

**Department of Transportation and Public Facilities (DOT&PF)
Alaska Marine Highway System (AMHS)**

DRAFT AMHS Annual Short-Range Plan

Author: DOT&PF in collaboration with the Alaska Marine Highway Operations Board (AMHOB)
As of September 6th, 2022

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Introduction

The mission of the Department of Transportation and Public Facilities (DOT&PF) is to keep Alaska moving through service and infrastructure. The Alaska Marine Highway System (AMHS) seeks to provide safe, reliable, and efficient transportation of people, good, and vehicles.

ALASKA MARINE HIGHWAY OPERATIONS BOARD (AMHOB)

Governor Dunleavy signed House Bill 63 (HB 63) into law on August 16, 2021 repealing the Marine Transportation Advisory Board (MTAB) and establishing the Alaska Marine Highway Operations Board (AMHOB). AMHOB advises DOT&PF/AMHS on numerous initiatives.

AMHOB is composed of the DOT&PF Deputy Commissioner assigned to AMHS and eight public members. One seat is from a recognized union representing AMHS employees; one represents Alaska Native organizations; the Gov appoints two; two by Speaker of the House, and two by Senate President. The seats are staggered but established in statute. According to HB 63, in consultation with AMHOB, DOT&PF will prepare a short-term plan and a comprehensive long-range plan that will consist of priorities and goals with a proposed strategic maintenance and vessel replacement plan. They may also recommend performance measures. Information about this board can be found at the DOT&PF's AMHOB website (<https://dot.alaska.gov/amhob/>).

PURPOSE OF THE AMHS SHORT-TERM PLAN

By statute¹, the purpose of the AMHS Short-term Plan is to describe how effective and efficient progress toward priorities and goals, defined in the pending comprehensive long-range plan, will be attained. It will be updated annually. It will include recommendations for the state operating and capital budgets and a description of skill or competency gaps in the AMHOB board. This plan is submitted to the legislature and the governor and made available to the public. The short-term plan is prepared by DOT&PF in consultation with the Alaska Marine Highway Operations Board (AMHOB).

This Short-term Plan is intended to illustrate the baseline and potential direction of operations, capital investments, and asset retirements within the context of strategic goals as outlined in the draft DOT&PF Statewide Long-term plan. In general, DOT&PF seeks to run what we have and build what we need.

Overview of AMHS

The Alaska Marine Highway System (AMHS) serves 35 Alaska ports by transporting passengers and vehicles between coastal communities. This service helps meet the social, educational, health and economic needs of Alaskans. AMHS provides year-round scheduled ferry service throughout Southeast and Southwest Alaska, extending south to Prince Rupert, British Columbia and Bellingham, Washington. The system connects communities with each other, regional centers, and the continental road system. It is an integral part of Alaska's highway system, reaching many communities that would otherwise be cut off from the rest of the state and nation. AMHS also provides a coastal transportation alternative between Anchorage and the "Lower 48" states versus driving the Alaska Highway.

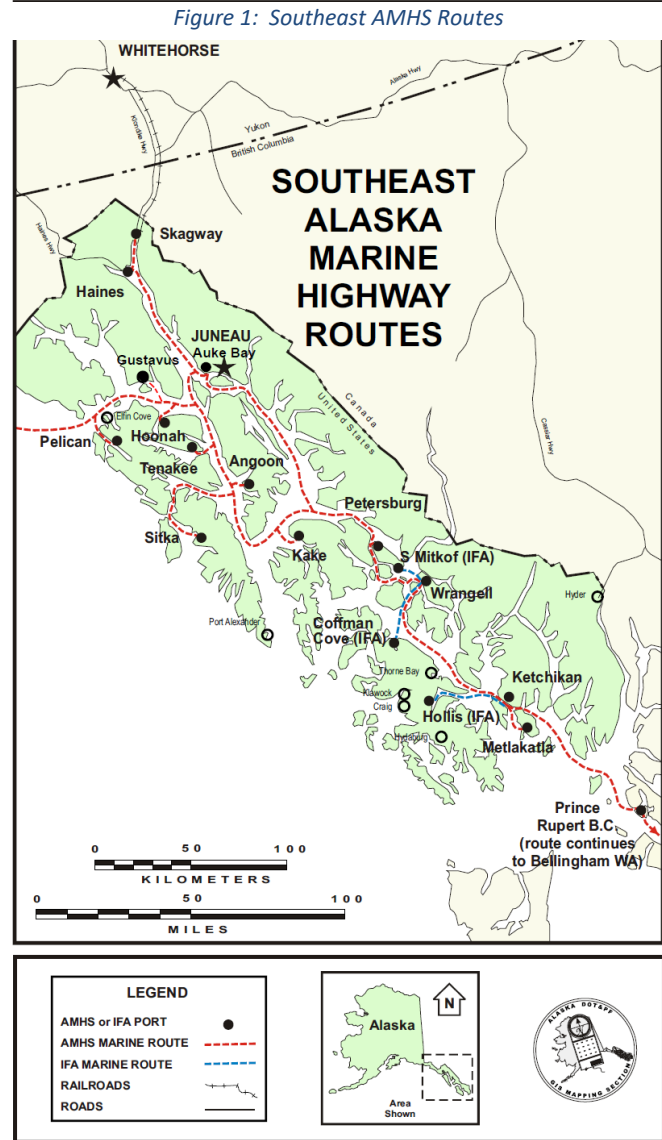
AMHS is designed to provide basic transportation services to communities; transportation that allows community access to health services, commodities, legal services, government services, and social services; transportation that meets the social needs of isolated communities; and transportation that provides a base for economic development. AMHS service

¹ Housebill 63

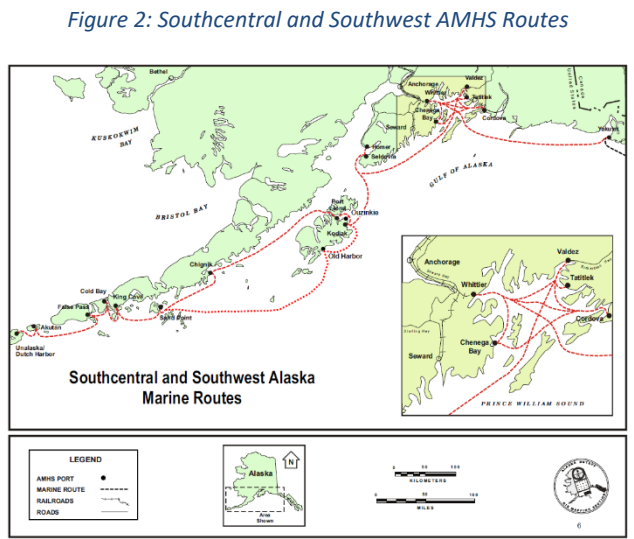
is divided into two major systems: the Southeast System (from Bellingham north to Yakutat) and the Southwest System (from Cordova west to Unalaska). The Alaska Marine Highway fleet consists of 9 vessels; six operate in the Southeast System and three operate in the Southwest System. All 9 vessels are designed to carry passengers and vehicles ranging in size from motorcycles to large freight container vans. Trips on AMHS can last several hours or several days, so passenger services are an important aspect of the state's transportation service. Most vessels provide food service, shower facilities, observation lounges, and recliner lounges. The larger vessels provide additional amenities, including play areas for children. Four vessels have stateroom accommodations for overnight travel.

One regular use of AMHS is the year-round transportation of container vans. These vans transport time-sensitive cargo such as fresh vegetables, meat, and dairy products from Bellingham and regional Alaska centers to communities served by the system. Local restaurants, grocery stores, individuals, and food distribution businesses have established delivery schedules with AMHS to ensure regular and continuous delivery of perishable goods. Shipping perishable supplies on AMHS is more cost-effective than air freight, and in many cases ensures delivery to communities on a more frequent basis than commercial barge and freight lines. Vans are also used to move fresh Alaska fish and seafood to markets, and to transport U.S. mail and household goods.

The Southwest system serves Prince William Sound, the Kenai Peninsula, Kodiak Island, and the Aleutians. The MV Tustumena provides regular service between Kodiak, Port Lions, Seldovia and Homer. The Southwest routes connect to the continental road system at Valdez, Whittier, and Homer, Alaska. The MV Kennicott provides regular cross gulf sailings. These sailings connect Southeast Alaska with the Southcentral and Southwest regions of the state. The Southeast route is divided into two subsystems: the “mainline” routes which typically take more than one day for the ship to travel and shorter routes where vessels depart their home port in the morning, travel to destination ports and then return to their home port on the same day. The mainline routes carry a high percentage of tourists and vehicles in the summer, and provide service between Bellingham, WA or Prince Rupert, BC, and Skagway or Haines, Alaska. Along the way, the ships stop in Ketchikan, Wrangell, Petersburg, Sitka, Juneau, and Haines. Although Kake and Hoonah are smaller communities, they are also served by certain mainline sailings. The day boat routes connect the smaller communities to regional hub communities for commerce, government, health services, and connections to other transportation systems.



- AMHS includes 9 active ferries, serving 35 ports in Alaska; Prince Rupert, British Columbia; and Bellingham, Washington.
- Since 2016, AMHS traffic volumes are trending steadily downward. In recent years, farebox recovery dropped from about 50 percent of operating costs to about 30 percent.
- The pandemic hit ferry service hard. The AMHS served 52,196 passengers and 27,006 vehicles in 2020, down from 190,118 passengers and 77,203 vehicles in 2019.
- Reliability is an issue because of mechanical failures due to the aging fleet and weather delays. AMHS ferry schedules have varied from year to year, based on available funding levels and operating budgets.
- AMHS is currently the only marine route recognized as a National Scenic Byway and All-American Road.
- AMHS uses a combination of federal, state, and fare box revenue to operate and maintain the system.



OVERVIEW OF IIJA AND SHORT-TERM FUNDING OPPORTUNITIES

- With constant updates coming, DOT&PF is evaluating the potential of the Bipartisan Infrastructure Law (BIL) to support the operational and capital funding needs of AMHS. Information to pertinent fact sheets:
- \$1 billion for a new program that establishes an essential ferry service to support rural communities. Assuming Alaska will receive \$180M per year¹.
- \$250 million for an electric or low-emitting ferry pilot program, with at least one pilot to be conducted in the state with the most Marine Highway System miles—Alaska.
- \$342 million for the Construction of Ferry Boats and Ferry Terminal Facilities Program, of which Alaska should receive \$73 million. Provides authorization for recipients of funding under the program to spend on the ferry system “operating costs.”
- Ferry Boat Formula fund increases may provide Alaska an additional \$16-20 per year. AMHS will likely complete dock projects with these additional funds.

TECHNICAL, LEGAL, AND FINANCIAL CAPACITY

DOT&PF owns, operates and/or maintains ferry terminals in 35 Alaskan communities. AMHS has operated since 1968. DOT&PF has a dedicated marine design group and environmental staff who have delivered dozens of terminal improvement projects, including up to six per year. DOT&PF has maintained a marine engineering team since Statehood in 1959 – primarily dedicated to supporting the AMHS ferry system. They have directly designed or managed consultant designs and conducted numerous refurbishments, replacements, repairs, and maintenance on nearly every ferry terminal facility in the State and many other ports, harbors, and seaplane facilities. Most of these projects utilized federal aid through FHWA. They have successfully delivered many federal aid marine projects supporting AMHS over the years, including 86 projects totaling over \$308,000,000 since 2002 alone.

DOT&PF’s project development staff comprises 75 persons, including materials and geotechnical engineers, environmental and right of way professionals who can navigate and achieve the required support products according to all Federal regulations and requirements. DOT&PF and its marine design group are knowledgeable about federal requirements, including Build America stipulations.

Alaska DOT&PF was granted primacy over its NEPA Assignment Program through an MOU with FHWA signed Nov. 3, 2017 to assume responsibilities under NEPA and all or part of FHWA’s responsibilities for environmental review, consultation, or other actions required under any Federal environmental law with respect to one or more Federal Highway projects within Alaska. The assigned responsibilities are subject to the same procedural and substantive requirements as applied to FHWA.

Alaska DOT&PF’s Equal Employment Opportunity Plan (2022) includes a review of personnel designations, employment practices information, employment practices assessment, monitoring and reporting systems, and additional resources. DOT&PF participates in the federal Disadvantaged Business Enterprise (DBE) program and meets the federal requirements. DOT&PF has a vibrant Disadvantaged Business Enterprise Program and a DBE Utilization Goal of 8.63 percent for federally funded projects. According to a 2019 study, M/W/DBE firms were awarded contracts totaling \$418.8 million, 17.68 percent of construction dollars. MBEs were awarded \$298.8 million in contracts, 12.61 percent of construction dollars.

DOT&PF has authority under 23 U.S.C. 140 to implement and conduct a compliance program that addresses Equal Employment Opportunity (EEO) and Affirmative Action (AA) for employment on federally assisted construction contracts. DOT&PF maintains a Civil Rights Office committed to ensuring equal opportunity for all businesses and personnel on DOT&PF projects. The bidding and contract documents include specific provisions to implement equity-focused policies related to all phases of contracting and construction. The contract provisions address nondiscrimination, equal employment opportunity, reasonable accommodations for employees with disabilities, and non-segregation of facilities.

DOT&PF provides reasonable accommodations to applicants and employees who need them because of a disability or practice or observe their religion absent undue hardships. Alaska DOT&PF appointed just under 70 percent (630) males and approximately 30 percent (275) females from July 1, 2019, thru June 30, 2021. This is a marked increase in female new hires from only 25 percent the previous fiscal year. DOT&PF has created a Diversity, Equity, and Inclusion (DEI) Team whose members work with the different department training systems.

AMHS OPERATING PRINCIPLES

- We will err on the side of safety when making decisions —the safety of our crew and passengers takes priority over the schedule and cost.
- We believe that the best service is provided by our employees sailing AMHS vessels, however, we will pursue creative solutions in order to maintain published service.
- We maintain a modernized fleet through proactive maintenance and preservation planning.
- We communicate often and openly to the public and staff and value all input.
- We strive to offer an agile schedule that reflects demand in a dynamic and evolving world because if there is reliable, sustainable, affordable service passenger levels will increase

Asset Program

AMHS oversees the preservation, maintenance, and capital improvement of existing ferry terminals and vessel. It also oversees the construction of new vessels and terminals. AMHS is responsible for over 35 terminals and nine vessels.

ASSET GOALS

The Alaska Marine Highway is vital to the health of Alaska. DOT&PF is stabilizing AMHS through immediate investment in our people, our vessels, and our shoreside infrastructure. Together we can build a sustainable and reliable marine highway system in a changing climate, one that safely and reliably transports people where they need to go while offering consistent service levels needed to grow back our economies.

DOT&PF's draft Long Range Term Plan "Alaska Moves 2050" drives strategic goals for all modes of transportation. Projects aligned with DOT&PF strategic investment areas were strategically selected to meet discretionary grant criteria. DOT&PF investment areas (and the respective AMHS focus areas) include:

DOT&PF Strategic Themes	Focus Areas
Safety	<ul style="list-style-type: none"> • Vessel Repair
State of Good Repair	<ul style="list-style-type: none"> • Preservation and Maintenance of Terminals and Vessels
Economic Vitality	<ul style="list-style-type: none"> • New Service Vessels • New Terminals
Resiliency	<ul style="list-style-type: none"> • Fleet Modernization • Vessel Replacement • Terminal Upgrades
Sustainability	<p>Developing sustainable transportation infrastructure involves a multi-modal lifecycle approach that considers environmental quality, economic development, and social equity.</p> <ul style="list-style-type: none"> • Vessel Hybrid Conversion • Terminal Electrification • Electric Shuttle Ferry Construction • Energy Efficient Operational Strategies
Mobility/Access	<ul style="list-style-type: none"> • Increased Service • ADA accessibility

AMHS Sustainable Transportation Program. The goal is to help communities thrive through transportation investments that promote independence, efficiency, low-cost transportation, and a healthy environment.

- Sustainable Transportation Research: FHWA Low-No Emission Ferry Research, Renewable Diesel Research, and Automation through Digitization.
- AMHS Fleet Modernization: Tustumena Replacement Vessel Construction, Low-No Emission Shuttle Ferry Construction, Shoreside Charging, Ferry Retrofits.
- Statewide Equipment Fleet Modernization: Statewide Fleetwide Modernization and Rolling Stock Electrification.
- Low-Cost Transportation: Alternative Energy Corridors EV Infrastructure, Port Parking Community EV Infrastructure.
- Energy Efficiency: DOT&PF Facilities Energy Efficiency Upgrades, LED Streetlight Conversions.
- Healthy Environment: Tracking Transportation Emissions, Cruise Line and Port Facilities Electrification.
- Equitable Transportation: Promoting equity within and between successive generations.

In addition, there are Asset Management goals which aren't captured in the above themes.

Goals:

1. All terminal and vessel capital projects are completed on budget.
2. Vessel out-of-service time is reduced to that which is strictly necessary.

VESSEL CONSIDERATIONS

Fleet Status

Fleet status is determined by the annual Fleetwide Condition Survey Reports completed by Glostten Associates. The objectives of these surveys to is describe the current vessel condition and create a database of maintenance needs.

To maintain the fleet, these vessel surveys are conducted for every vessel in collaboration with our vessel staff and term contractor, Glostten. Each survey has a matrix summarizing work items for that vessel, as shown in the upper left. It is broken down by cost and priority. Priority ranking is based on urgency and type, such as immediate, problematic, preventative, lifecycle, and upgrades. Currently identified work for all vessels (excluding Hubbard), much of which is considered a high priority, is estimated at a rough order of magnitude at \$224m.

Vessel	Year Built	Notes	Recommended Work ²	Priority 1 Work ³
Matanuska (SOLAS)	1963	The Matanuska is near retirement and may be replaced by the Matanuska Replacement Vessel (MRV) when constructed.	\$47,860,000	\$3,490,000
Tustumena	1964	MV Tustumena is near retirement and being replaced by the Tustumena Replacement Vessel (TRV) when completed.	\$27,013,750	\$23,302,500
Columbia	1973	Columbia is undergoing a CPP project and will continue to provide mainline service when online.	\$11,099,500	\$2,695,000
LeConte	1974	The LeConte continues to provide	\$4,129,000	\$691,250
Aurora	1977	The Aurora is near retirement.	\$17,447,500	\$15,175,000
Kennicott (SOLAS)	1998	Kennicott will continue to provide continue cross-gulf mainline service, finding replacement parts and equipment is already difficult.	\$52,149,000	\$535,000
Lituya	2004		\$958,250	\$235,000
Tazlina	2018	Crew quarters are being added to MV Tazlina. Crew quarters make ACFs equivalent in function to the LeConte and Aurora providing greater flexibility in the operating schedule while increasing capacity.	\$1,690,000	\$425,000
Hubbard	2020	Crew quarters are being added to MV Hubbard.		
TRV (SOLAS)	2028	The Tustumena Replacement Vessel (TRV), and be online by 2028. This vessel will also provide cross-gulf service and run some SE routes if needed.		

² ROM estimates are from the Glostten 2020 Fleet Condition Survey. Work completed up not included. Updated

³ Priority 1 work, identified in annual Fleet Condition Surveys, has high urgency.

MRV (SOLAS)	2029	A new mainliner, the Mainliner Replacement Vessel, could be online in 2029.		
2nd New Mainliner (SOLAS)	2032	A second new mainliner will be built to replace Kennicott for an estimated \$350M and be online in 2032.		

Vessels go through various capital improvement projects (CIP) to complete upgrades and refurbishments necessary to keep the fleet operational.

Vessel Capital Projects

SUMMARY VESSEL CAPITAL EXPENDITURES					
VESSEL DESIGN EXPENDITURES					
Project (\$ in 1,000s)	2022 (Balance as of 5/15/22)	2023	2024	2025	2026
Current Vessel Design Projects	\$ 17,420.4	\$ 2,500.0			
Mainliner Replacement Vessel Design		\$ 10,739.5			
SUBTOTAL	\$ 17,420.4	\$ 13,239.5	\$ -	\$ -	\$ -
VESSEL CONSTRUCTION EXPENDITURES					
Minor CIP Projects	\$ 14,017				
Columbia Controllable Pitch Propeller System Replacement Project	\$ 13,733				
Matanuska Safety Improvement Project		\$ 37,469			
Kennicott Emissions and Exhaust Upgrades			\$ 13,881		
Tazlina Crew Quarters Construction and Modernization			\$ 25,000		
Tustumena Replacement Vessel		\$ 238,145	\$ 86,856		
Mainliner Replacement Vessel Design			\$ 100,000	\$ 100,000	\$ 125,000
Low-No Emission Electric Shuttle Ferry				\$52,516	
SUBTOTAL	\$ 27,750	\$ 275,614	\$ 225,737	\$ 152,516	\$ 125,000
VESSEL OVERHAUL EXPENDITURES					
AMHS VESSEL OVERHAUL AND REHABILITATION	\$ 15,000.0	\$ 15,000.0	\$ 15,000.0	\$ 15,000.0	\$ 15,000.0
Outstanding Maintenance Needs Priority 1 (non-CIP) in Yr 1 and 2-5 Yr 2	\$ 27,150.0	\$ 50,000.0	\$ 83,798.3		
SUBTOTAL	\$ 42,150.0	\$ 65,000.0	\$ 98,798.3	\$ 15,000.0	\$ 15,000.0

The following capital improvement projects are broken out in detail below:

- I. Columbia Controllable Pitch Propeller System Replacement Project
- II. Kennicott Emissions and Exhaust Upgrades
- III. Low-No Emission Electric Shuttle Ferry
- IV. Matanuska Safety Improvement Project
- V. Mainliner Replacement Vessel Design
- VI. Tazlina Crew Quarters Construction and Modernization
- VII. Tustumena Replacement Vessel

I. Columbia Controllable Pitch Propeller System Replacement Project			
Federal #	SAMHS00147	STIP ID	18358
Scope	The project scope of work consists of, but is not limited to, providing services; engineering, administration, and mobilization for the installation of a new CPP System; replacement of the existing Fire Detection System; upgrades to the existing Alarm and Monitoring System; dry docking; removal and disposal of existing asbestos materials (ACM), lead containing paint (LCP), chromate and dichromate, and PCB's encountered during performance of the work; installation of suitable replacement materials for removed ACM, LCP, and PCB; structural, outfit, mechanical and electrical modifications associated with the modifications; testing of all new equipment and systems; demonstration of satisfactory and acceptable operation to regulatory bodies and the owner; prepare complete construction drawings, perform all engineering and design work and prepare all documentation in accordance with the specification; provide training as specified; provide field office and court recorded preconstruction conference; perform thorough cleaning, surface preparation, and painting of all areas affected by the work; perform State Funded overhaul work.		
Design (P2)	\$500,000	Construction (P4)	\$13,732,725
Schedule: Design (P2)	Complete	Schedule: Construction (P4)	12/31/2024
Date of SSE	9/3/2022		

II. Kennicott Emissions and Exhaust Upgrades			
Federal #	SAMHS003800	STIP ID	18358
Scope	The intent of this Project is to upgrade the Kennicott's emissions and exhaust systems to assure compliance with ADEC and EPA standards. Work may include the purchase of new generation systems on the vessel, plus all ancillary work associated with the upgrade. Ancillary work may include electrical, system control revisions or replacements, structural modifications, piping modifications, exhaust system revisions, fire alarm and extinguishing system installations, deck and hull modifications, fuel/air/water piping installations, integration of the new system into the existing vessel systems, crew training, and other items.		
Design (P2)	\$800,000	Construction (est)	\$13,881,118 No PDA
Schedule: Design (P2)	8% Complete	Schedule: Construction (est)	12/31/2024 No PDA
Date of SSE	8/19/2022		

III. Low-No Emission Electric Shuttle Ferry			
Federal #	No Fed #	STIP ID	Not in STIP
Scope	To construct an electric ferry to improve and sustain essential transportation services to rural port communities, demonstrate innovative approaches that increase efficiency, decrease emissions, promote transportation sustainability, and increase grid resilience while improving the overall sustainability of Alaska's ferry system.		
Design (est)	\$5,251,592 No PDA	Construction (est)	\$52,515,918 No PDA
Schedule: Design (est)	Q1 2024	Schedule: Construction (est)	Q4 2025 No PDA
Date of SSE	ROM		

IV. Matanuska Safety Improvement Project			
Federal #	SAMHS00295	STIP ID	Not in STIP
Scope	This project includes the refurbishment and renovation of the passenger accommodation staterooms including wet spaces/restroom/showers, replacement of wasted steel, electrical refurbishments, complete pipe/plumbing and electrical replacements, fire and smoke detector wiring replacements, lead, chromium and asbestos abatement, preservation of exterior and interior structure, vessel upgrades as recommended in the 2018-19 Fleet Condition Survey, the ABS current and future survey status, Coast Guard Inspection status and compliance with existing and pending regulations, stability assessment, sea trials and annual State funded overhaul work and dry-docking.		
Cost: Design (P2)	\$366,625	Cost: Construction (P4)	\$37,469,059
Schedule: Design (P2)	8% Complete	Schedule: Construction (P4)	9/1/2025
Date of SSE	8/10/2022		

V. Mainliner Replacement Vessel Design			
Federal #	No Fed #	STIP ID	33976
Scope	This project will support the early steps of the process to replace the current aging mainliner vessels to provide continued and enhanced service to the communities of Southeast Alaska, providing for a new vessel that will offer a safer, more efficient, and environmentally friendly platform for public transportation and the delivery of freight between small and rural communities.		
Cost: Design (est)	\$10,739,520 N No PDA o PDA	Cost: Construction (est)	\$325,000,000
Schedule: Design (est)	9/30/2023	Schedule: Construction (est)	12/31/2027 No PDA
Date of SSE	ROM		

VI. Tazlina Crew Quarters Construction and Modernization			
Federal #		STIP ID	33978
Scope	Fund construction modifications to the M/V Tazlina to incorporate sleeping quarters for up to 24 persons, add 8 single person staterooms on the Bridge Deck, and 8 two-person staterooms on the Upper Deck. Additional work includes the installation of a Galley, Scullery, and Mess spaces on the Upper Deck; a new Fan Room on the Bridge Deck; and extension of the existing Port Stair Tower to the Bridge Deck to serve the new accommodations. Construction will include removal of existing furniture and equipment, linings, ceilings, piping, electrical wiring, fixtures, and other outfitting in the Pump Room and Passenger Upper and Bridge Decks. Following removals, the vessel shall be modified by addition of new structure, piping, toilet/shower modules, electrical wiring and fixtures, ceiling, linings, deck coverings, furniture, galley equipment, and fixtures necessary to accommodate the revised vessel arrangement. This project may include the installation of a type three waste management system and other modifications for energy management.		

Cost: Design (est)	\$2,500,000 No PDA	Cost: Construction (est)	\$25,000,000
Schedule: Design (est)	9/30/2023 No PDA	Schedule: Construction (est)	12/31/2024
Date of SSE	December 2021		

VII. Tustumena Replacement Vessel			
Federal #		STIP ID	30189
Scope	This project enables long-awaited construction of the Tustumena Replacement Vessel (TRV), allowing the sixty-year-old M/V Tustumena to retire, which will provide continued and enhanced service to many disadvantaged communities of Southwest Alaska; as part of this project, design updates to the new vessel's diesel-hybrid propulsion system, with batteries, will provide a safer, more efficient, and environmentally friendly platform for public transportation.		
Cost: Design (est)	\$13,000,000	Cost: Construction (est)	\$324,870,000
Schedule: Design (est)	6/30/2023	Schedule: Construction (est)	12/31/2026
Date of SSE	7/31/2022		

SHORE FACILITY CONSIDERATIONS

Shore Facilities Status

Shore Facilities Conditions Survey Reports are completed by DOT&PF's Southcoast Region Marine Engineering Section; the most recent report was completed in 2021. The primary purpose of this survey is to provide an overview of the present condition of the terminals to ensure the safety of the structures, aid planners in programming for future development, assist maintenance personnel with upkeep, and alert AMHS managers of operational constraints. The above water components of each facility are inspected biennially, and underwater inspections are performed on a five-year cycle. The ownership and configuration of the facilities vary widely, they include state and foreign-owned ferry terminals, city-owned freight wharves, and privately owned fish processing docks.

Table 1: Shore Facility Condition Survey Report Ranking System

9	EXCELLENT CONDITION
8	VERY GOOD CONDITION - No problems noted
7	GOOD CONDITION - Some minor problems
6	SATISFACTORY CONDITION - Structural elements show minor deterioration
5	FAIR CONDITON - All primary structural elements are sound but may have minor corrosion, cracking or chipping. May include minor erosion on bridge piers.
4	POOR CONDITION - Advanced corrosion, deterioration, cracking or chipping. Also significant erosion of concrete bridge piers.
3	SERIOUS CONDITION - Corrosion, deterioration, cracking and chipping, or erosion of concrete bridge piers have seriously affected deck, superstructure, or substructure. Local failures are possible.
2	CRITICAL CONDITION - Advanced deterioration of 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 bridge until corrective action is taken.
1	"IMMINENT" FAILURE CONDITION - Major deterioration or corrosion in deck, superstructure, or substructure, or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may be put back in light service.
0	FAILED CONDITION - out of service - beyond corrective action.
N	Not applicable

Southeast Alaska Facilities			
Terminal	Rating (out of 9)	Owner	Notes
Angoon	6.3		
East Berth	4.8		
Stern Berth	7.0		
Bellingham	7.0	Port of Bellingham	
Gustavus	7.4		
Haines	6.8		
Hoonah	6.7		
Kake	5.8		
Ketchikan, Berth 2	5.8		
Ketchikan, Berth 3	6.3		
Annette Bay (Metlakatla)	7.0		
Port Chester (Metlakatla)	4.3		
Pelican	7.0		Dock modifications are needed for ACFs
Petersburg	6.6		
Prince Rupert	5.0	City of Prince Rupert	

Sitka	7.0		
Skagway	6.2		
Tenakee	4.5		
Wrangell	6.3		
Yakutat	6.3		
Southeast Score	6.2 or 69%		

Table 2: Southeast Alaska Shore Facilities Status

Southcentral Alaska Facilities			
Terminal	Rating (out of 9)	Ownership	Notes
Chenega	7.0	North Pacific Rim Housing Authority	Dock modifications are needed for ACFs
Cordova	6.6		Dock modifications are needed for ACFs \$6,180,000
Homer	7.4	City of Homer	
Seldovia	5.0	City of Seldovia	
Tatitlek	6.5	North Pacific Rim Housing Authority	Dock modifications are needed for ACFs
Valdez	9.0		
Whittier	7.7		
Southcentral Score	7.0 or 78%		

Table 3: South Central Alaska Shore Facilities Status

Southwestern Alaska Facilities			
Terminal	Rating (out of 9)	Ownership	Notes
Akutan	5	Aleutians East Borough	
Chignik	9	Trident Seafoods	
Cold Bay	5	Aleutians East Borough	
False Pass	7	Village of False Pass	
King Cove	5	Aleutians East Borough	
Kodiak (Pier 1)	9	City of Kodiak	
Kodiak (Pier 2)	7	City of Kodiak	
Old Harbor	9	City of Old Harbor	
Ouzinkie	9	City of Ouzinkie	
Port Lions	9	City of Port Lions	
Sand Point	5	City of Sand Point	
Unalaska (Dutch Harbor)	9	City of Unalaska	
Southwest Score	7.3 or 81%		

Table 4: Southwestern Alaska Shore Facilities Status

Shore Facility Capital Projects

SUMMARY SHORESIDE CAPITAL EXPENDITURES					
SHORESIDE DESIGN EXPENDITURES					
Project (\$ in 1,000s)	2022 (Balance as of 5/1/22)	2023	2024	2025	2026
General Shoreside Improvements Design	\$5,404.8	\$6,377.8	\$4,300.0	\$0.0	\$0.0
SUBTOTAL	\$5,404.8	\$6,377.8	\$4,300.0	\$0.0	\$0.0
SHORESIDE CONSTRUCTION EXPENDITURES					
Prince Rupert Construction	\$12,990.7				
Cascade Point Lease Payments (state 1st year)	\$8,000.0	\$8,000.0	\$8,000.0	\$8,000.0	
Terminal and Dock Improvements Construction	\$9,570.0	\$9,100.0	\$71,450.9	\$18,400.0	\$6,100.0
SUBTOTAL	\$30,560.7	\$17,100.0	\$79,450.9	\$26,400.0	\$6,100.0

The following capital improvement projects are broken out in detail below:

- I. Auke Bay Ferry Terminal Building Refurbishment
- II. Auke Bay Ferry Terminal: East Berth
- III. Angoon Ferry Terminal Improvements
- IV. Cascade Point Terminal
- V. Chenega Bay Ferry Terminal
- VI. Cordova Ferry Terminal Improvements
- VII. Ketchikan Ferry Terminal
- VIII. Tatitlek Ferry Terminal
- IX. Pelican Ferry Terminal
- X. Skagway Ferry Terminal
- XI. South Tongass Ferry Terminal
- XII. Port Electrification

I. Auke Bay Ferry Terminal Building Refurbishment			
Federal #		STIP ID	31922
Scope	Refurbish the existing Auke Bay Ferry Terminal building structure.		
Schedule	Under Construction		
Estimate	\$2,870,000		
Date of SSE	Final PDA per Kirk Miller		

II. Auke Bay Ferry Terminal: East Berth			
Federal #		STIP ID	29709
Scope	Stage 1: Make improvements to the existing AMHS Auke Bay Ferry Terminal East Berth offshore dolphin structures. Improvements would include: replacement of 5 each, pile supported berthing dolphins, replacement of 2 each pile supported float restraint structures, replacement of pile supported gangway supports, catwalk and gangway upgrades, and electrical lighting improvements. The existing terminal was constructed in 1982. The pile supported structures are essential features needed to berth the AMHS ferry vessels. The existing structures have extensive section loss due to corrosion and the potential for structural failure is high.		
Cost: Design (P2)	\$960,938	Cost: Construction (P4)	\$8,127,609
Schedule: Design (P2)		Schedule: Construction (P4)	

Date of SSE	5/5/2022
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III. Angoon Ferry Terminal Improvements			
Federal #		STIP ID	33883
Scope	Install 2 new dolphins to accommodate the ACF vessel, and upgrade the apron lift with hydraulic accutators.		
Cost: Design (P2)	\$900,000	Cost: Construction (P4)	\$3,500,000
Schedule: Design (P2)		Schedule: Construction (P4)	
Date of SSE			

IV. Cascade Point Terminal			
Federal #		STIP ID	33974
Scope	A new dock at Cascade Point may be built in 2026. The Reshaping Working Group report recommended a terminal be built at Cascade Point, stating that ACF crew quarters would not be needed with this terminal. An ACF with crew quarters can operate on the shorter Lynn Canal route from Cascade Point while also running longer routes to Angoon and Hoonah. Without crew quarters, an ACF will not make the round-trip from Cascade Point to these ports in a 12-hour window.		
Schedule			
Estimate	\$36,000,000		
Date of SSE			

V. Chenega Bay Ferry Terminal			
Federal #		STIP ID	33888
Scope	Construct new side berth ferry terminal facility at the Chenega dock to accomodate the Alaska and Aurora Class ferry vessels. Improvements would include the provision of a new side loading ferry terminal structures including pile supported approach dock structure, vehicle transfer bridge, bridge support float and two mooring dolphins. An end loading terminal (which would be less cost) may also be feasible at location of existing tidal ramp ferry berth but it appears to conflict with existing dock uses.		
Cost: Design (P2)	\$500,000	Cost: Construction (P4)	\$12,575,000
Schedule: Design (P2)	Year 1-2 Design	Schedule: Construction (P4)	Year 3 Construction
Date of SSE	5/9/2022		

VI. Cordova Ferry Terminal Improvements			
Federal #		STIP ID	33886
Scope	Make improvements and modifications to the existing ferry terminal to accommodate the ACF Class Vessel (M/V Hubbard) and the Aurora Class vessel. The existing terminal is owned and maintained by the AMHS. Work would include removal of 2 floating fenders and replacing with fixed-fender dolphins and catwalks for improved mooring and line handling along the face of the		

	dock. Work would also include modifications the stern berth required to accommodate the ACF vessel. This work would include a new fixed-fender dolphin farther out and removal of submerged debris.		
Cost: Design (P2)	\$450,000	Cost: Construction (P4)	\$6,180,000
Schedule: Design (P2)		Schedule: Construction (P4)	
Date of SSE			

VII. Ketchikan Ferry Terminal: Berth 2			
Federal #		STIP ID	31098
Scope	Stage II: This project will remedy structural and operational deficiencies at the Ketchikan AMHS Ferry Terminal. This project will replace and refurbish existing vessel mooring and berthing structures, provide a new mooring dolphin structure and construct upland access and terminal building improvements.		
Cost: Design (P2)	\$350,000	Cost: Construction (P4)	3,000,000
Schedule: Design (P2)		Schedule: Construction (P4)	
Date of SSE			

VIII. Tatitlek Ferry Terminal			
Federal #		STIP ID	33887
Scope	Construct a new end berth ferry terminal facility at the Tatitlek dock to accommodate the Alaska and Aurora Class ferry vessels. Improvements would include the provision of new end loading ferry terminal structures including vehicle transfer bridge and bridge support float (or lift bridge support) at the location of the existing tidal ramp ferry facility.		
Cost: Design (P2)	\$1,500,000	Cost: Construction (P4)	\$10,575,000
Schedule: Design (P2)	Year 1-2 Design	Schedule: Construction (P4)	Year 3 Construction
Date of SSE	5/9/2022		

IX. Pelican Ferry Terminal			
Federal #		STIP ID	33885
Scope	Construct a new ferry terminal or modify the existing terminal to accommodate the ACF Class Vessel (M/V Tazlina) and the Leconte Class vessel. The existing terminal is owned and maintained by the City of Pelican and AMHS operates under an MOA. The terminal is currently configured for the LeConte Class vessel only, and the ACF vessel can not be accommodated without reconfiguration or by installing a separate facility. Work for a new terminal would include construction of an access road, 130' x 20' trestle, 100' transfer bridge, float and apron structure, 4 offshore mooring structures, and a waiting shelter.		
Cost: Design (P2)	\$1,716,826	Cost: Construction (P4)	\$14,520,906
Schedule: Design (P2)	Year 1-2 Design	Schedule: Construction (P4)	Year 3 Construction

Date of SSE	4/7/2022
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X. Skagway Ferry Terminal			
Federal #		STIP ID	13883
Scope	Replace existing mooring float and transfer bridge, refurbish existing side berth mooring structures and construct new mooring structures to provide end berth for Alaska Class Ferry vessels.		
Cost: Design (P2-3)	\$554,850	Cost: Construction (P4)	\$22,000,000
Schedule: Design (P2-3)		Schedule: Construction (P4)	
Date of SSE	6/8/18		

XI. South Tongass Ferry Terminal I			
Federal #		STIP ID	33972
Scope			
Cost: Design (P2)	\$800,000	Cost: Construction (P4)	\$12,300,000
Schedule: Design (P2)	Year 1-2 Design	Schedule: Construction (P4)	Year 3 Construction
Date of SSE	4		

XII. Port Electrification			
Federal #		STIP ID	Not in STIP
Scope	Location to be determined.		
Cost: Design (P2)	\$2,000,000	Cost: Construction (P4)	\$12,000,000
Schedule: Design (P2)		Schedule: Construction (P4)	
Date of SSE			

Shore Facility Improvements Timeline

pending

ASSET MANAGEMENT PROGRAM RECOMMENDATIONS

<p>1. Replace and upgrade aging infrastructure.</p>	<ul style="list-style-type: none"> • Construct new vessels to replace those beyond retirement • Upgrade terminal facilities for system flexibility • Implement a vessel replacement schedule to replace vessels every 30-35 years.
<p>2. Invest in technology to support the management of vessel and terminal assets and improve passenger experience.</p>	<ul style="list-style-type: none"> • Define and track metrics to inform system planning. • Maximize utilization of system capacity through adaptive management strategies such as an expanded reservation system, an improved fare structure, and fare collection methods.
<p>3. Design a fleet that is future-ready and sustainable.</p>	<ul style="list-style-type: none"> • Plan vessels and terminals to be flexible and adaptable to emerging technologies and new transportation options. • Construct a low-no emission ferry, for use on suitable routes. • Complete shoreside infrastructure improvements needed to support low-no emission ferries. • Incorporate commercially available modern technologies, where practicable, on the current fleet. • Highlight sustainability through organizational structure, decision-making, and reporting

ASSET MANAGEMENT PROGRAM PERFORMANCE METRICS

DOT&PF Strategic Themes	Metric	Current Value
Safety	Pax injuries per 1,000 pax; OSHA recordable crew injuries per 1,000 revenue service hours.	
State of Good Repair	Shore Side Facilities State of Good Repair Score	
Economic Vitality		
Resiliency		
Sustainability		
Management Goals		
	Metric	Current Value
All terminal and vessel capital projects are completed on budget.	% of terminal projects completed on time/budget; % of vessel projects completed on time/budget	
Vessel out-of-service time is reduced to that which is strictly necessary.	Avg. Vessel out-of-service time	

Operating Program

DOT&PF, like many agencies in Alaska and the nation, is facing unprecedented challenges with inflation, tight labor markets, a pandemic, an aging workforce and fleet, supply chain issues, and outdated technologies. For years DOT&PF has been trying to adapt to these ever-changing challenges, and, despite constant adjusting and tireless effort by staff and crew, the agency has been struggling to provide reliable and predictable service. This pattern cannot continue. The public expects more from its transportation agency. Reliable, predictable service needs to be restored

AMHS RESTORATION PROGRAM

The AMHS Restoration Program will chart the course ahead to a restored and healthy transportation system by meeting service level targets based on crewing availability, fleet capacity, and budget. This program will first focus on stabilizing the system and then incrementally adding service while providing transparency through monitoring and reporting of critical system elements—our crew, our vessels, and the financial resources to support service.

Each phase includes mitigation measures addressing fare structure, policy, and communication. This program will have a cost for mitigation measures such as those need to recruit and retain employees. To enhance transparency and communications, each community will be able to track service updates, program progress, and any changes to mitigation measures via a customized Service Area Playbook.

Crew. AMHS is nothing without the people working daily to keep vessels running, provide passengers with services, maintain schedules, and keep us in regulatory compliance. Committed staff are burning out due to national staffing shortages in the maritime industry. The shortage of qualified crewmembers threatens operations. Vessels are frequently at risk of going into lay-up and sailing with a crew operating by 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 leave. Despite efforts to hire and retain talented staff, recruiting efforts to date are failing to attract workers.

Fleet. Reliability is impacted by mechanical delays and failures due to the aging fleet. Currently, the fleet is aging and behind in vessel maintenance. This is a liability to the ability of the system to provide an adequate level of service. Five out of the nine vessels in the fleet are at least 45 years of age, and the fleet size has contracted in recent years as vessels have been sold or otherwise decommissioned.

Budget. AMHS uses a combination of federal, state, and fare box revenue to operate and maintain the system. The AMHS operating budget is based on legislatively approved service levels, and as such, ferry schedules have historically varied from year to year based on available funding levels. In recent years, the system has seen reduced revenue due to loss of ridership and other services. For example, after budget cuts in 2016, AMHS traffic volumes have trended steadily downward, and farebox recovery dropped from about 50 percent of operating costs to about 30 percent. The pandemic reduced ridership even further; AMHS served 52,196 passengers and 27,006 vehicles in 2020, down from 190,118 passengers and 77,203 vehicles in 2019.

FY2021 continued the trend of challenging years for AMHS. The pandemic continued to cause lower-than-normal traffic volumes and forced AMHS to reduce operations, resulting in lower annual operating revenues, lower operating weeks, and fewer port calls than pre-pandemic operations. During FY2021, AMHS recorded \$27.9 million in operating revenues, which was a decrease of \$22.9 million compared to FY2019. Operating expenditures totaled \$96.1 million, which is \$44.8 less than FY2019.

OPERATING GOALS

1. Establish and maintain a reliable and predictable service.
2. Achieve sufficient manning levels to avoid crewmember holdovers and overtime.
3. Establish vessel energy management plans that reduce operating costs.

OPERATING CONSIDERATIONS

Climate Change

DOT&PF is responsive to climate change and environmental justice, which is especially true as newer ferries with better technology and improved fuel efficiency are appropriately deployed. There are numerous community climate action plans that call for more efficient transportation operations. DOT&PF is in the process of developing a Sustainable Transportation Program and considering the development of a transportation equity plan. EJSCREEN is used in DOT&PF planning.

Environmental Justice Populations

The communities served by the AMHS all face low transportation access and high transportation cost barriers. The majority are not accessible by road so the cost of transporting freight and travel for individuals is extremely high. As a public transportation system, the AMHS provides affordable transportation options for people who might not otherwise be able to travel. In rural Alaskan towns, a ferry ride is a slower but more affordable way to the city than an air taxi or float plane for student groups, medical patients, or individuals looking to travel for work or for pleasure. In winter severe weather makes air transportation risky and unreliable. Lack of ferry service leads to a host of logistical problems, ranging from broken vehicles to stranded fishing gear and construction equipment. Locals may spend up to four times as much to barge freight if ferries are not available.

Racial Equity/Barriers to Opportunity

AMHS is at the heart of Alaska's equitable approach to ensuring the benefits of affordable transportation. This publicly subsidized system ensures that coastal communities (the majority of which are considered disadvantaged) have high costs and limited service mitigated. Coastal communities' land use policies and housing take into account distance from the ferry terminal and dock access. DOT&PF's Sustainable Transportation program and future transportation equity plan take into account the AMHS. All projects consider how best to address racial equity and remove barriers to opportunity.

Justice40

AMHS addresses the Justice40 Initiatives by strengthening the resiliency of a vital transportation system in the face of extreme impacts from climate change and by connecting disadvantaged rural communities to commerce, health and social services, and providing an economical way to bring food and other goods and services in. Transportation planning in Alaska must account for communities that are very remote. Harsh weather means they are often not accessible by air during the winter, so the marine highway plays an important part in connecting residents to basic services that are often a short drive away in other parts of the U.S. Resilience to climate change in the transportation network is particularly important in Alaska, where climate change puts much of the state at increased risk for natural disasters. Since the Exxon Valdez oil spill in Prince William Sound in 1989, the AMHS has been integrated into the state's emergency response system.

Many of the datasets in Justice40 screening tools are not complete for Alaska and data is not always applicable. 15 of the 35 served communities on AMHS routes are considered Tribal or Disadvantaged, though other datasets would

consider all communities served as Tribal and additional communities as Difficult Development Areas or climate-impacted. EPA’s EJSCREEN and DOT’s Historically Disadvantaged Community Tool are used by DOT&PF in their planning processes and project implementation. 45 percent of the communities within the AMHS service area are Disadvantaged Communities

Metlakatla	16,203
Ketchikan (Saxman)	27,968
Petersburg	4,701
Kake	1,308
Haines (Klukwan)	30,067
Valdez	7,010
Chenega	127
Tatitlek	98
Seldovia	1,915
Ouzinkie	879
Chignik	137
Sand Point	235
Cold Bay	117
False Pass	42
Akutan	176

Table 5: Justice40 Disadvantaged Community Served Actual or Estimated Annual Ridership Count

Economic Development

DOT&PF contracts implement equity-focused policies and labor standards related to all phases of contracting and construction and requires payment of Davis-Bacon wages when applicable. For communities with few opportunities, AMHS provides good career jobs. AMHS employees are represented by three unions. Ninety-five percent of AMHS employees are residents of 44 communities. Contractors are required to seek out minority and local hires and fully utilize any training programs in the area.

CY23 OPERATING BUDGET

One of the first actions of the State of Alaska when it became a state was to bond for a ferry. The Alaska Marine Highway System has been a mainstay of Alaska’s economy and community viability. The State of Alaska remains just as committed to that system and outcome today as 70+ years ago.

The Alaska State Legislature continues to fund the AMHS beyond farebox recovery, with more than 50% of the budget coming from general fund revenues. That kind of commitment has been upheld even as the State faced dire fiscal circumstances with its precipitous drop in revenue due to oil price decline and output. More recently, and concurrently, the State upheld its budget commitment while the pandemic and economic crisis diminished the ability for the ferry system to operate fully due to public health concerns and in the face of restricted travel.

Milestone	Date
Draft Budget Released	December 2021
Legislative Session	January-May 2022
Final Budget Adopted	Passed legislature May 2022; Signed into law June 2022
CY23 Operating Budget	Effective January 1, 2023

Table 6: Operating Budget Key Dates

WINTER 2022-2023 OPERATING SCHEDULE

Winter schedule pending for (10/1/2022-4/30/2022)

AMHS is currently running with a reduced level of service that aligns with available resources. As part of the AMHS Restoration Program, AMHS will redefine service levels for the people and businesses we serve.

OPERATING RECOMMENDATIONS

DOT&PF, like many agencies nationwide, is facing unprecedented challenges with inflation, tight labor markets, a pandemic, an aging workforce and fleet, supply chain issues, and outdated technologies. For years, DOT&PF has been trying to adapt to these ever-changing challenges, and, despite constant adjusting and tireless effort by staff and crew, the agency has been struggling to provide reliable and predictable service through its ferry system. AMHS currently brings in an average of 30% of the annual average operating costs in revenue; the remaining operating costs are covered by federal and state funds. Revenue is insufficient to meet operational needs.

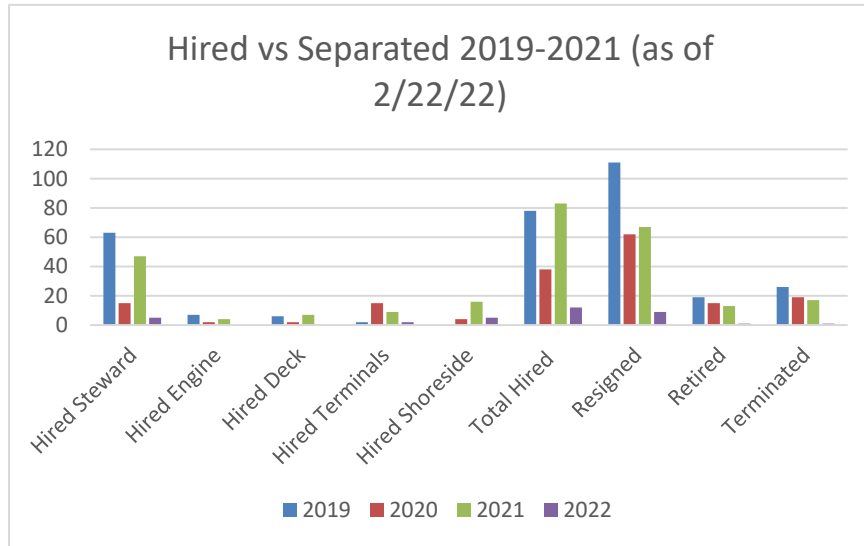
Goal	Objective
Draft and maintain a Service Restoration Plan and update weekly.	<ul style="list-style-type: none"> • Definite critical service levels, optimal service levels, and growth service level. • Facilitate improved customer communications. • Provide transparency into operational decision-making.
Stabilize system operations to offer reliable scheduling.	<ul style="list-style-type: none"> • Launch a Preservation and Maintenance Program for vessels and terminals that maintain a consistently good state of repair. • Streamline and optimize the fleet composition to realize enhanced efficiencies and redundancy. • Enhance connections for all users.
Establish a workforce development plan to support recruitment, retention, professional development, and training.	<ul style="list-style-type: none"> • Establish a workforce development plan.
Draft vessel and terminal energy management plans.	<ul style="list-style-type: none"> • Establish vessel energy management plans. • Establish terminal energy management plans.

Table 7: Operating Recommendations

CREW METRICS

AMHS is nothing without the people working daily to keep vessels running, provide passengers with services, book reservations, maintain schedules, and keep us in regulatory compliance. DOT&PF is fortunate to have a committed staff who want to make a difference and create a system we can all be proud of. Staff are burning out due to national staffing shortages in the maritime industry, this is our foremost critical problem. The shortage of qualified crewmembers threatens the ability of AMHS to man the fleet. Being short-staffed, vessels are frequently at risk of going into lay-up and sail with a crew operating by 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 leave.

Figure 3: Employees Hired and Separated 2019 to 2022



	2019	2020	2021	2022
Hired Steward	63	15	47	5
Hired Engine	7	2	4	0
Hired Deck	6	2	7	0
Hired Terminals	2	15	9	2
Hired Shoreside	0	4	16	5
Total Hired	78	38	83	12
Resigned	111	62	67	9
Retired	19	15	13	1
Terminated	26	19	17	1

Table 8: Employees Hired and Separated 2019 to 2022

Our dedicated, flexible, and hard-working personnel are the reason we have been able to maintain the service we do. A tightening labor market and accelerated attrition after the onset of the Covid-19 pandemic have compounded longstanding challenges with hiring and retaining our people. We want to reverse these trends.

We will identify metrics that help us measure the happiness and well-being of our people. We will benchmark current crewing levels against target thresholds and the minimum level required to operate each vessel in our fleet.

Figure 4: Crew Utilization

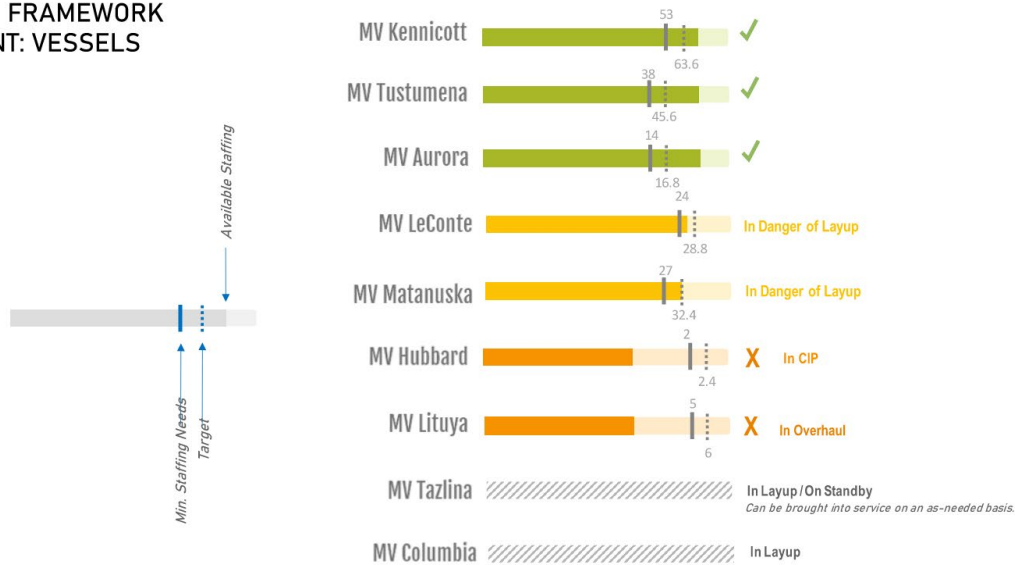


Crew Health Check ● ○ ○ ○ ○ ○

- ○ ○ ○ ○ ○ **Staffing Levels:** Each vessel crew is made up of multiple types of positions, and a certain number of crew are needed for each position to provide service. To meet current systemwide staffing needs, **about 14 additional crew are needed** to ensure sufficient staff for all types of crew positions.
- ● ○ ○ ○ ○ **Relief Pool:** Relief crew fill in when a regularly-scheduled crew member calls in sick or takes vacation. Having enough relief crew is vital to preventing service disruptions. Currently, relief crew is only available for **1 of the 5** types of crew positions.

Figure 6 compares crewing requirements for each vessel to target levels and minimum levels required for safe operation of the vessel. The graphic depicts an overall shortage across the system, with the LeConte and Matanuska as risk of layup due to shortages. Note that even when in layup, crew are still needed onboard a vessel to perform maintenance work and routine upkeep.

**SYSTEM FRAMEWORK
ELEMENT: VESSELS**



*Available crew is as of 7/24/22 to demonstrate the possible graphics but doesn't portray what is expected as available crew.

Figure 5: Vessel Staff Levels

Graphics will be developed to track important indicators of crew morale, such as percentage of relief requests granted, investments in workforce development and training, and employee engagement survey results.

Figure 7 will compare crewing requirements for each category of crew to minimum required and target levels to meet the upcoming schedule. The graphic depicts an overall shortage across the system with no relief for deck and engine personnel. Minimum crewing levels do not account for overtime worked.

October and November Crewing Needs

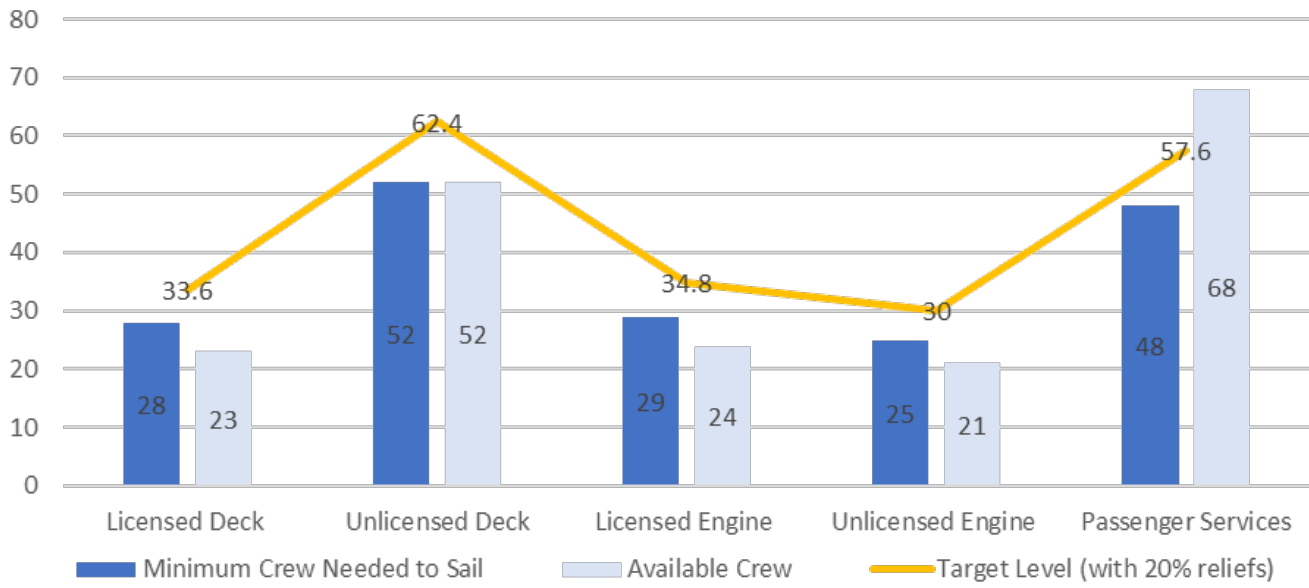


Figure 6: Crewing needs

FLEET METRICS

Lack of vessels, through extended overhauls or unexpected maintenance requirements, restricts options for serving our ports.

This key system health element is intended to measure the "State of Good Repair" of the fleet. The short-term operating needs of the system must be balanced against necessary maintenance and overhaul projects to ensure vessel availability over time. Both vessel utilization and "State of Good Repair" are considered in the overall health check. Currently, the fleet is aging and behind in vessel maintenance. This is a liability to the ability of the system to provide an adequate level of service. Five out of the nine vessels in the fleet are at least 45 years of age, and the fleet size has contracted in recent years as vessels have been sold or otherwise decommissioned.

The varied operating environments across the different service areas in the system mean that vessels are not easily transferrable to alternative routes of service. This means a single vessel being out of service increases the risk that the system will not be able to provide service to a community if a vessel goes out of service. This reinforces the importance of maintaining a "State of Good Repair"

While good ship maintenance practices can help mitigate the risks associated with an aging vessel, additional time spent out of service and higher maintenance costs are correlated with vessel age.

Conditions of Class and United States Coast Guard 835's are issued to document vessel deficiencies with respect to classification society standards and Code of Federal Regulations laws, respectively.

How responsive is the system to maintenance requests from crew? Is there an extensive backlog of priority maintenance items?

How does the planned duration of overhaul periods compare to actuals?

BUDGET METRICS

AMHS' operating budget is based on legislatively approved service levels. In recent years, the system has seen reduced revenue due to 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 appropriated levels. Because of this, current funding levels are sufficient to support

Figure 7: Fleet Vessel Utilization

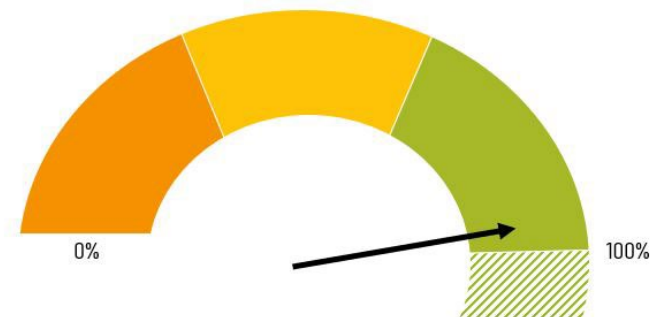


Fleet Health Check ●●●○○○

●●●○○○ **Modernization of Fleet:** As a vessel ages, reliability risks increase. The average age of a vessel in the current fleet ins **34.1** years old, which means that the fleet's overall reliability risk is medium.

●○○○○○ **Vessel Availability:** Some of the vessels in the fleet will be unavailable at times for routine overhauls. This is to be expected as we invest in maintaining our fleet. periods of unavailability are planned with the intent of minimizing overall impact on the system. However, if overhaul periods extend beyond plan or unplanned and urgent maintenance needs manifest, the ability to maintain schedule may be impacted.

Figure 8: Appropriate Budget Levels



Budget Health Check ●●●●●●

●●●●●● **Allocated Funding:** The state has allocated sufficient funds to provide current service levels and to meet the 2022-2023 Winter Operating Plan. Providing service to meet budgeted levels is currently not possible due to crew and vessels

current service levels and the 2022-2023 Winter Operating Plan. As service levels are restored, this system health element will be monitored.

	FY2019 Final Authorized	FY2020 Final Authorized	FY2021 Final Authorized	CY2022	CY2023 Governor's Proposed	Δ	Δ%
Total Planned Weeks of Service	345.9	254.3	286.7	249.5	362.7	113.2	45%
Weeks of Service Excluding LIT					313.1		
Metlakatla (LIT) Weeks of Service					49.6		
Planned Port Calls	5,914	4,399	4,959	4,166	6,311	2,145	51%
Budgeted Revenue	\$ 51,697.6	\$ 48,070.2	\$ 51,779.1	\$ 53,365.1	\$ 53,314.8	\$ 7,829.6	17%
Actual Revenue	\$ 50,804.0	\$ 28,257.0	\$ 27,862.0	\$*41,000.0			
Planned Fare Box Recovery	37%	44%	47%	33%	38%		
Actual Fare Box Recovery	36%	29%	29%	*22%			
Fund Source							
Unrestricted General Funds (UGF)	\$ 86,005.5	\$ 46,002.2	\$ 54,011.0	\$ 63,401.6	\$ -	\$ (63,401.6)	-100%
Designated General Funds (DGF)	\$ 52,070.1	\$ 55,492.6	\$ 53,151.4	\$ 5,425.7	\$ 5,000.0	\$ (425.7)	-8%
Other	\$ 2,167.7	\$ 8,071.3	\$ 2,150.0	\$ 1,308.3	\$ 859.7	\$ (448.6)	-34%
Federal- Relief Funding	\$ -	\$ -	\$ 1,122.4	\$ 112,768.0	\$ -	\$ (112,768.0)	-100%
Federal Funds (Including IJJA/BIL)	\$ -	\$ -	\$ -	\$ -	\$ 135,894.7	\$ 135,894.7	100%
Operating Total	\$ 140,243.3	\$ 109,566.1	\$ 110,434.8	\$ 182,903.6	\$ 141,754.4	\$ (41,149.2)	-22%
				<i>AMHS less Forward Funding</i>	\$ 118,667.5	\$ 23,086.9	19%

Figure 9: CY23 Governor's Proposed Operating Budget

We will identify metrics that help us measure whether funding levels are adequate to support current and targeted service levels. We will evaluate whether budget is sufficiently allocated to key operational areas, such as service and maintenance.

It is important that the system make investments in fleet maintenance. Figure 9 compares funding levels for maintenance against actual spending levels.

What level of service is the system providing relative to appropriated levels?

Stakeholder Planning Documents

The **Southwest Alaska Municipal Conference's CEDS** states the region's growing concern is the sustainability of reliable ferry service. Continual repairs required for the Tustumena and AMHS budget shortfalls have resulted in service disruptions. The Strategy update supports continued service to Kodiak and communities west to Unalaska. Unalaska's Comprehensive Plan considers ferries as critical to residents, businesses, and visitors.

The **Kenai Peninsula Economic Development District's CEDS** highlights disruptions to marine travel as being a key challenge for the region. Budget reductions to the AMHS have threatened ferry service which provides critical passenger connections and transports goods to and from the Kenai Peninsula. Seldovia depends on the AMHS to accommodate freight, vehicles, and passenger travel to and from Homer. Their Comprehensive Plan's goal is to retain, safe, well-timed, water-based transportation options, by cooperating with the State to improve service.

The **Southeast Conference's CEDS** stresses that a strong ferry system is essential to regional economic development, quality of life and community wellbeing. The priority transportation objective is to minimize impact of budget cuts to AMHS and develop sustainable operational model. Elements of this objective include: Design a new strategic operating

plan for AMHS, Lower State's general fund subsidy percentage, Fleet Renewal Plan, and AMHS Value Outreach. Skagway, the northern terminus of Southeast Alaska's part of the AMHS, advocates for consistent ferry service. Their Comprehensive Plan notes that the ease and cost of resident travel are negatively affected when ferry service is down, especially in the winter.

Alaska Marine Highway Operations Board Competency Review

A description of skill or competency gaps in the AMHOB board.

List of needed skills or competencies

- Enterprise
 - Architecture
 - Business operations
 - Financial management
 - Risk management
 - Logistics
 - Supply chain management
 - Engineering
 - Project management & controls
 - Marine operations
 - Strategy
 - Regulatory compliance
 - Ship maintenance
 - Construction
 - Repair
 - Quality Management
 - Continuous Improvement
 - Sales and marketing
 - Communication
 - Customer Interface
 - Experience Management
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