in line with DOT&PF’s existing and planned goals and initiatives.
- **AMHOB**

AMHOB is comprised of the deputy commissioner of DOT&PF assigned to AMHS and eight public members. AMHOB serves to provide recommendations on the 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 plan development.
- **Ferry Focus Groups**

As a part of CTC, DOT&PF initiated FFGs to engage with local stakeholders more specifically. These service area-specific groups were formed to gain local input for service schedules, supplemental service opportunities, and event occurrences. The first round of FFGs occurred in April 2023, with five separate virtual focus groups. These meetings established the groups, began to gauge service schedule feedback, and explored ways to increase awareness for and attendance of the meetings. These groups are planned to meet on a quarterly basis.
- **Southwest Alaska Municipal Conference**

The Southwest Alaska Municipal Conference (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 development¹⁰.

- Southeast Conference

As the state and federally designated regional economic development organization for Southeast Alaska, Southeast Conference (SEC) serves as the collective voice for advancing the region's economy. SEC has 180 member organizations representing 1,200 people from 32 regional communities¹¹.

- Public Comment Solicitation

Community members have the opportunity to provide public comment at any time through the Public Comment platform on the AMHS or CTC websites. Public comment solicitation on the LRP webpage will focus requested feedback on issues related to the LRP.

¹⁰ Source: SWAMC. <https://swamc.org/about/>

¹¹ Source SEC Mission Statement. <https://statics.teams.cdn.office.net/evergreen-assets/safelinks/1/atp-safelinks.html>



4. AMHS Mission & Vision Development

AMHS is an essential service to many of Alaska’s otherwise isolated communities as it provides lifeline connections and transportation for people, goods, and services. The AMHS LRP serves to provide a vision to guide the system through 2045 by identifying short-, medium-, and long-term investments. The development of this vision is informed by the priorities and goals highlighted in the following sub-sections, which were identified through system analysis and supported by input and recommendations by Alaskans.

Mission and vision statements will be recommended with these defined priorities in mind. Existing and ongoing planning efforts including AMHOB and existing long range transportation plans (LRTPs) have proposed priorities, strategies, vision, and mission statements that will be referenced in the development of the LRP. Existing statements will be used as a baseline upon which to build future iterations.

As proposed by members of the AMHOB, AMHS is envisioned as an essential and sustainable transportation mode vital to the economic and social well-being of coastal communities, characterized by operational excellence.

The existing mission of AMHS is to provide safe, reliable, and efficient transportation of people, goods and vehicles among Alaska 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.



5. Priorities, Goals, and Performance Measures

As stated in Section 1.2, the purpose of the LRP is to outline priorities for AMHS, propose strategies to approach these goals, and identify performance metrics to measure progress toward the envisioned system. The first stage of this, identifying priorities, involves synthesizing existing planning materials, including those introduced in Section 4, to gauge historical trends and system weaknesses.

Two such planning materials are the existing Long-Range Transportation Plans (LRTPs), *Let's Keep Moving 2036* and *Alaska Moves 2050*.

Let's Keep Moving 2036 envisioned a transportation network that enabled a robust and growing economy. The plan prioritized investment in modernization and promoting economic vitality. The plan prioritized investment in the following categories:

- Modernization
- Economic Vitality

Alaska Moves 2050, drafted in 2022, superseded *Let's Keep Moving 2036* as the State's LRTP. This multimodal plan set forth six priority areas:

- Safety
- Economic Vitality
- State of Good Repair
- Resiliency
- Sustainability

The AMHS LRP, expected in 2024, will fit into the vision outlined in the LRTP, focusing on the role of AMHS within the larger context of Alaska's multimodal transportation network. To kick off the current LRP, workshops were held in October 2022 and April 2023 with members of AMHOB and DOT&PF to begin identifying priorities and goals. From these workshops, six main priorities were identified:

- Fleet Modernization
- Service Level Improvement
- Leverage Sales and Marketing
- Employee Support and Retention
- Vessel Maintenance and Replacement Plan
- Funding



In addition to this input from AMHOB, AMHS staff will identify a comprehensive list of internal priorities and strategies focused on operations and management.

In combination with the DOT&PF Goals and Strategic Investment Areas, the priorities identified by AMHOB and AMHS staff will inform the goals set forth in the AMHS LRP. This work is ongoing and will be strengthened in Phase 2 of the LRP effort, which will structure these focused elements into a framework of **goals and priorities** that will guide AMHS planning and investment, **strategies** that will include implementable actions in the short-, medium-, and long-term, and **metrics** for accountability.

The following sections identify goals, initiatives, and performance measures for the preliminary list of LRP priorities, which are:

- Level of Service
- Safety
- Customer Experience
- Workforce Support and Development
- Capital Improvement
- Operational Support Infrastructure

5.1 Level of Service

5.1.1 Background

Level of Service (LOS) is a measure used in transportation planning to assess the quantity and quality of service provided by a system. LOS can be defined in different ways depending on the mode of transportation and type of service. For the purposes of AMHS planning efforts, LOS is defined as the number of port calls that each system community receives seasonally.

5.1.2 Goals

- Establish seasonal minimum and target LOS for each community.

5.1.3 Initiatives

A framework must be established to determine the minimum and target LOS. To begin development of the LOS framework, AMHOB's input was solicited to establish a set of community characteristics relevant to determining LOS requirements. These characteristics, which represent a community's access to core needs, resources, and community connections, can be used to assess community needs. From the characteristics compiled and prioritized by AMHOB, communities can be grouped into typologies. These typologies can then be assigned minimum and target LOS for the system to meet. Once these minimum and target levels are established, workforce, fleet, and budgeting plans can be created that create a path for the system to meet the LOS.



In Phase 2 of the LRP, feedback from AMHOB will continue to be gathered and additional feedback from community representatives will be collected. The LOS framework will be finalized in Phase 2 and will be used to inform the vessel and crewing strategies over the twenty-year planning horizon.

5.1.4 Performance Measures

Once a minimum and target LOS is defined for each community, the following measure can be tracked to assess performance relating to LOS:

- Track actual LOS provided against minimum and target LOS.

5.2 Safety

5.2.1 Background

Safe operation is fundamental to modern ferry operations. In the United States, ferries fall under the regulatory purview of the USCG mandated by the U.S. Code of Federal Regulations, primarily Title 33, Navigation and Navigable Waters, and Title 46, Shipping. AMHS vessels are also overseen by a third-party classification society, ABS, which sets requirements for construction and adherence to a formal Safety Management System (SMS). Safety is designed into the vessels, overseen during construction, and verified through periodic inspections.

A recent evaluation of AMHS¹² noted “a strong reference to safety from its discussions with crew members across the fleet.” However, the evaluation identified several specific risk areas:

- A lack of maintenance data input leading to a potential breach of International Safety Management regulations (ISM).
- Outdated or legacy technology: examples include limited onboard connectivity, system links or data uploads impacting communications and invalidating maintenance toolset utilization such as Asset Management Operating System (AMOS).
- Incomplete or less than best-practice training: issues noted with the overarching principles of crew training, include limited facilities available for onboard crew training, and limited mechanisms for funding travel and accommodation for crew in training.

Another aspect of safety is the interaction with the flag state, specifically deficiencies reported as the result of periodic inspections. In the United States, this can be measured by the number of USCG Form 835 reports that have been issued to the operator.

¹² Elliott Bay Design Group, "Comprehensive Evaluation," 22039-007-801-1. Seattle, WA



5.2.2 Goals

Keeping both passengers and employees safe is a priority for AMHS and for DOT&PF. One of the goals identified in the draft DOT&PF LRTP *Alaska Moves 2050* is to maintain and continuously improve the safety of the transportation system for all users.

- **Reduce passenger injuries:** since 2014, passenger injuries have generally decreased from a high of 2.19 per 10,000 passengers to a low of 1 per 10,000 passengers in 2019. Figure 15 shows the number of passenger injuries each year from 2007 to 2022. In 2014 and 2019 the system transported 319,004 and 190,118 passengers, respectively. The accident rate has varied between one injury per 4,557 passenger (2014) to one injury per 10,006 passenger (2019).

The goal for passenger injuries is to be below the 10-year average from 2011 to 2020, equal to less than one injury per 6,772 passengers carried.

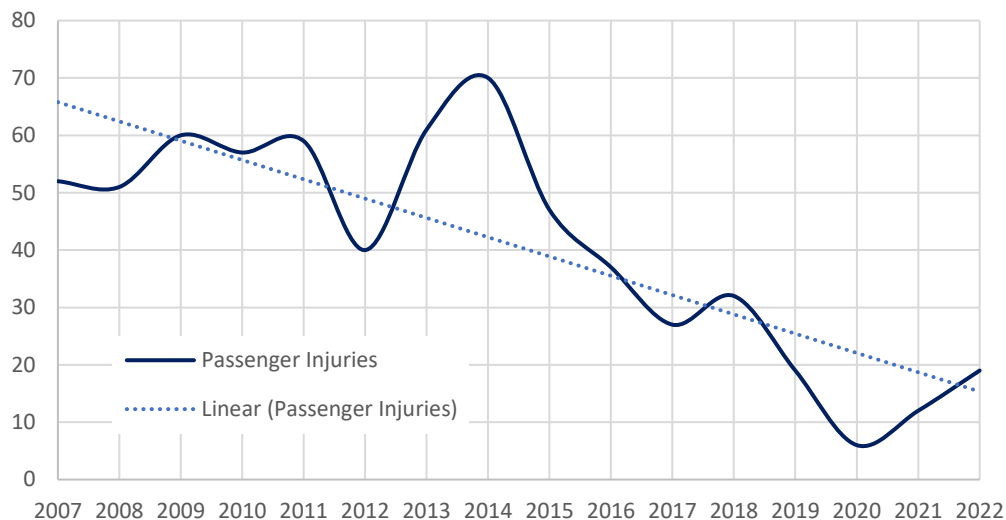


Figure 15: Passenger Injuries 2007 – 2022

- **Reduce employee injuries:** unfortunately, employee injuries have not followed the same trend. The highest number of injuries (excluding personal illness or family emergencies) was 307 in 2014 and the lowest was 86 in 2020. However, 2020 and 2021 had reduced service/ridership due to the COVID-19 pandemic. Between 2010 and the beginning of 2023 there were a total of 2,801 injuries. The top two most common injuries were slips/trips/falls (584) and lifting/moving objects (502). Figure 16 shows the number of employee injuries between 2010 and 2022. Over the same period, AMHS had 37 lost-time injuries with 2,856 lost workdays.



The goal for employee injuries is to be below the 2019 injury level (representing the last year of service before COVID-19 impacts).

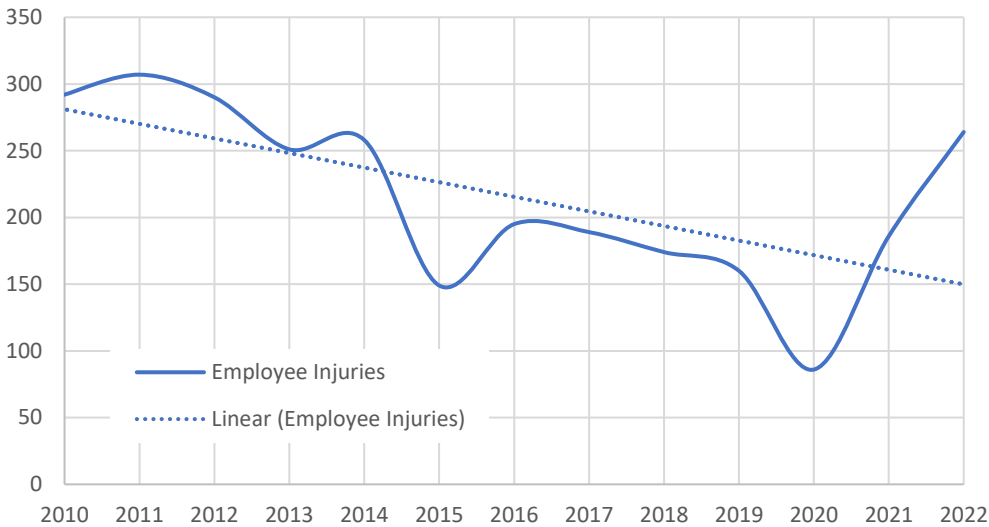


Figure 16: Employee Injuries 2007 – 2022

5.2.3 Initiatives

AMHS is undertaking several initiatives to improve safety, beginning with replacement of the older vessels in the fleet and active recruitment of new vessel staff which will provide an opportunity to reinforce the existing safety culture onboard AMHS vessels. This will also reduce the risk of fatigue due to crews needing to be “held over” due to insufficient crewing reserves.

Additionally, AMHS is rewriting their SMS to bring it up to date with current policy and procedures and is creating a Safety Action Plan with safety goals and initiatives for next year. The plan and goals will be reviewed regularly.

AMHS plans to have crew members attend a yearly crew safety conference. Furthermore, AMHS will conduct wheelhouse assessments on each vessel to assess operations and good bridge resource management.

5.2.4 Performance Measures

The critical key performance indicators for safety will include the following:

- Passenger Injury Rate
- Crew Injury Rate
- Vessel Deficiencies



5.3 Customer Experience

5.3.1 Background

AMHS emphasizes customer experience by tracking and monitoring public opinion. Though AMHS is an essential lifeline service for Alaskan communities, providing a high level of comfort and hospitality remains a core value. Interactions with crew, access to amenities, and quality of service are aspects of customer experience that can be measured to gauge success in achieving a positive overall customer experience.

5.3.2 Goals

- **Customer Satisfaction:** provide and maintain a high level of customer service and satisfaction.
- **Consistent Improvement:** monitor and track areas of growth to consistently improve on service provided.
- **Customer-Oriented Mindset:** foster a passenger-oriented mindset among crew and staff.
- **Crew training:** use customer feedback to guide improvement measures and goals for crew training.

5.3.3 Initiatives

The following initiatives will continue to be used to facilitate community feedback on AMHS services. These initiatives provide valuable insights for prioritization and planning efforts.

5.3.3.1 On-Board Surveys

Surveys are distributed to customers after their trip to help gauge customer satisfaction and experience. One part of the survey asks customers to rate various aspects of their experience on-board on a scale of 1 to 5. From 2019 through 2023 (to date), the system received a total aggregate score of roughly 4.3, with little variation from year to year (Figure 17). The lowest scoring categories have consistently been related to amenities on the vessel, meal quality and choices, and movies and/or play areas for children. Courtesy, helpfulness, attitude, and appearance of the crew consistently received the highest ratings.



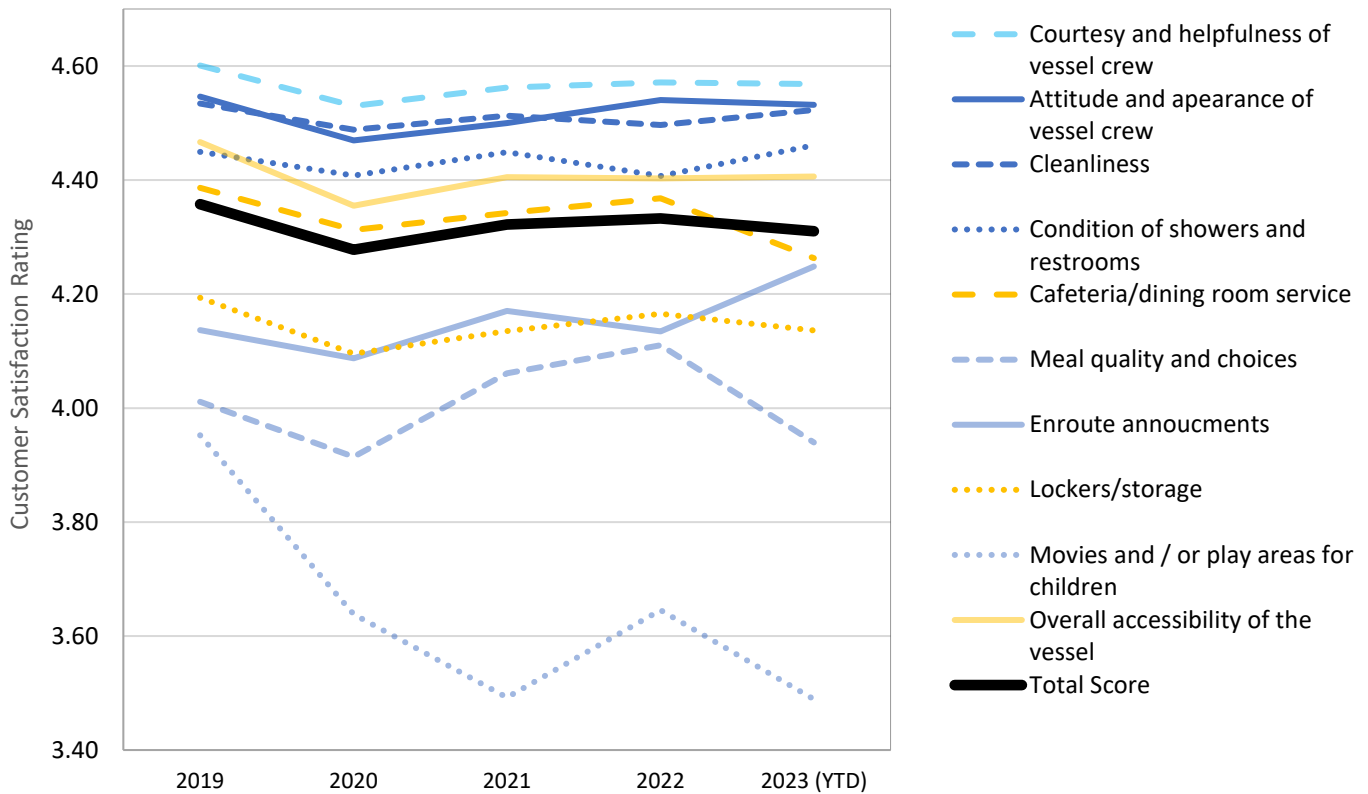


Figure 17: Customer Satisfaction Survey Results

5.3.3.2 Ferry Focus Groups

As a part of the CTC initiative, DOT&PF has formed and is facilitating FFGs to more effectively engage with communities served by AMHS. While this effort is focused on gaining input for future service schedules, these forums allow for an open discussion between community members and DOT&PF personnel, allowing individuals to share feedback of any kind.

5.3.3.3 Public Comment Forums

Customers are welcome to provide public comment through the AMHS website, either as a response to published service schedules, or to share general feedback.

5.3.4 Performance Measures

To monitor the health and progress of the customer experience on AMHS ferries, AMHS will use a series of performance measures informed by customer feedback in areas such as:

- **Comfort and safety:** evaluate passenger satisfaction in regard to comfort and safety while sailing.
- **Amenities:** evaluate customer satisfaction with the availability and quality of amenities.



- **Quality of interactions with crew members:** evaluate passenger satisfaction with crew member interactions aboard vessels.
- **Access to information:** evaluate passenger satisfaction with ability to access information in all stages of experience with the ferry system, from booking to sailing.

5.4 Workforce Support and Development

5.4.1 Background

Vessel crews are a vital part of AMHS. Currently, the system faces several issues concerning crewing levels, particularly in hiring and training staff to replace retiring and separating crew members. Due to current limitations in the pools of both unlicensed and licensed crew, there are often one or two vessels in layup due to crewing shortages. Supporting, growing, and developing the AMHS workforce is crucial to the system's health.

5.4.2 Goals

- **Recruitment:** Attract a larger pool of applicants, particularly residents of Alaska.
- **Maintain crewing levels:** Maintain crewing levels sufficient to minimize crew-related vessel layups.
- **Maintain crew relief pools:** Maintain crew relief pool levels sufficient to allow for planned and unplanned crew leave.
- **Retention:** Retain employees from new hires to the highest positions within the system.

In addition to the goals outlined in this section, crew safety is also of the utmost importance and will be targeted as outlined in Section 5.2.

5.4.3 Initiatives

To improve and grow the AMHS workforce, several initiatives have been implemented. These initiatives target the goals of improving recruitment, retention, and safety.

5.4.3.1 Employee and Passenger Safety

AMHS currently provides a mandatory five-day orientation followed by a three-day post-hire training. This training provides information necessary for the general success and safety of employees. To further improve the safety of employees and passengers, AMHS will adopt a continuing safety program for employees and reward safe practices. These orientations and trainings will be continued and improved upon.

5.4.3.2 Compensation and Benefits

Recent crew exit surveys have shown that one of the most common reasons cited for voluntary separations is insufficient compensation. Additionally, the system is unable to attract out-of-state



licensed mariners due to low non-resident salaries and lack of travel pay. To address this, AMHS is performing a market analysis of comparable ferry system wages and seeking approval to provide travel pay to out-of-state employees.

5.4.3.3 Recruitment

AMHS has initiated efforts to increase the level and breadth of recruitment. These initiatives include frequent attendance at job fairs and school recruitments, diversification and increased number of advertisements, and growth of social media presence. AMHS has also contracted with PeopleAK to attract additional applicants. These existing recruitment efforts will be continued and expanded upon. The results of recruitment efforts will be analyzed to identify initiatives with the greatest impacts.

5.4.3.4 Retention

AMHS has been working to improve employee satisfaction and identify policies and procedures that may cause employees to separate from the system. As mentioned in Section 3, all unlicensed entry level new hires must enter the system through the Passenger Services Department as a steward, which can often lead to early employee resignations. To reduce these early separations, AMHS is evaluating a reorganization of the current entry process for new employees to allow for immediate placement into employees' target departments. Additionally, AMHS will continue to identify initiatives to increase employee satisfaction, such as additional training programs, streamlining cumbersome processes, and maintaining crew positions in the off-season.

5.4.4 Performance Measures

To monitor the health and progress of the system's crewing levels, AMHS will use a series of performance measures, such as:

- **Staffing levels:** evaluate staffing levels by position and identify positions with shortages or that are at risk of experiencing shortages.
- **Hires and separations:** evaluate the number of hires and separations and whether the system's crew is growing or shrinking.
- **Relief pool levels:** evaluate relief pool staffing levels by position and identify positions with shortages or that are at risk of experiencing shortages.
- **Employee satisfaction:** evaluate the satisfaction of crew members and identify reasons for voluntary separations.

In addition to the measures outlined here, crew safety measures will also be tracked as outlined in Section 5.2.



5.5 Capital Improvement

5.5.1 Background

AMHS is vital to the health of Alaska’s communities and economy. DOT&PF’s *Let’s Keep Moving 2036* and the draft *Alaska Moves 2050* provides strategic goals for all modes of transportation, which are translated through all DOT&PF’s activities as Strategic Investment Areas.

Reliability has been identified as an issue for AMHS, as the system has faced increased risk of delayed or cancelled sailings associated with mechanical failures resulting from an aging fleet, weather delays, and limited available funding levels and operating budgets. In addition to these trends, AMHS is also facing significant challenges with hiring qualified staff, a trend that is being observed by many ferry systems across the United States.

Fleet CIPs address larger maintenance or refurbishment items that cannot be completed while the vessel is in operation and are not covered under a normal vessel overhaul (as discussed in Section 6.2.3) but are necessary to keep the fleet operational. CIPs can also include major modifications to the vessel that improve its operation or expand the routes on which it can operate. CIPs include work that may be required to meet new or updated regulations. To operate, AMHS vessels must meet the inspection requirements of and standards of safety and seaworthiness for ABS and USCG. AMHS must also meet additional requirements for the two vessels that have SOLAS certifications.

Like the fleet, terminals require regular maintenance and CIP projects to remain functional. It is important that terminals be in good working condition for the safety of the vessels, crew, and passengers.

5.5.2 Goals

Some of the goals identified in the *Let’s Keep Moving 2036* and the draft *Alaska Moves 2050* relating to capital improvements are:

- **Safety:** provide for and continuously improve the safety of the transportation system for all users.
- **System Preservation:** manage the Alaska Transportation System to meet infrastructure condition performance targets and acceptable levels of service for all modes of transportation.
- **State of Good Repair:** plan for full lifecycle costs across the transportation system, including planning, construction, operation, and maintenance to improve funding allocation in a consistent and effective manner.
- **Economic Vitality:** monitor and consider statewide economic trends, such as job creation, access to jobs, and workforce training, and plan for and invest in transportation infrastructure that facilitates and supports economic growth and lowers the cost of goods and services.



- **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.
- **Modernization:** improve the quality and safety of the existing transportation system through improvements that support productivity, improve reliability, and reduce safety risks.
- **Sustainability:** promote a sustainable, clean, equitable transportation system to reduce costs to consumers and businesses and provide wider social and environmental benefits.
- **Economic Development:** promote and support economic development by ensuring safe, efficient, and reliable access to local, national, and international markets for Alaska's people, goods, and resources, and for freight-related activity critical to the State's economy.
- **Livability, Community, and the Environment:** incorporate livability, community, and environmental considerations in planning, delivering, operating, and maintaining the Alaska Transportation System.

5.5.3 Initiatives

The DOT&PF is working to stabilize AMHS through immediate investment in vessels and shoreside infrastructure, with a focus on building a sustainable and reliable marine highway system that safely and reliably transports people where they need to go while offering consistent service levels needed to support economic growth. The CIPs that are identified within this plan are intended to help the system meet the goals outlined above.

5.5.3.1 Safety/System Preservation/State of Good Repair

Projects relating to Safety, System Preservation, and State of Good Repair are:

Fleet CIPs:

- **Matanuska Safety Improvement and Steel Repair Project¹³:** This project completes the necessary modifications to be in compliance with SOLAS regulations including refurbishing and renovating passenger accommodation staterooms to remove dead end corridors and converting the Chief Mate's stateroom into a SOLAS-compliant Safety Center. Additionally, this project will remove and replace excessive corrosion in the voids and ballast tanks.
- **Columbia Controllable Pitch Propeller Replacement:** This project replaces the CPP system, Fire Detection System, and upgrades the existing Alarm and Monitoring System.

¹³ Scope of project is subject to upcoming discussion with USCG scheduled for September 2023.



- **Kennicott Emissions and Exhaust Upgrades:** This project upgrades the emissions and exhaust systems to assure compliance with Alaska Department of Environmental Conservation and U.S. Environmental Protection Agency.

Terminal CIPs:

- **Cold Bay Dock Replacement¹⁴:** This work includes a cost/benefit assessment of the existing dock to determine whether extensive repairs or complete replacement would represent a better investment.
- **Mooring Improvements at Auke Bay (Juneau):** The work includes replacing deteriorated mooring dolphin structures and installing cathodic protection anodes.
- **Kake Ferry Terminal Improvements:** This project involves the design and construction of crucial improvements for the Kake Ferry Terminal to enhance safety, functionality, and accessibility for marine operations.
- **Skagway Ferry Terminal Relocation or Improvements¹⁵:** A cost/benefit analysis is required to determine whether relocating the AMHS terminal or making improvements to the existing terminal, including replacing the aging float, would represent a better investment for AMHS.
- **Yakutat Ferry Terminal Improvements:** This project involves the design and construction of crucial terminal improvements to enhance safety, functionality, and accessibility for marine operations.

5.5.3.2 Economic Vitality/Modernization/Resiliency

Projects relating to economic vitality and modernization include new service vessels and new terminals. Resiliency projects include fleet modernization, vessel replacement, and terminal upgrades.

Planned new service vessels:

- **Tustumena Replacement Vessel (TRV):** This project constructs a replacement vessel for the *M/V Tustumena*.
- **Mainline Replacement Vessel (MRV):** This project will provide AMHS with a vessel to replace one of the aging mainline vessels. The new vessel will also enhance the currently provided transportation of passengers, vehicles, and freight.
- **No-Low Emission Vessel:** This project designs and builds an electric or low-emission ferry to replace the *M/V Lituya* using funding received from the IIJA.

Planned fleet modernization projects include:

¹⁴ Dock is owned by Cold Bay. Grant funding has been applied for and is awaiting decision of award.

¹⁵ Project under review and may not proceed.



- **Tazlina Crew Quarters Addition:** This project will add crew sleeping quarters, a galley, scullery, and mess facilities to allow the vessel to serve on routes over 12 hours, expanding the area of operation for the *M/V Tazlina*.

Planned new terminals include:

- **Cascade Point Terminal¹⁶:** This project builds a new ferry terminal facility for ACF vessels.
- **Pelican Ferry Terminal:** This project builds a new ferry terminal facility for ACF vessels. The existing terminal is currently configured for the LeConte and will not work with ACF vessels.
- **South Tongass Ferry Terminal¹⁷:** This project includes construction of a new end berth facility at the Saxman seaport for the *M/V Lituya*.
- **Tatitlek Ferry Terminal:** This project includes construction of a new end berth ferry terminal facility to accommodate *M/V Aurora* and the ACF vessels. Improvements would include a new end-loading ferry terminal structure including a vehicle transfer bridge and bridge support float (or lift bridge support) at the location of the existing tidal ramp ferry facility.

Planned terminal upgrades include:

- **Angoon Ferry Terminal Improvements:** This project includes installation of marine structures to accommodate the ACF vessels and modifications to the intermediate ramp/apron lift system controls to improve reliability.
- **Chenega (Bay) Ferry Terminal:** This project includes installation of a transfer bridge and marine structures to accommodate the ACF vessels.
- **Cordova Ferry Terminal Improvements:** This project includes removal of two floating fenders and replacement with fixed-fender dolphins and catwalks for improved mooring and line handling along the face of the dock. It also includes modifications to the stern berth required to accommodate the ACF vessel which includes a new fixed-fender dolphin and removal of submerged debris.

5.5.3.3 Sustainability

DOT&PF has created a Sustainable Transportation Plan¹⁸, a multimodal transportation program, in order to meet the needs of the present without compromising the ability of future generations to meet needs of the future. It involves developing sustainable transportation infrastructure with a multi-modal lifecycle approach that considers environmental quality, economic development, and social equity.

¹⁶ Project under review and may not proceed.

¹⁷ Project under review and may not proceed.

¹⁸ Sustainable Transportation Plan, <https://dot.alaska.gov/stwdplng/cip/stip/projects/STP.shtml>



The Sustainable Transportation Program will help communities thrive through transportation investments that promote reduced greenhouse gas emissions, energy independence, efficiency, low-cost transportation, and a healthy environment. Ongoing and future projects relating to AMHS include:

- Sustainable Transportation Research
 - No/-Low Emission Ferry
 - Renewable Diesel
 - Automation through Digitization
- Fleet Modernization
 - TRV – Hybrid
 - No/-Low Emission Shuttle Ferry – Electric/Hybrid
 - MRV – Diesel Electric
 - Shoreside Charging – Port Electrification

Other work that has already been completed is the development of Ship Energy Efficiency Management Plans (SEEMPs) for the *M/V Matanuska* and the *M/V Kennicott*. The SEEMP outlines best practices to be followed on board and within the organization to support the maximum efficiency of the vessel. The SEEMP is a living document that continues to be refined and modified throughout the life of the vessel.

5.5.4 Performance Measures

There are several performance measures that can be used to monitor CIPs such as:

- **Percentage of terminal projects completed on time and within budget:** evaluate overall performance of completing terminal projects on time.
- **Overhaul Completion on Schedule:** evaluate overall performance of completing vessel overhauls on time.
- **The quantity of outstanding maintenance requests remaining after an overhaul period by vessel:** evaluate maintenance performed vs maintenance deferred.
- **Ship Availability:** evaluate vessel availability for conformance to budgeted operating plan.

5.6 Operational Support Infrastructure

5.6.1 Background

AMHS is a complex entity with a multifaceted infrastructure supported by many shoreside departments. It is critical that operational support is both maintained and continually updated.



5.6.2 Goals

Some of the goals outlined in the *Let's Keep Moving 2036*¹⁹ and the draft *Alaska Moves 2050*²⁰ reports, as they pertain to operational support infrastructure, include:

- **System Management and Operations:** manage and operate the system to improve operational efficiency and safety.
- **System Preservation:** manage the Alaska Transportation System to meet infrastructure condition performance targets and acceptable levels of service for all modes of transportation.
- **State of Good Repair:** plan for full lifecycle costs across the transportation system, including planning, construction, operation, and maintenance to improve funding allocation in a consistent and effective manner.
- **Modernization:** make the existing transportation system better and safer through transportation system improvements that support productivity, improve reliability, and reduce safety risks to improve performance of the system.

5.6.3 Initiatives

5.6.3.1 System Management and Operation

Managing and maintaining a diverse fleet of nine vessels with different equipment and infrastructure, and varying ages, is a challenging task. To support system management and operation, AMHS plans to implement the following measures:

AMOS Maintenance Module

AMHS has utilized the Maintenance module of AMOS for over 20 years to plan and monitor maintenance and repair orders for its fleet. The module standardizes and centralizes planned maintenance and provides an integrated view of spare parts across the organization. However, AMHS discontinued the AMOS training program about a decade ago, leading to a decline in the use of the Maintenance module as fewer employees became familiar with it. AMHS also transitioned from dedicated AMOS servers on each vessel to a central server in Juneau, accessible via a Citrix/web link. The internet access on the vessels relies on cellular service, which is only available near ports. Citrix is often unavailable, making it challenging for engineers to access and update maintenance information.

For AMHS, it is imperative to perform and record maintenance in a computerized maintenance management system. Proper maintenance records are required by the ISM SMS and are part of the checklist reviewed during ABS annual surveys. Since the Maintenance module framework still

¹⁹ https://dot.alaska.gov/stwdplng/areaplans/lrtpp2016/docs/20160907_LRTP_policyplan_draft.pdf

²⁰ https://alaskamoves2050.com/wp-content/uploads/2023/01/25697_Alaska_Strategic_Freight_Plan_REDUCED_122222.pdf



exists for most fleet vessels, AMHS has restarted the AMOS implementation and updated maintenance data for each vessel. AMHS plans to review potential implementation and ongoing usage of AMOS modules that provide comprehensive management tools for vessel projects, quality, health, safety, compliance, environment processes, and staff management.

Vessel Scheduling

AMHS schedules determine which ports each vessel serves, and when each port receives service. AMHS communicates frequently with communities to determine their service needs and creates seasonal vessel schedules using spider graphs for Southwest, Southcentral, Prince William Sound, and Southeast. The spider graph represents a monthly schedule and depicts the days of the week, communities, and travel of each ship. Draft spider graphs are posted online for community and public feedback. Travel to and from special community events are also considered during schedule development. Occasionally, schedules are modified to accommodate additional community events. The vessel schedule development is a complex and labor-intensive task that could be simplified with scheduling software. The DOT&PF Information Systems and Services department is currently developing a vessel scheduling program to assist AMHS.

Quality of Service

To ensure quality service, AMHS plans to establish an internal Quality Steering Committee to review operations, create quality initiatives for areas needing improvement, and outline how these improvements will occur. This committee will meet quarterly to ensure regular quality review and confirm that AMHS provides the best possible service to customers.

Change Management

AMHS has established a Management of Change committee to critically assess proposed management changes and ensure comprehensive review prior to implementation.

Alignment of Union Contracts

AMHS employees are members of various unions. To improve operational efficiency, aligning union contracts will eliminate complexity, improve operational options, and help to stabilize the system.

5.6.3.2 System Preservation and State of Good Repair

AMHS currently does not currently conduct root cause analysis to prevent incidents. The system should provide training to crew and staff on root cause analysis and when to use it, covering incidents, failures, and spills.

Recently AMHS has faced attrition throughout its operation, especially in the Marine Engineering department where the lack of qualified personnel has made it challenging to estimate, schedule, and manage shipyard maintenance projects. AMHS currently supplements engineering support with contracted services, which will continue until AMHS hires the necessary staff.

Although AMHS has a Marine Engineering department, it lacks Professional Engineers (PE) with marine backgrounds, which are often required by the USCG and ABS for repair and capital



improvement plans. AMHS maintains several Term Service agreements with marine engineering firms for assistance with plan development and PE stamping. AMHS will maintain these agreements.

5.6.3.3 Modernization

Since the establishment of AMHS in 1963, technology has transformed dramatically and the AMHS fleet has not kept pace. Internet access is vital for crew members to access email, communicate with shoreside staff, and access AMOS records and checklists on AMOS. Additionally, customers have become accustomed to having internet service available at all times. Adding satellite internet (e.g., Starlink) benefits crew and passengers. If AMHS adds on-board Wi-Fi for passengers, it can promote itself as a transportation option for remote workers. AMHS is currently testing Starlink on the *M/V Hubbard* and the *M/V Columbia*, with access restricted to crew.

Another area of new technology is real-time tracking. For passengers waiting for the ferry, it is essential to know ferry status, including arrival times. AMHS should provide real-time monitors displaying vessel locations in terminals.

With increased internet availability, more people prefer making online reservations. AMHS is working to enhance its online presence and increase online bookings. In 2022, AMHS implemented a new online booking portal, which will continue to be improved for user-friendliness. AMHS is collaborating with CARUS on a user-friendly app to improve customer service. CARUS will evaluate AMHS's reservation system against industry's best practices, and necessary improvements will be made.

To enhance service reliability, AMHS needs to track service interruptions and out-of-service events, as well as the cause of the issue. To assist with this effort, internal staff will develop a process and system for tracking service interruptions and out-of-service events as well as their causes. Internal staff will develop a process and system for this tracking.

5.6.4 Performance Measures

- **Initiatives Implemented:** evaluate the percentage of initiatives that have been implemented on time and on budget.



6. Three-Year Strategic Maintenance and Vessel Replacement Plan

6.1 Three-Year Capital and Operating Budget Objective

The Interim Long-Range Plan (CY2024-CY2026) identifies key project initiatives for the three-year planning horizon, including infrastructure projects, organizational supporting software and management tools, and a continued emphasis on workforce safety, recruitment and retention. These proposed investments will serve to stabilize the system with a focus on reliability, in alignment with the first phase identified in CTC.

6.2 Three-Year Fleet Plan

The sections below provide a summary of the planned fleet assignments and projects over the three-year planning horizon. Figure 18 shows the three-year fleet plan with the ports served by each vessel and the projects that are planned for each year.

Route	Vessel/Terminal	Age as of 2023	2023	2024	2025	2026
SE	Matanuska (1963)	60	Vessel in Reliability Risk (Over 30 yrs)			
	Columbia (1974)	49				
	MRV 1	0		MRV 1 Design		MRV 1 Build
	LeConte (1974)	49	JNU, HNH, TKE, OUS, ANO, PEL, KAE			
	Hubbard (2019)	4	JNU, HNS, SBY			
	Tazlina (2019)	4	Layup	Crew Qtr Des	Crew Quarter Build	Supplemental Support for SE
X-Gulf	Kennicott (1998)	25	BEL, KTN, JNU, YAK, WTR, CHB, KOD, HOM			
SW	Tustumena (1964)	59	SDV, HOM, ORI, OUZ, KOD, CHG, SDP, KCV, CBY, FPS, AKU, OLD, UNA			
	TRV	0	TRV Design		TRV Build	
PWS	Aurora (1977)	46	CHB, WTR, VDZ, TAT, CDV			
KTN/MET	Lituya (2004)	19	KTN, ANB			
	No-Low Emission Electric	0		No-Low Design		No-Low Build

Legend	
	Existing / In Service
	CIP Design
	CIP Build
	Vessel in Reliability Risk (Over 30 yrs)
	Layup

Figure 18: Three Calendar Year Fleet Plan



Table 10 shows the fleet status for each year. Calendar Year (CY) 2023 is provided for reference. Appendix B provides a key to the port abbreviations.

Table 10: Fleet Status

	2023*	2024	2025	2026
<i>In Service</i>	7	8	8	8
<i>Layup</i>	2	1	1	1
<i>Backup (for Aurora)</i>	0	0	0	0
<i>Reliability Risk</i>	5	5	5	5
<i>Total Fleet #</i>	9	9	9	9
<i>Vehicle Capacity (linear ft)</i>	9,835	9,835	9,835	9,835
<i>Quantity of 20 ft Vehicles</i>	489	489	489	489

*2023 provided for reference

Below is a list of each vessel and where it is planned to operate from 2024-2026.

- *M/V Matanuska* will be in layup in Ketchikan.
- *M/V Columbia* will operate the southeast route from Bellingham to Skagway.
- *M/V LeConte* will serve the smaller communities in the Northern Inside Passage.
- *M/V Hubbard* will operate in the North Lynn Canal area.
- *M/V Tazlina* will undergo a CIP project to add crew quarters and then it will provide supplemental service in Southeast.
- *M/V Kennicott* will operate the Cross Gulf route from Bellingham to Homer.
- *M/V Tustumena* will connect the Aleutian Chain to Kodiak and Homer in the summer and in the winter, it will continue to serve Kodiak, Ouzinkie, Homer and Port Lions.
- *M/V Aurora* will serve in the Prince William Sound region.
- *M/V Lituya* will provide shuttle service between Ketchikan and Metlakatla.

6.2.1 New Vessels

No new vessels will join the fleet between 2024 to 2026. However, planned new vessel projects include:

- Finalizing the design of the TRV and constructing the new vessel. The TRV is expected to be in operation at the beginning of 2027 and will replace the *M/V Tustumena*.
- Designing the MRV and starting construction.
- Designing and building a new No-Low Emission vessel to replace the *M/V Lituya*. The new vessel is expected to be in service in 2027.



6.2.2 Vessel Retirement

No vessels are scheduled to be retired prior to 2027.

6.2.3 Vessel Preservation & Maintenance

Each year, every vessel goes through an overhaul period that includes inspection, repair, and maintenance that cannot be performed while the vessels are operating. This work includes drydocking the vessel; performing wear down tests and inspections on propeller shafts, rudders, pintles and gudgeons; inspecting impressed current cathodic protection system; inspecting and cleaning the propeller blades, seals and CPP system (if applicable); inspecting and cleaning the thruster(s); opening and cleaning sea chests; replacing zincs in sea chests; opening, cleaning, testing, and rebuilding (if necessary) sea and car deck valves; inspecting, cleaning, and repairing coatings in voids and ballast tanks; cleaning bilges; replacing zincs as needed; servicing fire equipment; cleaning, blasting, and painting areas of corrosion, rust, scale, and deteriorated coatings on the hull, superstructure and decks; cleaning marine growth from the seawater systems; cleaning ventilation ducting and galley exhaust; cleaning, inspecting, and repairing (if needed) the sewage treatment systems; cleaning and gas freeing all tanks; removing and reinstalling all life rafts and marine evacuation chutes; cleaning, measuring, remarking the anchor chain; dye checking the anchor swivel; and cleaning debris from the chain lockers.

Additionally, AMHS must meet the inspection requirements and standards of safety and seaworthiness for ABS and the USCG. At the end of the overhaul period, the vessel must pass the USCG inspection to obtain a COI to operate and carry passengers.

Overhaul durations vary each year depending on the vessel and the amount of work to be completed, but other than the *M/V Lituya* they are at minimum six weeks. Table 11 shows when each vessel normally has their overhaul period and an approximate number of weeks for the overhaul period.

Table 11: Normal Overhaul Period

Vessel	Normal Overhaul Period	# of weeks
<i>M/V Kennicott</i>	November through December	9
<i>M/V Columbia</i>	January through February	9
<i>M/V Aurora</i>	October through Mid-December	10
<i>M/V Lituya</i>	Beginning August through Mid-August	2
<i>M/V LeConte</i>	Mid December through February	10
<i>M/V Tustumena</i>	Mid-February through April	11
<i>M/V Hubbard</i>	Mid-March through Mid-May	9
<i>M/V Tazlina</i>	Mid-January through Mid-March	9



6.3 Three-Year Shore Facility Plan

6.3.1 Vessel Interface Considerations

The current configuration of and access to the shore facilities throughout the system limits the size and type of vessel that can serve each community. As improvements are made to the fleet, facility maintenance, resilience, and sustainability efforts should also consider addressing the shortcomings of each facility to increase the number of vessel classes it can serve. In particular, all terminals in the Southeast and Southcentral regions should be improved to be compatible with the ACF to maximize the flexibility of the *M/V Tazlina* and *M/V Hubbard* for both scheduled and unscheduled service when needed. Similarly, as the design brief for the MRV is developed, terminal compatibility in the Southeast region should be assessed and improvements necessary to accommodate it identified for inclusion in future planning efforts, keeping in mind that in an emergency, service to terminals that are not considered mainline may be necessary.

6.3.2 Capital Improvement Projects

Projects that are planned for the next three years are listed below. Figure 19 illustrates the phases for each project.

- Alaska Class Ferry Compatibility: Terminal improvements to accommodate the Alaska Class Ferry should continue at Angoon, Chenega (Bay), Cordova, Pelican, and Tatitlek as provided in the July 2023 draft STIP.
- General Terminal Upgrades: The improvement projects currently underway at Angoon, Auke Bay (Juneau), Pelican, and Yakutat should continue into construction as provided in the July 2023 draft STIP.
- Cascade Point Terminal: The feasibility and service planning work related to the potential new terminal at Cascade Point should be completed to allow a decision to be made on if a new terminal should be constructed (Section 2.3.2).
- South Tongass Terminal: The feasibility and service planning work related to the potential new South Tongass terminal at Saxman should be completed to allow a decision to be made on if a new terminal should be constructed (Section 2.3.2).
- Skagway Float: The concept design and planning work related to relocating the Skagway terminal should be completed and if the terminal is not relocated, a new float for the existing terminal should be procured.
- Cold Bay Dock: The current pier at Cold Bay is due for replacement or major repairs. Planning and preliminary design will likely need to be started in the next two to three years.
- Prince Rupert: Although there has not been service to Prince Rupert for several years, there is demand for a direct connection to the Canada and Lower 48 road system from



Southeast Alaska. A decision on whether to rebuild the existing AMHS facility or negotiate a shared-use agreement with BC Ferries will be needed in the next one to three years.

Route	Vessel/Terminal	Age as of 2023	2023	2024	2025	2026
SE	Angoon (2011)	22		Design		Improvements for ACF
	Pelican (2012)	11		Design	ROW	New Terminal for ACF
	Auke Bay East Berth (1982)	41		Design		Mooring Improvements
	Keke (1974)	49			Design	Improvements for ACF
	Yakutat (1983)	40			Design	
	South Tongass	0		Design		ROW
PWS	Chenega (1995)	28		Design		ROW
	Cordova (2005)	18		Design		Improvements for ACF
	Tatitlek (1995)	28		Design		Improvements for ACF

Legend (terminals)	
	Terminal CIP Design
	Terminal CIP Right of Way (ROW)
	Terminal CIP Construction

Figure 19: Three Year Terminal Plan

6.4 Operating Budget Recommendations

The AMHS budget comprises two parts: the operations budget and the capital budget. The operations budget relies on the operations plan, which outlines the status of each vessel throughout the year and the route on which it operates.

To support the operating budget recommendations in the plan, notional operation plans for CY2024 through CY2026 were developed, based on typical overhaul periods and planned CIP. These plans are shown in Figure 20 to Figure 22. The abbreviations used in these figures are defined as follows: BEL-YPR links Southeast communities to Bellingham or Prince Rupert with weekly trips from Bellingham to Skagway and monthly trips from Prince Rupert to Skagway; BEL connects Southeast communities to Bellingham with weekly trips from Bellingham to Skagway; PWS services Prince William Sound communities; MET links Metlakatla and Ketchikan; NP serves Northern Panhandle communities; SW connects Southwest communities; OH indicates the vessel is at a shipyard for overhaul; Layup means the vessel is not operating; and Federal CIP signifies the vessel is at a shipyard undergoing a federal or CIP.



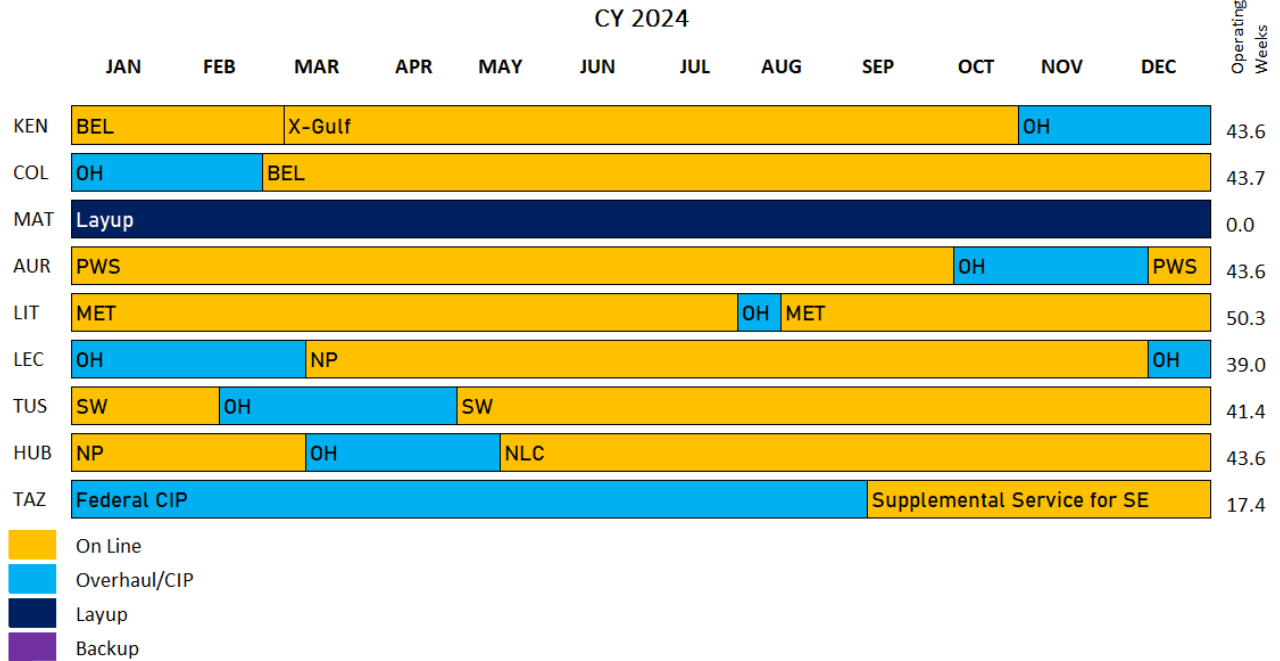


Figure 20: CY2024 Operation Plan

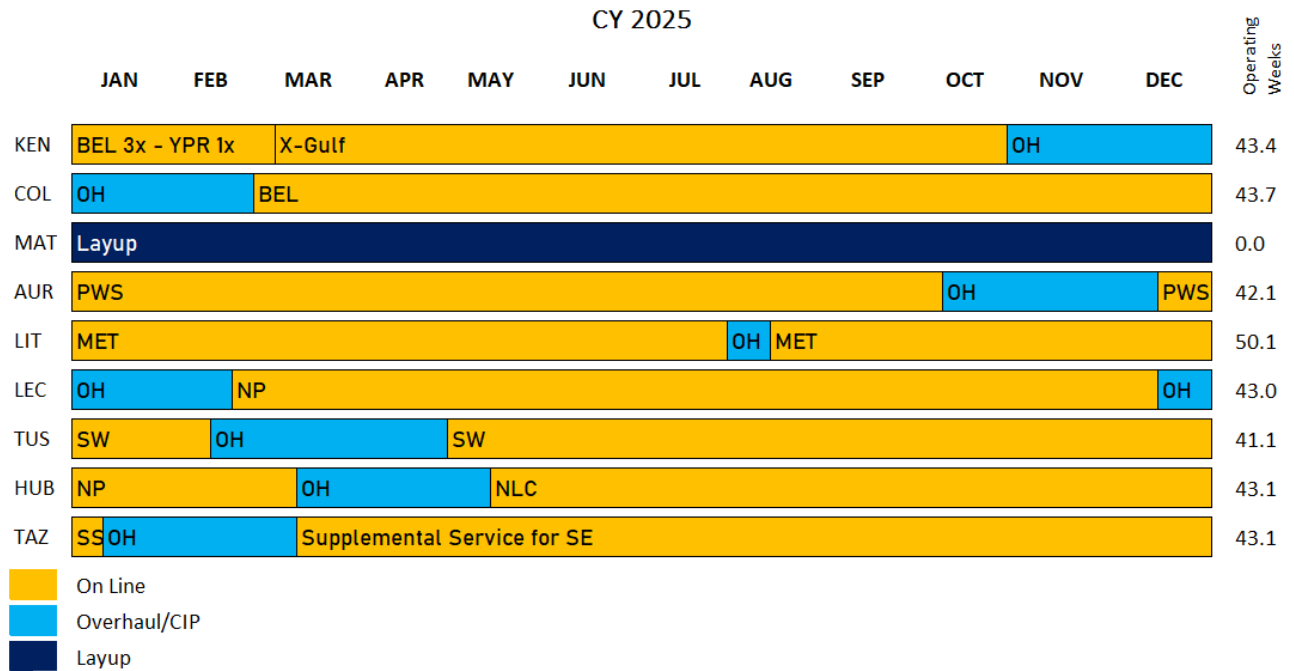


Figure 21: CY2025 Operating Plan



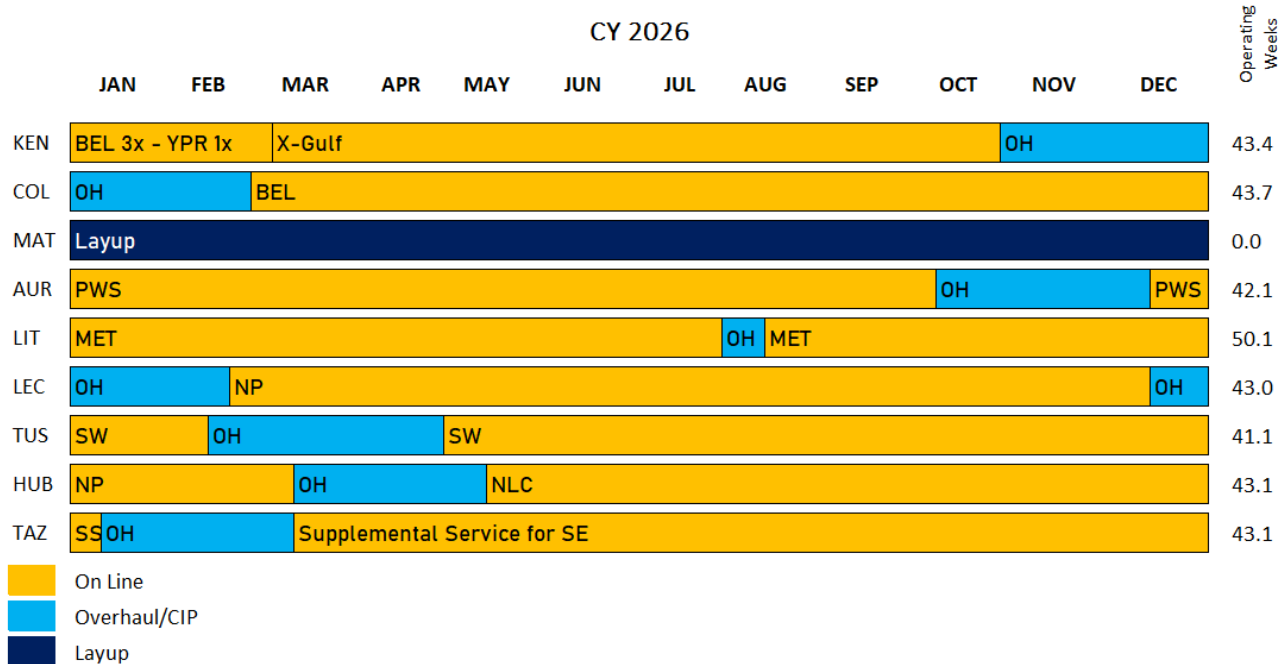


Figure 22: CY2026 Operating Plan

6.4.1 Operating Costs

AMHS uses a tool known as the Scenario Spreadsheet to calculate the operating costs (excluding capital costs) for each operating plan. This tool is intricate and requires annual adjustments to several inputs, including wages, overtime assumptions, benefits, reimbursable service agreements with other departments, fuel costs, and outsource service costs.

Updated wages include crew, marine shore operations, marine engineering, vessel operations management, and reservations. The crew wages and yearly increases are determined by three union agreements: MMP, MEBA, and IBU. Inflation associated with travel, services, and commodities for marine vessel operations is assumed to be 3 percent annually.

Shoreside employees belong to various bargaining units. Each union contract governs the annual wage and COLA increases.

Table 12 and Table 13 present the percentages assumed for crew overtime.



Table 12: Overtime Assumptions

	MMP	MEBA	IBU	Lituya – MMP
<i>Straight OT</i>	6.5%	6.5%	10.5%	17.5%
<i>Holiday OT</i>	3.0%	3.0%	3.0%	3.0%
<i>Late Arrival OT</i>	0.1%	0.1%	0.0%	0.1%
<i>Hold Over OT</i>	5.0%	5.0%	3.5%	0.0%
<i>Yard OT</i>	20.0%	45.0%	8.0%	-
<i>Early Call Back</i>	1.0%	1.0%	0.1%	1.0%

Table 13: Overtime Assumed for Other Forms of Pay

	MMP	MEBA	IBU
<i>Travel Pay</i>	2.0%	1.5%	1.0%
<i>Minimum Guarantee</i>	1.5%	1.5%	1.2%
<i>Split Wages</i>	0.1%	0.1%	0.0%
<i>Unearned Maintenance Wage</i>	0.4%	0.2%	1.0%
<i>Longevity Pay</i>	2.0%	0.0%	1.1%
<i>Penalty Pay</i>	0.0%	2.6%	0.0%
<i>Non-Watch</i>	0.0%	0.0%	0.0%
<i>Other</i>	0.0%	0.1%	0.0%

Health care and other variable benefits for crew are assumed to be approximately 66 percent of the overall wages. Benefits for marine shore operations, marine engineering, vessel operations management, and reservations are assumed to be 70 percent of overall wages.

Other budget components, such as travel, services, and commodities for shoreside employees are assumed to increase 3 percent annually.

Risk management has been estimated to remain the same as FY2023. Allocated costs, including Southeast Support Services, Administrative Services, Human Resources, Information Systems & Services Department, and the Commissioner's Office, are anticipated to increase by 3 percent annually.

Table 14 displays the proposed operating costs resulting from the CY2024 to CY2026 operating plans, with a more detailed breakdown available in Appendix A.



Table 14: CY2024-2026 Proposed Operating Costs & Statistics (in Thousands)

	CY2024	CY2025	CY2026
Operating Costs			
<i>Marine Vessel Costs*</i>	\$137,426.9	\$144,931.6	\$150,868.6
<i>Shoreside Costs*</i>	\$20,499.8	\$20,276.8	\$20,621.1
<i>Allocated Admin</i>	\$1,975.2	\$2,034.5	\$2,095.5
Total Proposed Operating Costs	\$159,901.9	\$167,242.9	\$173,585.2
Operating Statistics			
<i>Weeks of Service</i>	322.6	349.9	349.9
<i>Fuel Burn (Gallons 000)</i>	7,555.0	7,784.7	7,784.7
<i>Fuel Price per Gallon</i>	\$3.00	\$3.30	\$3.63

*Preliminary – Some costs are pending decisions.

6.4.2 Capital Costs

Table 15 lists the proposed capital costs, which are based on amounts included in the draft 2024-2027 STIP and the fleet plan.



Table 15: CY2024-2026 Proposed Capital Costs (in Thousands)

	CY2024	CY2025	CY2026
Vessel Projects			
<i>TRV</i>	\$10,000.0	\$186,666.7	\$93,333.3
<i>MRV</i>	\$26,760.4	\$6,690.1	\$70,000.0
<i>No-Low Emission Ferry</i>		\$45,000.0	\$55,000.0
<i>Annual Overhauls</i>	\$22,000.0	\$22,000.0	\$22,000.0
<i>Ferry Refurbishment</i>	\$4,000.0	\$4,000.0	\$4,000.0
<i>FCS Update</i>	\$300.0	\$300.0	\$300.0
<i>Tazlina Crew Quarters</i>	\$25,000.0	-	-
<i>Matanuska Safety Improvement Project²¹</i>	\$35,950.0	-	-
<i>Columbia CPP</i>	\$13,732.7	-	-
<i>Kennicott Emissions and Exhaust Upgrades</i>	-	\$13,881.1	-
Total Proposed Vessel Capital Costs	\$191,053.0	\$278,537.9	\$244,633.3
Terminal Projects**			
<i>Shoreside Facilities Condition Survey</i>	\$240.0	\$240.0	\$240.0
<i>AMHS System Wide Mooring System Improvements</i>	\$1,200.0	\$1,200.0	\$1,200.0
<i>Ferry Terminal Refurbishment</i>	\$2,000.0	\$2,000.0	\$2,000.0
<i>Angeon Ferry Terminal Improvements</i>	-	-	\$4,000.0
<i>Auke Bay East Berth Terminal Improvements</i>	-	\$11,000.0	-
<i>Chenega (Bay) Ferry Terminal Improvements</i>	-	\$10.0	\$13,000.0
<i>Cordova Ferry Terminal Modifications</i>	\$100.0	-	\$6,000.0
<i>Kake Ferry Terminal Improvements</i>	\$624.4	-	\$4,809.2
<i>Pelican Ferry Terminal Improvements</i>	\$10.0	-	\$13,000.0
<i>South Tongass Ferry Terminal*</i>	-	-	\$10
<i>Tatitlek Ferry Terminal Improvements</i>	-	-	\$11,000.0
<i>Yakutat Ferry Terminal</i>	\$2,323.1	-	-
<i>Port Electrification</i>	\$2,000.0	\$4,750.0	\$4,750.0
Total Proposed Terminal Projects	\$8,515.5	\$19,200.0	\$60,009.2
Total Proposed Capital Projects	\$199,568.5	\$297,737.9	\$304,642.5

*Project under review and may not proceed

**Other projects may be in the planning stages and were not included in the 2024-2027 Draft STIP

²¹ Scope of project is subject to upcoming discussions with USCG scheduled for September 2023



Appendix A

CY2024-CY2026 Proposed Operations Budget



	CY2024	CY2025	CY2026
Marine Vessel Operations			
Personnel Service	\$91,657.3	\$95,311.5	\$97,556.2
Travel	\$2,500.5	\$2,678.2	\$2,823.5
Services	\$11,814.8	\$12,654.4	\$13,341.0
Fuel	\$22,665.1	\$25,689.4	\$28,258.3
Commodities	\$5,015.7	\$5,372.1	\$5,663.6
Initiatives			
<i>Root Cause Analysis</i>	\$35.0	-	-
<i>Crew Safety Conference</i>	\$80.0	\$80.0	\$80.0
<i>Supplemental Service</i>	\$3,500.0	\$3,000.0	\$3,000.0
<i>AMOS Maintenance & Inventory App*</i>	\$72.0	\$72.0	\$72.0
<i>AMOS Quality and Safety Module*</i>	\$57.0	\$57.0	\$57.0
<i>Vessel Communication and Connectivity Upgrades*</i>	\$24.5	\$12.0	\$12.0
<i>AIS Real Time Monitoring</i>	\$5.0	\$5.0	\$5.0
Subtotal Marine Vessel Operations	\$137,426.9	\$144,931.6	\$150,868.6
Shoreside Costs			
Marine Shore Operations	\$7,893.3	\$8,038.7	\$8,187.6
Vessel Ops Management	\$4,897.2	\$4,973.7	\$5,051.9
Reservations & Marketing	\$1,560.9	\$1,611.9	\$1,627.4
Marine Engineering	\$2,883.4	\$2,931.2	\$2,976.5
Overhaul	\$1,699.6	\$1,751.0	\$1,803.5
Initiatives			
<i>AMOS Business Suite</i>	\$396.2	\$296.0	\$300.0
<i>AMOS Staff Management Module*</i>	\$46.0	\$46.0	\$46.0
<i>SMS Rewrite</i>	\$10.0	-	-
<i>Reservations Improvements</i>	\$20.0	\$20.0	\$20.0
<i>AMOS Projects*</i>	\$8.2	\$8.2	\$8.2
<i>Wheelhouse Assessment Plan</i>	\$100.0	\$100.0	\$100.0
<i>Asset Management Support</i>	\$50.0	-	-
<i>Marine Engineering Consultant Support</i>	\$500.0	\$500.0	\$500.0
<i>SRP/LRP Development*</i>	\$435.0	-	-
Subtotal Shoreside Costs	\$20,499.8	\$20,276.8	\$20,621.1
Allocated Costs			
SE Support Services	\$46.7	\$48.1	\$49.5
Admin Services	\$1,153.3	\$1,187.9	\$1,223.5
Information Systems & Services Department	\$516.4	\$531.9	\$547.8
Commissioner's Office	\$258.8	\$266.6	\$274.6
Subtotal Allocated Costs	\$1,975.2	\$2,034.5	\$2,095.5
Total Proposed Operational Costs	\$159,901.9	\$167,242.9	\$173,585.2

*Costs are still in progress.



Appendix B

Port Abbreviations



Community	Identifier	Scheduled Region
Akutan	AKU	SW
Angoon	ANG	SE
Bellingham, WA	BEL	SE & CG
Chenega Bay	CHB	SC & CG
Chignik	CHG	SW
Cold Bay	CBY	SW
Cordova	CDV	SC & PWS
Dutch Harbo	UNA	SW
False Pass	FPS	SW
Gustavus	GUS	SE
Haines	HNS	SE
Homer	HOM	SW & CG
Hoonah	HNH	SE
Juneau	JNU	SE & CG
Kake	KAE	SE
Ketchikan	KTN	SE & CG
King Cove	KCV	SW
Kodiak	KOD	SW & CG
Metlakatla	ANB	SE (MV LIT)
Old Harbor	OLD	SW
Ouzinkie	OUZ	SW
Pelican	PEL	SE
Petersburg	PSG	SE
Port Lions	ORI	SW
Prince Rupert, BC	YPR	SE
Sand Point	SDP	SW
Seldovia	SDV	SW & CG
Sitka	SIT	SE
Skagway	SGY	SE
Tatitlek	TAT	SC & PWS
Tenakee	TKE	SE
Valdez	VDZ	SC & PWS
Whittier	WTR	SC, PWS & CG
Wrangell	WRG	SE
Yakutat	YAK	SE & CG

