State of Alaska
FY2007 Governor's Operating Budget

Department of Transportation/Public Facilities
Marine Engineering
Component Budget Summary

Component: Marine Engineering

Contribution to Department's Mission

Ensure that all Alaska Marine Highway System (AMHS) vessels and terminal facilities are safe, reliable, comfortable, and accessible to all Alaskans and visitors to the state.

Core Services

Conduct annual Fleet and Terminal condition surveys to develop functional operational assessments. Provide technical information for long-range planning and facility development.

Prepare the plans, specifications and estimates and manage the construction contracts for new vessel construction and for the repair, refurbishment, and modernization of existing AMHS vessels. Assure that the vessels continue to comply with state, federal, and international regulations, as well as all United States Coast Guard (USCG) and marine classification society requirements.

Support fleet operations through the port engineer functions located in Ketchikan and Juneau and while attending AMHS vessels at commercial shipyards during both state overhauls and federal aid projects.

Perform preventive maintenance on 16 widely-dispersed state-owned ferry terminals ranging in location from Homer to Ketchikan. Perform semi-annual inspections and maintenance for regulatory compliance and accomplish upgrades and repairs of the terminal facilities. Terminal facilities include the transfer bridges, mooring structures, staging areas and terminal buildings. The majority of these terminals are located on the National Highway System and are vital for the transportation of goods and people throughout the state.

FY2007 Resources Allocated to Achieve Results

FY2007 Component Budget: $2,593,100

Personnel:	
Full time	20
Part time	2
Total	22

Key Component Challenges

The contract administration of the existing fleet refurbishment program funded through current ongoing capital improvement projects continues to stretch existing vessel construction management team members. We continue to modernize our existing fleet, three of which carry the very demanding Safety of Life at Sea (SOLAS) certification required to service Prince Rupert, BC. On 1 July 2002, a comprehensive new set of requirements for fire protection, fire detection and fire extinction on board ships entered into force as a new revised Chapter II-2 of the International Convention for the Safety of Life at Sea 1974, as amended, incorporating technological advances in fire detection and extinction as well as lessons learned from fire incidents over the years.

Allocation of adequate Statewide Transportation Improvement Program (STIP) funds to procure replacement vessels for our aging fleet, as well as modernize and maintain regulatory compliance of our current vessels, is critical to the long range mission accomplishment of AMHS. The orderly replacement and upgrade of our vessels, with more emphasis on true day boat service, should result in reduced operating expense and improved vessel reliability and customer service. In accordance with our long-range maintenance and modernization plan, the planning for federally funded capital projects for M/V Malaspina, M/V Columbia and M/V Tustumena are underway for accomplishment in FY07.

The addition of modernized and expanded terminal facilities along with the introduction of new Fast Vehicle Ferry (FVF) terminals and maintenance facilities workload continues to increase for the four-person shore facilities maintenance team. The shore maintenance personnel are currently fully utilized throughout the yearly maintenance cycle. It must be expected that the current staff will be unable to fully maintain the existing facilities with the anticipated construction of new and larger terminals in Auke Bay, Whittier, Valdez, Cordova and Ketchikan. Regulatory requirements now mandate that AMHS facilities have sophisticated security features. The Valdez terminal incorporates AMHS' first-ever weigh-in-motion vehicle scales installed in support of the introduction of the fast vehicle ferry M/V Chenega in Prince William Sound in 2005. These scales will require maintenance and calibration. All emergency generator fuel storage tanks now require operation inspections and certification to meet 18 AAC 78. Each new terminal that is built, upgraded, or expanded adds a new fire alarm system and/or sprinkler system that require annual re-certification to meet Division of Fire Prevention regulations. These new regulations, added to historical Occupational safety and Health Administration (OSHA), Department of Environmental Conservation (DEC), Americans with Disabilities Act (ADA), and now security requirement oversight, require significant administrative effort and demand additional funding to meet and maintain compliance.

The addition or expansion of loading berths, docks and ramps adds stress to our already limited resources. Cordova has grown from one building and one dock to a new mooring facility with a side loading berth, a stern loading berth, and a FVF support building. Each berth has its own hydraulic system, shore tie connection, and sewer and water. Valdez has gone from just a high tide and a low tidal ramp, without moving parts to the largest terminal building with state of the art equipment. Whittier has grown from a small terminal building to a new structure with a paved and lighted parking lot, and a new dock built to accommodate the M/V Kennecott, M/V Aurora, and the FVF Chenega. We also have a new berth and transfer facility in Auke Bay for the FVF Fairweather. This new berth provides daily service for the M/V Fairweather, sometimes twice per day. This increased use has added more wear and tear on this dock's mechanical systems and requires more frequent maintenance.

Recruitment of Vessel Construction Managers and Port Engineers, primarily due to retirement and transfer from state service, will continue to be challenging. Hiring qualified candidates that have specialized skills and experience normally requires nationwide recruitment and at least six months lead time. It is anticipated that the current level of marine engineering service will be maintained and will accomplish both the Department of Transportation and Public Facilities (DOT&PF) State Transportation Improvement Plan (STIP) and AMHS Operating Plan as currently written.

In order to sail to Prince Rupert, B.C. AMHS vessels must continue to be certified under the demanding International Maritime Organization's Safety of Life at Sea (SOLAS) regulations. Over the past 15 years, almost annual new and innovative SOLAS safety and security requirements have been mandated, usually with very short implementation timeframes. Many of these requirements are eventually incorporated in the USCG-enforced U.S. Code of Federal Regulations (CFR's) for the remainder of the AMHS domestic fleet. While we cannot predict these unfunded mandates, we will continue to absorb them in FY07 and beyond and do our best to accomplish those using federal funds. With the addition of these new facilities, our work load has increased over the past few years.

Significant Changes in Results to be Delivered in FY2007

No significant change anticipated.

Major Component Accomplishments in 2005

Successfully managed the $10.6 million design and construct contract on the M/V Columbia Machinery Refurbishment and Ship System Improvement Project. Vessel was re-delivered on 29 April, 2005 in Portland, Oregon. Work included: Renew the main propulsion engines, inspect/overhaul/replace the entire gear train as appropriate. Made improvements as recommended in 2000 Vessel Condition Survey. Renewal/upgrading of piping systems such as condensate, fuel, fire main, propulsion salt water cooling, flushing, and potable water in engineering spaces. New/overhaul, F/O transfer pump, sanitary pumps, potable water pumps, etc. MSD Upgrades. Overhaul / renewal of deck machinery. Electrical system upgrades. New marine growth inhibitors in sea chests. Blasting and painting of tanks and voids. Security Upgrades. Dry-docking for Regulatory Inspections.

Successfully managed the $5.5 million design and construct contract on the M/V Kennicott Refurbishment Project. Vessel was re-delivered on 15 March 2005 in Portland, Oregon. Work included: Five year modifications - Correct deficiencies in crew and public spaces, main engines, generators, vehicle elevator, other machinery, wiring, electrical equipment, ventilation, piping drainage systems, sanitary system and other components as necessary. Install voyage

data recorders, AIS and Local Application Fire Fighting Systems. Install computer network equipment. MSD Upgrades. Security Upgrades. Drydocking for Regulatory Inspections.

Successfully re-activated M/V Aurora and the M/V Taku after lengthy lay-ups in Ketchikan.

AMHS Marine Engineering Vessel Construction Managers have implemented federal aided projects for the 2006-2007 winter lay-up seasons which include:

M/V Tustumena Engineering Equipment/Systems Upgrades/Overhaul
Scope of work consist of making improvements as recommended in 2000 Vessel Condition Survey. Typical items to include overhaul/renew miscellaneous equipment. Renewal/upgrading of piping systems such as condensate, fuel, fire main, and car deck sprinkler (CUNI), propulsion salt water cooling, flushing, and potable water in engineering spaces. New/overhaul, F/O transfer pump, sanitary pumps, potable water pumps etc. Overhaul / renewal of deck machinery. MSD upgrades. Electrical system upgrades. Life Saving equipment upgrades. New marine growth inhibitors in sea chests. Blasting and painting of tanks and voids. Security Upgrades. Dry-docking for Regulatory Inspections.

AMHS Fleet Survey
The intent of this contract is to update the 2001 AMHS Fleet Vessel Condition Reports and the computer database that was created at that time, to describe the current vessel condition and reflect construction work performed since the 2001 reports were prepared. The completed reports will assist AMHS Management in identifying and programming future Capital Improvement Projects for each vessel. Updates will be limited to performing updates of reports for the M/V Aurora, M/V Columbia, M/V Kennicott, M/V LeConte, M/V Malaspina, M/V Matanuska, M/V Taku, and M/V Tustumena. Reports will not be prepared for the FVF Chenega, FVF Fairweather, or the M/V Lituya.

M/V Taku SOLAS Compliance and Machinery Upgrades
Work scope composed of New Overhaul Propellers Hubs & Blades. Overhaul/Renew of CPP System. Installation of new Regulatory Automatic Identification System (AIS), Voyage Data Recorder (VDR), and Fixed local Application Fire Extinguishing System. New Security Upgrades, Selected Equipment Renewals/Overhauls, Public Space Upgrades, and Sandblasting of Voids and Tanks as Identified in the 2000 Vessel Condition Survey. Dry-docking for Regulatory Inspections.

M/V Malaspina Engine Overhaul and Refurbishment
Work scope composed of overhaul both main engines, and refurbishment of accommodation spaces. Address vessel refurbishment priorities as established in annual AMHS Fleet Survey Report and visual inspection of vessel.

M/V Columbia Habitability and Ship Systems
The project consists of preparation of planning and design documentation for the improvement of the M/V Columbia. The scope of work should include but is not limited to the renovation of forward and aft lower crew berthing areas, to include asbestos removal, renewal/upgrading piping system in berthing areas. Scope of work also will include the overhaul of deck machinery, blasting and painting of tanks and voids as recommended in the 2000 – 2001 Vessel Condition Survey, the ABS current and future survey status, the Coast Guard inspection status, and compliance with existing and pending regulations.

Major accomplishments on AMHS Facilities from the short staffed Marine Facilities Division has ranged from:

Skagway - Extended fenders on the Skagway mooring float to accommodate the FVF Fairweather. Reattached fingers to the Skagway Transfer Bridge, installed new hinges, and new chains and shackles. Repaired pedestrian gangway, fuel and waterline on the Skagway floating dock after it was damaged in a storm. Made repairs to Skagway generator building after it was struck by motor home.

Auke Bay - Installed stern berth access to berth III Auke Bay. Replaced Auke Bay stern berth waterline. Replaced Auke Bay fire alarm system.

Haines - Terminal Gave Southeast Region to help with the stabilization of the sheet pile cells that failed at the Haines Terminal. Completed Syncro-Lift inspection on the Haines and Wrangell lift systems.

Main Berth Ketchikan - Made repairs to Main Berth Ketchikan after dock was damaged due to extreme low tide, and high winds. Installed pass through window in dispatchers office in Ketchikan. Replace hydraulic pump, and electric motor on berth II Ketchikan.

Pelican - Made emergency repairs to the lower tidal ramp at the Pelican dock.

Sitka - Replaced fire alarm system in the Sitka Ferry terminal.

Petersburg - Installed power to the new pursers shack at the Petersburg terminal.

AMHS has selected a marine engineering consultant who has commenced work on the design study report for a new mainline vessel. AMHS has also selected a naval architect consultant to prepare a design study report for the proposed Southern Gateway Shuttle (SGS) which will provide more efficient and timely service to Prince Rupert, B.C. from Ketchikan.

AMHS has continued to reduce the frequency and severity of terminal casualties and emergency repairs. This is being accomplished through the use of improved, condition-based, planned, and programmed preventive maintenance.

Statutory and Regulatory Authority

AS 19
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Contact Information

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Marine Engineering
Component Financial Summary

All dollars shown in thousands

	FY2005 Actuals	FY2006 Management Plan	FY2007 Governor
Non-Formula Program:			
Component Expenditures:			
71000 Personal Services	1,516.0	2,144.3	2,285.3
72000 Travel	41.3	45.1	45.1
73000 Services	143.1	107.5	107.5
74000 Commodities	178.8	155.2	155.2
75000 Capital Outlay	0.0	0.0	0.0
77000 Grants, Benefits	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0
Expenditure Totals	**1,879.2**	**2,452.1**	**2,593.1**
Funding Sources:			
1061 Capital Improvement Project Receipts	1,143.4	1,555.3	1,639.5
1076 Marine Highway System Fund	735.8	896.8	953.6
Funding Totals	**1,879.2**	**2,452.1**	**2,593.1**

Estimated Revenue Collections

Description	Master Revenue Account	FY2005 Actuals	FY2006 Management Plan	FY2007 Governor
Unrestricted Revenues				
None.		0.0	0.0	0.0
Unrestricted Total		**0.0**	**0.0**	**0.0**
Restricted Revenues				
Capital Improvement Project Receipts	51200	1,143.4	1,555.3	1,639.5
Restricted Total		**1,143.4**	**1,555.3**	**1,639.5**
Total Estimated Revenues		**1,143.4**	**1,555.3**	**1,639.5**

Summary of Component Budget Changes
From FY2006 Management Plan to FY2007 Governor

All dollars shown in thousands

	General Funds	Federal Funds	Other Funds	Total Funds
FY2006 Management Plan	**0.0**	**0.0**	**2,452.1**	**2,452.1**
Adjustments which will continue current level of service:				
-FY 07 Wage Increases for Bargaining Units and Non-Covered Employees	0.0	0.0	40.1	40.1
-FY 07 Health Insurance Cost Increases for Bargaining Units and Non-Covered Employees	0.0	0.0	3.8	3.8
-FY 07 Retirement Systems Cost Increase	0.0	0.0	75.9	75.9
Proposed budget increases:				
-Risk Management Self-Insurance Funding Increase	0.0	0.0	21.2	21.2
FY2007 Governor	**0.0**	**0.0**	**2,593.1**	**2,593.1**

Marine Engineering
Personal Services Information

Authorized Positions			Personal Services Costs	
	FY2006 Management Plan	FY2007 Governor		
Full-time	20	20	Annual Salaries	1,197,214
Part-time	2	2	COLA	39,907
Nonpermanent	0	0	Premium Pay	267,553
			Annual Benefits	784,747
			Less 0.18% Vacancy Factor	(4,121)
			Lump Sum Premium Pay	0
Totals	**22**	**22**	**Total Personal Services**	**2,285,300**

Position Classification Summary

Job Class Title	Anchorage	Fairbanks	Juneau	Others	Total
Accounting Tech II	0	0	0	1	1
Administrative Clerk I	0	0	0	1	1
Administrative Clerk II	0	0	0	1	1
Administrative Clerk III	0	0	0	2	2
Administrative Manager I	0	0	0	1	1
Facilities Manager I	0	0	1	0	1
Maint Gen Journey	0	0	1	2	3
Maint Spec Bfc Jrny II/Lead	0	0	1	0	1
Marine Trans Srvs Mgr	0	0	0	1	1
Naval Architect	0	0	1	0	1
Vessel Const Manager I	0	0	0	1	1
Vessel Const Manager II	0	0	2	2	4
Vessel Const Manager III	0	0	0	3	3
Vessel Construction Asst III	0	0	0	1	1
Totals	**0**	**0**	**6**	**16**	**22**