

**Agency: Commerce, Community and Economic Development**

**Grants to Named Recipients (AS 37.05.316)**

**Grant Recipient: Marine Exchange of Alaska**

**Federal Tax ID: 92-0173630**

**Project Title:**

**Project Type: Maintenance and Repairs**

# Marine Exchange of Alaska - Alaska Vessel Tracking System Upgrades and Expansion

**State Funding Requested: \$600,000**

**House District: Juneau Areawide (3-4)**

Future Funding May Be Requested

## Brief Project Description:

Operate, maintain, upgrade and expand the vessel tracking system provided by the non-profit Marine Exchange of Alaska that substantially contributes to safe, secure, efficient and environmentally sound maritime operations. The vessel tracking system impacts all of Alaska's coastal communities and is a valuable tool for State agencies (ADEC, Commerce, DOT, F&G, DMVA) and the U.S. Coast Guard.

## Funding Plan:

**Total Cost of Project: \$1,800,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Federal Funds	\$600,000	2010			\$600,000	2011
State Funds	\$450,000	2010				
Other Funds	\$600,000				\$600,000	2011
<b>Total</b>	<b>\$1,650,000</b>				<b>\$1,200,000</b>	

### Explanation of Other Funds:

Other funds refer to funding received from Marine Exchange members and other commercial users of the vessel tracking system and its services. This includes vessel operators (tankers, cargo ships, tugs, cruise ships, passenger vessels and fishing vessels), ports, harbors and facilities.

## Detailed Project Description and Justification:

The non-profit Marine Exchange of Alaska's mission is to provide information, communications and services that aid safe, secure, efficient and environmentally sound maritime operations. To this end, the Marine Exchange developed an Alaska vessel tracking network comprised of satellite comms and shore based vessel tracking receiving stations (AIS - Automatic Identification System) which tracks AMHS ferries, cruise ships, tankers, cargo vessels, oil exploration and support vessels, and larger fishing boats, providing a safety and security net, a emergency response tool and aiding the efficiency of maritime operations. As recognized in a Coast Guard Meritorious Public Service Commendation awarded to the Marine Exchange in February 2010, the system has provided tangible benefits to the Coast Guard in saving lives and property and protecting the environment in several high consequence maritime emergencies. It is also extensively used by AMHS, ADEC, Commerce, DMVA and F&G in carrying out their missions.

This project will ensure the continued operation, maintenance and upgrade of the existing 65 AIS sites built and operated by the Marine Exchange as well contribute to the installation of 10 additional AIS receiving sites in areas where there

presently are gaps in the vessel tracking safety net in Southeast Alaska, the Aleutians, Western Alaska and the Arctic.

The Marine Exchange of Alaska's vessel tracking system has been in operation since 2001 and represents the shared commitment on the part of the Coast Guard, State of Alaska and the maritime community to apply emerging vessel tracking technologies to aid safe, secure, efficient and environmentally sound maritime operations. The systems' contributions towards the success of emergency response operations to date have validated the need to maintain and expand the system.

**Project Timeline:**

The required pre-planning of maintenance and upgrades of existing AIS sites and installation of new AIS sites has been completed and the project will commence in July 2010 and continue through June 2011.

**Entity Responsible for the Ongoing Operation and Maintenance of this Project:**

Marine Exchange of Alaska

**Grant Recipient Contact Information:**

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Has this project been through a public review process at the local level and is it a community priority?  Yes  No

**State of Alaska Operating Funds Request**  
**Marine Exchange of Alaska**

***Alaska Vessel Tracking System Operation, Upgrades and Expansion***

February 8, 2010

The non-profit Marine Exchange of Alaska requests \$600k in State funds to maintain, service, repair and upgrade and expand the vessel tracking system services provided by the non-profit Marine Exchange of Alaska that substantially contributes to safe, secure, efficient and environmentally sound maritime operations. .

Since 2001, over \$8 million dollars in State, Coast Guard and private marine industry funds have been allocated to build a vessel tracking system operated by the Marine Exchange of Alaska that provides a maritime safety and security net for vessels sailing Alaska waters as well as aids environmental monitoring and emergency response.

Both international treaties and Coast Guard regulations require most commercial vessels to be equipped with transponders called AIS (Automatic Identification System), similar to those used by aircraft, to transmit their position and other information several times a minute over a VHF frequency. While vessels are transmitting this information, the Coast Guard only has 15 receiving stations in Alaska leaving over 95% of Alaska waters uncovered. While most of the AMHS vessels' port calls are uncovered by the Coast Guard's AIS network, all but two are covered by the Marine Exchange system. The Marine Exchange also operates a satellite tracking system for vessels operating well offshore beyond the reach of AIS stations. This Marine Exchange's vessel tracking system which is presently comprised of 65 AIS (Automatic Identification System) receiving sites extending from Kaktovik north of the Arctic Circle, west to Adak and south to Ketchikan and is extensively used by State agencies and the Coast Guard in carrying out their maritime safety, security and environmental protection missions.

The benefits accrued to maritime safety were highlighted in February 2010, when the 17<sup>th</sup> Coast Guard District Commander, Admiral Chris Colvin, presented the Marine Exchange of Alaska the Meritorious Public Service Commendation for the tangible contributions the Marine Exchange's vessel tracking system provided the Coast Guard's maritime safety, environmental protection and emergency response operations in Alaska.

Many maritime regions throughout Alaska remain uncovered by AIS receivers and is anticipated over 100 stations are needed to provide comprehensive coverage of coastal waters.

Costs and Funding:

To date Coast Guard and private marine industry funds have been used to operate the vessel tracking system that incurs an annual operating cost of approximately \$1.8M. The Marine

*Marine Exchange of Alaska State Capital Grant Request-Feb 2010*

Exchange requests the State provide \$600,000 in funds, which equates to 1/3 of the total funding needed to continue the operation of this system. The balance of the funds required will be provided by the Coast Guard and the private maritime industry that sail Alaska waters.

The requested funds will contribute to the operation, maintenance and upgrade of existing AIS sites as well as install additional sites to provide more complete coverage of Alaska waters.

In addition to benefiting the Coast Guard and the operators of cruise ships, tugs, barges, tankers, containerships, passenger vessels, offshore supply vessels, landing craft and fishing vessels, the following State agencies presently use the Marine Exchange's vessel tracking system in the fulfillment of their missions:

- Department of Transportation: The system is used by DOT to provide real time tracking of AMHS ferries and the 7x24 Safety and Ship Security Alert System (SSAS) operations center. The vessel tracking system is in the process of providing an updated ferry tracking display for posting on AMHS web site and terminals for users of the ferries.
- Department of Military and Veterans Affairs (DMVA): The system is used to aid emergency preparedness and response to incidents that impact the Alaska maritime community, i.e. volcanic eruptions and tsunamis.
- Department of Fish and Game: The agency uses the system to track their survey and enforcement vessels as well as to monitor the locations of fishing fleets operating nearshore and to assess ballast water discharges and monitor environmentally sensitive areas.
- Department of Public Safety: The agency uses the system to locate vessels of interest as well as to monitor the locations of their enforcement vessels.
- Department of Commerce: The State vessel pilotage administrator uses the system to monitor and enforce State pilotage regulations.
- Department of Environmental Conservation: The agency uses the system to monitor the locations of cruise ships for environmental monitoring, enforcement of State oil spill preparedness regulations by identifying vessels operating in Alaska waters and oil spill response and investigation.

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To date the Marine Exchange's vessel tracking system has been used to aid the response to several serious maritime casualties some of which are noted below:

- The cargo ship *Selendang Ayu* grounding near Dutch Harbor and the follow on search and rescue and oil spill response operations.
- The search for a "man overboard" from a cruise ship sailing in Lynn Canal this summer with the tracking system providing the Coast Guard with the vessel's trackline and probable location of the passenger which led to the recovery of the deceased.
- The grounding and abandon ship of the *Empress of the North* and the follow on emergency response, salvage and oil spill response operations.
- The grounding and abandon ship of the *Le Conte* in 2004.
- The assistance provided by the state Fish and Game vessel KESTREL to the fishing vessel EQUINOX that averted loss of the vessel and likely pollution and possible loss of life in the fall of 2009.

In summary, the Marine Exchange's Vessel Tracking System is a state of the art tool that aids safe, secure, efficient and environmentally sound maritime operations in Alaska as noted below.

- **Safety:** The safety of maritime operations is aided by the information provided by the expanded tracking system to the Coast Guard and State agencies to conduct emergency response operations, locating vessels in distress and vessels that are nearby able to assist.
- **Environmental Protection:** The system validates compliance with various environmental regulations, including overboard discharges and the reduced speed transits in areas where whales are present and ensuring safe distance from protected areas as well as provides information on the locations of tugs and other vessels that may take a vessel in two
- **Security:** The system provides information that aids DMVA and the Coast Guard in the execution of their security missions directed at protecting cruise ships, tankers, ferries and other high value vessels.
- **Efficiency:** The system is able to provide information to users of the AMHS ferries, as well as pilots, tug operators and others supporting vessel operations to aid the efficiency of operations.

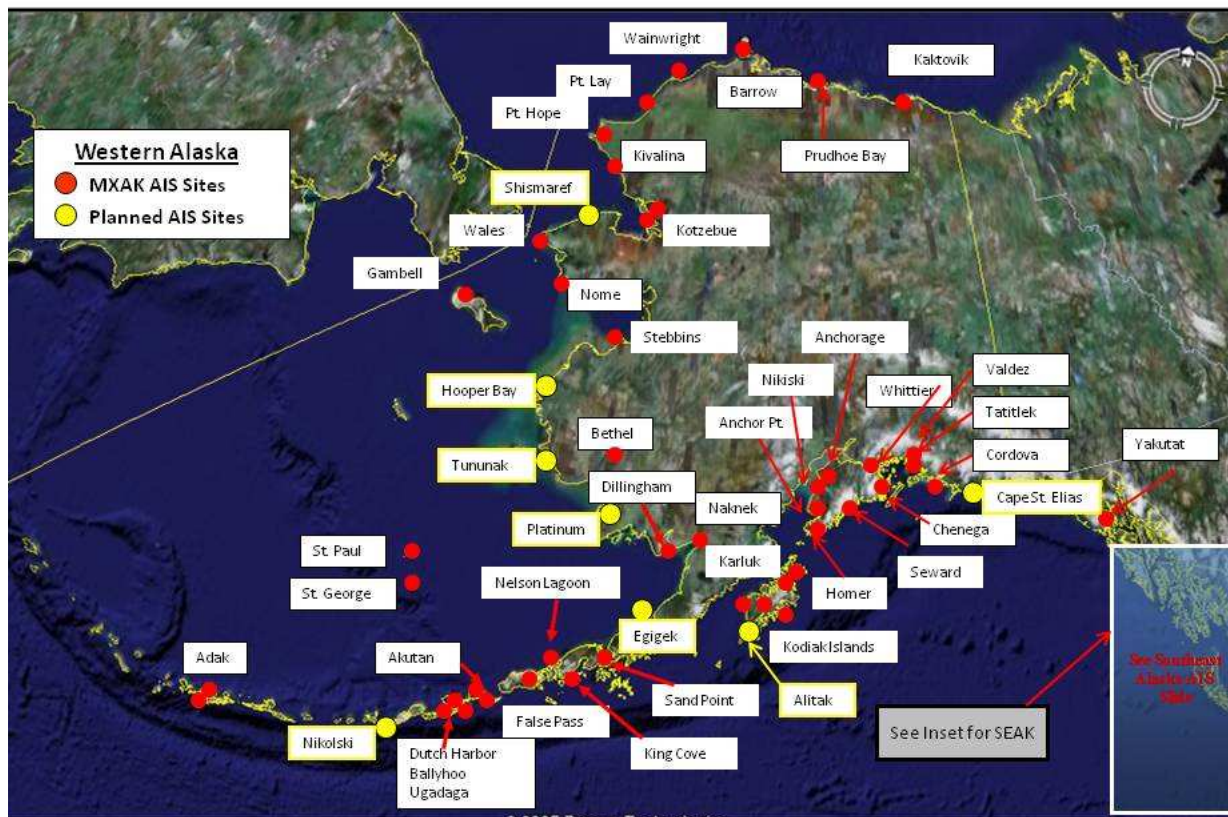
**Allocation of Funds:** The requested funds will be expended as follows:

- (1) \$250k for operating and maintaining 7x24 Operations Center: Staffing and equipment
- (2) \$110k for vessel tracking hardware (receivers, power systems, communications systems) for upgrading existing sites and installing new AIS sites.
- (3) \$120k for personnel and contractors installing and upgrading AIS network
- (4) \$70k to fund travel to AIS receiving sites to perform maintenance and servicing and to establish additional receiving stations.
- (5) \$50k vessel tracking software licenses and upgrades

Graphics showing the present locations of the AIS receiving sites in Alaska and the locations where additional sites are planned are provided below and on the following page.

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### Automated Identification System (AIS) Sites in Alaska Feb 1, 2010





### Automated Identification System (AIS) Sites in Alaska Feb 1, 2010

