ALASKA STATE LEGISLATURE
JOINT MEETING
HOUSE TRANSPORTATION STANDING COMMITTEE
SENATE TRANSPORTATION STANDING COMMITTEE
March 26, 2013
1:15 p.m.

MEMBERS PRESENT

HOUSE TRANSPORTATION

Representative Peggy Wilson, Chair
Representative Doug Isaacson, Vice Chair
Representative Eric Feige
Representative Lynn Gattis
Representative Bob Lynn
Representative Jonathan Kreiss-Tomkins

SENATE TRANSPORTATION

Senator Dennis Egan, Chair
Senator Fred Dyson, Vice Chair
Senator Hollis French
Senator Anna Fairclough

MEMBERS ABSENT

Representative Craig Johnson

COMMITTEE CALENDAR

PRESENTATION: MARINE EXCHANGE OF ALASKA BY CAPTAIN ED PAGE

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

CAPTAIN ED PAGE, Executive Director
Alaska Marine Exchange of Alaska
Juneau, Alaska
POSITION STATEMENT: Commented on the Alaska Marine Exchange System.

PAUL FUHS, President
Board of Marine Exchange of Alaska
Juneau, Alaska
POSITION STATEMENT: Thanked the legislature for all the support it had given them over the years and explained funding sources.

ACTION NARRATIVE

1:15:00 PM
CHAIR DENNIS EGAN called the Joint House and Senate Transportation Standing Committee meeting to order at 1:15 p.m. Senators Dyson and chair Egan; Representatives Lynn, Isaacson, Feige, Gattis, Kreiss-Tomkins, and Chair P. Wilson were present at the call to order. Senators French, Fairclough, and Dyson arrived as the meeting was in progress.

Marine Exchange of Alaska (MXAK) Presentation by Captain Ed Page

1:16:42 PM
CHAIR EGAN announced the only order of business, the Marine Exchange of Alaska presentation.

ED PAGE, Retired Captain, U.S. Coast Guard (USCG);, Executive Director, Alaska Marine Exchange of Alaska, Juneau, Alaska, was accompanied by his Chief Technical Officer, Bill Benning, also a retired US Coast Guard captain, and Paul Fuhs, President of the Board of Directors.

He said this organization has existed for 12 years and he would explain the maritime safety net that had been established over the past few years and where it is headed, as well as the importance of it to safety, efficiency, environmental protection, and security for the State of Alaska, the most complex, diverse, maritime state by far.

SENATORS FRENCH and DYSON joined the meeting.

1:18:18 PM
CAPTAIN PAGE said he had served in the USCG for some 30 years and came to Alaska on a Coast Guard Cutter in 1973. He had about 25-years' experience in Alaska sailing on tankers, container ships, tugboats, fishing vessels, USCG vessels, offshore supply vessels, drilling rigs, and platforms; he had been fascinated with the state and its challenges, especially its safety concerns. He was involved in the Exxon Valdez spill for several years, as well as some search and rescue cases and

became somewhat obsessed with the idea of how having a vessel tracking system would save a lot of lives.

He explained that marine exchanges started in places like Baltimore and San Francisco back in the 1800s basically to exchange maritime information. They were developed so that merchants would know when a ship was coming in to port versus standing on a dock waiting for it. When the USCG assigned Captain Page to board a ship or inspect vessels he would call the marine exchange to find out where the vessels were. In fact, he routinely called during his time as Captain of the Port for Los Angeles (L.A.), Long Beach, since the exchange had the information he needed to carry out his business. When he got out of the Coast Guard he decided to try that model in Alaska.

1:19:47 PM
CAPTAIN PAGE said different technologies have to be used here, and one of the differences is that the L.A. marine exchange has a 25-mile radar, which is totally useless in Alaska because of the state's size. For maritime safety to be effective, information is needed on vessel locations, areas that are protected and off limits, and compliance validation, and that is what this tool does. It has already saved lives and protected the environment here.

He showed a display of 9,000 transits going from Seattle to the Far East through Unimak Pass per year (the "Pacific I-5") that was made with information from satellite tracking, automatic identification systems (AIS), and other state-of-the-art-technology.

1:21:35 PM
REPRESENTATIVE ISAACSON said his friend, a vice president of a shipping company, showed him an "app" on his IPhone and asked if the marine exchange is like a "physical app."

CAPTAIN PAGE answered that if people get real time information in Alaska from an app, it's coming from him and they must pay for the service. Basically, the exchange brings information in from 100 marine safety sites, and these include weather stations, automatic identification system (AIS) receiving stations, and even search and rescue receiving stations. One of his customers is Lloyd's of London and he could show them where ferries or tankers are with his IPad or IPhone.

REPRESENTATIVE ISAACSON asked if regular apps are not as complete as what he provides.

CAPTAIN PAGE said that was correct and that the Marine Exchange of Alaska has the best information available.

1:23:27 PM
CHAIR P. WILSON said it's amazing how much traffic is going through the Arctic already.

CAPTAIN PAGE responded that it is in the neighborhood of 500 vessels (compared to 100,000 transits in the L.A. area) and growing every year. He added that this whole concept works because of the shared common commitment on the part of the state, the maritime industry and the Coast Guard stemming from incidents like the Exxon Valdez and the need to be safer and more environmentally conscious.

1:25:10 PM
SENATOR FAIRCLOUGH joined the committee.

CAPTAIN PAGE said $2.5 million/year came from the state, the Coast Guard and the maritime industry to build the system, which represents about 30 percent of overall costs. The Coast Guard and the maritime industry - Shell, Trident Seafoods, Western Alaska Marine Lines, Crowley Maritime - are supporters of the system as well as being customers. The cruise ship head tax, which is restricted to maritime related issues (enhanced safety and efficiency of foreign commerce) is another funding source.

1:26:36 PM
CAPTAIN PAGE said MXAK is the leader of the pack of all marine exchanges around the country. They can see vessels from Maine and the Gulf of Mexico to L.A., Seattle, and Alaska. Their office is located on the waterfront above the Juneau Electronics Building, and their customers range from container ships, tankers, and cruise ships to ports, terminals, ferries, and the Coast Guard. He related that the founding members were from every segment of the maritime industry - the ports, the pilot associations, the shipping companies, the seafood and tanker industries, and the container and tug lines; and the board is headed by Paul Fuhs.

1:28:22 PM
CAPTAIN PAGE said they are trying to encourage more youth to pursue maritime careers by offering training. They also print accurate charts so vessels coming in can safely operate in our waters; MXAK also does a lot of compliance work which helps pay some overhead. All of this gets them flying all over the state.

He said vessel tracking and the data base are key components of their system and that tracking vessels provides a safety net that helps in assessing the risk of various trade routes; the Coast Guard uses it now for the Bering Strait access study. The Admiral had their app installed on his IPhone so he could track the Kulluk incident from home.

CAPTAIN PAGE related that MXAK has had 99.9 percent success in guiding vessels in and out of Prince William Sound, but that's not good enough. It's a very high stakes game; the Exxon Valdez being an example of ships that were not being monitored or supervised. It was beyond the Coast Guard's oversight and beyond Alaska radar, so the captain decided to go out of the channel to avoid an iceberg and go below even though he was supposed to be on the bridge. He never should have left the bridge and probably wouldn't have if he was being monitored.

1:30:51 PM
CAPTAIN PAGE said such monitoring could only be pulled off because of new technology. For instance, the Coast Guard requires transponders that send out information every couple of seconds for course, speed, cargo, destination, and dimensions; all this information is brought into the system. MXAK also uses satellite transponders and has added weather and environmental sensors to their remote sites.

Most recently they worked on digital sector-calling radios where if you push the red button the USCG will get a call and then tell you the position and name of the vessel. However this feature doesn't work in Alaska, because Congress didn't provide enough money to the Coast Guard to build a system here. So, MXAK is currently building the DSC (Digital Selective Calling) receivers here pro bono.

1:32:01 PM
REPRESENTATIVE ISAACSON asked if that would hook into the Alamar system or if it were just dedicated to shipping and DSC.

CAPTAIN PAGE answered it won't go to an Alamar system; it goes to the radio and then on to the Coast Guard into his command center. The USCG could turn it into Alamar if it wanted to.

1:32:35 PM
He explained that PacTracs is a display system that basically takes information captured by shore stations on vessels that are in the global marine exchange and disseminates it.

Vessels on international trade sailing through our waters are required to have an Automatic Information System (AIS); the trick is in picking up that information without the Coast Guard getting funding to build an AIS network in Alaska. This is the same problem he had in Los Angeles/Long Beach. They did not have a vessel tracking system and Congress did not provide the money. So, he got interested parties working on it and partnered with them and built it using the same model he is using up here.

He said the Arctic Maritime Shipping Assessment in the National Academy of Science Report says we need to complete an AIS network to make sure vessels can be tracked. It is a key component in all the reports.

1:33:46 PM
CAPTAIN PAGE showed them a slide of their 100 Marine Safety Sites from Kaktovik to Barrow to Adak and down to Ketchikan and apologized for not being in the Interior but said they were actually starting to work their way into rivers. Compared to the 11 countries on the Baltic that have come together to build an AIS network, ours is much more complex and bigger, and only 16 people operate the MXAK in Juneau.

1:34:21 PM
SENATOR DYSON asked him to comment on the equipment he "smuggled" into Canada last summer.

CAPTAIN PAGE clarified that he didn't smuggle anything, but Senator Dyson helped him with some creative ways to get around barriers to bringing foreign equipment into Canada.

He said that no ship is going to come into Alaska that is in compliance with the law and not be picked up by the vessel tracking system. They focused on having coverage where the ferries go, where the high risk vessels go and at entry points into Alaska. Their equipment is on schools, harbor offices, light houses, pilot stations and tug offices. They have leveraged their resources so they can get more done with less and had recently put a lot of emphasis on building sites in the Arctic.

1:37:53 PM
CAPTAIN PAGE explained that they apply all this information for validation of cruise ship compliance, compliance with speed limits in Glacier Bay, Shell's compliance with permit restrictions in the Arctic, fiber optic cables for GCI and ACS

(if there is a break in a cable they can tell them where a ship anchored on it - it happened a couple of times), preventing collisions, port planning, risk assessments, vessel support operations and security. They compile this information and turn it in to Vessel Tracking Application ship security alert systems that are required on ferries, tankers and other vessels.

He said all the information they collect goes to the Coast Guard and the State of Alaska. So, over time, if mariners know they're being monitored, they won't do things such as the Exxon Valdez did, because they know they will get a call from the Coast Guard. Someone is now watching where before they weren't.

1:39:31 PM
SENATOR BISHOP joined the committee.

CAPTAIN PAGE said they control traffic going to Kodiak Airport as the result of a situation when a cruise ship was coming into the port that was higher than the flight path. At the same time a Coast Guard C-130 was flying in reduced visibility. The pilot had to pull out, because all of a sudden the stack of a cruise ship appeared. The FAA came to MXAK and asked what could be done to keep it from happening again. So now alarms go off when a high-masted vessel comes into that particular area. MXAK contacts the tower and the pilots, and they coordinate so ship and vessel are not in the same airspace.

1:41:07 PM
CAPTAIN PAGE said that Shell set up watch dogs and alarms and buffer systems in the off-limit areas so that alarms would go off in the MXAK operations center if those areas were breached and to make sure Shell's operations are in full compliance.

1:41:43 PM
CHAIR P. WILSON asked if Shell was paying them for the use of that system.

CAPTAIN PAGE answered absolutely; they have a lot of accounts (a "power user") and all have to pay for use and operation of the system, but they pay as they go in kind of a user pay model.

1:42:12 PM
CAPTAIN PAGE said they put a vessel tracking system on a state vessel, which is exempted from having one, and got a call from the Coast Guard about the, Noble Discoverer, a fishing vessel that was adrift. He had been watching as it departed to the

Aleutian Islands and was able to direct a Coast Guard boat to save the boat.

1:43:15 PM
SENATOR DYSON recalled how the Selendang Ayu was drifting by Dutch Harbor and the Coast Guard commander, through a laptop, knew that ship was dragging its anchor before the skipper did.

CAPTAIN PAGE agreed and said ironically that the vessel on scene thought everything was okay, but the command center said the Selendang Ayu was dragging anchor and sure enough it was. This is amazing technology.

1:44:27 PM
Other examples were the Golden Seas that was drifting backwards and had reported they had run aground, but they hit an island with a Coast Guard aide to navigation on it. The Coast Guard, using the PacTracs display screen to see who the closest vessel was, contacted the F/V Columbia to render assistance. And everyone knows about the Kulluk incident, which, incidentally, he watched on his IPad from South America.

1:46:17 PM
CAPTAIN PAGE said they are also monitoring high risk events; for instance a container ship was recently disabled in Unimak Pass; they were able to see it and talk to the Coast Guard and other players to be involved in that response. Alarms go off when vessels come too close to shore, and they had recently redirected a couple of tankers going through high risk routes in the Aleutian Islands.

Similarly, Captain Page said, they watch others one was an ice breaker in the Arctic - "snoop around" our waters, which generates a tremendous amount of detail that they categorize. They can also "look into Russia" from their office at vessels operating out of the Bering Straits.

1:47:51 PM
REPRESENTATIVE ISAACSON asked for the range of the radars on the monitoring devices.

1:48:00 PM
CAPTAIN PAGE answered that they use data burst CMOS [complementary metal-oxide-semicondutor technology used for constructing integrated circuits] that travel much further than conventional analog CMOS, generally going 100 miles, but on mountain tops (on Adak, for instance) twice that.

REPRESENTATIVE ISAACSON asked whether the size of the seas also affects it.

CAPTAIN PAGE answered, "To some extent". They sometimes access satellite AIS information that is 4-12 hours old, which is sporadic and doesn't get all the vessels. It's a piece of information they use in a strategic context. Satellite tracking transponders are on vessels used for tracking barges.

1:49:16 PM
CAPTAIN PAGE said they have also developed an emergency response data base, so when an emergency does happen, you push the emergency button and determine want kind of vessel is needed (oil spill response vessel, towing vessel), and only those vessels and their information show up on the display. That information is shared with the Coast Guard and the State. When people want to know where the ships are in the Arctic, they come to them; they get calls from Washington, D.C. all the time.

1:50:17 PM
CAPTAIN PAGE turned to Alaska hot spot issues; for instance there is a lot of talk about the dramatic increase in shipping in Dixon Entrance, because of Prince Rupert activity, so they are upgrading their system to make sure there is complete coverage.

The National Academy of Sciences talks about the AIS being the tool to minimize risk in the Aleutian Islands, so they are continually building and upgrading their system to close the gaps in the coverage in places like Barrow and Adak and putting equipment even on Shell vessels; they also worked with the UAF to rebuild a power module. Cook Inlet is always a hot area where they have good coverage; they use a lot of risk assessment tools and are now adding weather stations so they can disseminate ice and weather information to vessels over AIS. This means you don't have to listen to broadcasts but are able to see a clear digital picture whenever you want. Benefits to the state include to the Marine Highway System, Homeland Response, Veterans Affairs, Fish and Game, Public Safety, Commerce, Pilotage Program oversight, Environmental Conservation, Department of Natural Resources' drilling operations and state boating safety, monitoring environmental regulations for cruise ships, and shell fish farming. He explained that shell fish farmers used to be required to have a [Department of Environmental Conservation] employee on board to make sure they went to the right area to get the shellfish. Often that person was not available so they

didn't go. Now transponders are used to validate where they are going, and a person is not needed any more.

1:53:06 PM
CHAIR EGAN asked why the observer program couldn't be automated.

CAPTAIN PAGE replied that it will probably happen over time. They are just beginning to scratch the surface of the many more applications for MXAK. Their future plans are to expand and improve the network to fill gaps in weather and environmental sensors, disseminate safety information, and search and rescue. MXAK is "building on and getting more and more mileage out these sites and are sending information - sensors and tracking capabilities - to the whalers, so the big ships can see the whaling boats minimizing the potential for a subsistence vessel to be run over by other vessels.

1:55:10 PM
CAPTAIN PAGE said AIS inputs come from satellite and terrestrial AIS, environmental sensors, search and rescue alerts, and vessel monitoring systems, then gets disseminated to the state, the Coast Guard, owner operators, oil spill response organizations, agents and pilots. Everyone involved in the system ends up contributing to its support, and that is how the cost to any one party is amortized. Governor Parnell "is a big fan," as is the Commandant of the Coast Guard, and MXAK has received the Coast Guard's Meritorious Public Service Award for innovative efforts.

1:56:00 PM
CAPTAIN PAGE reiterated that their office is in Juneau and is tied into the Coast Guard headquarters, the district, Lloyds of London and all the marine exchanges throughout the country. It's basically patched together, so they hope to upgrade it. Senator Egan has supported the community of Juneau in providing the land and use of the public works building that is on it. It is a safe building that would be appropriate for the type of technology they are using. It would have an exhibit on the ground floor showing people the nature of the trade and professions that are available to Alaskans. The Port of Juneau could be on the second floor, and the Marine Exchange would be on the third floor. He had shared this with the legislature and the Rasmussen Foundation. The total cost of the 10,000 square feet is about $5 million. The funding would be provided through a combination of local support (providing the land and building), some state funding, [indisc.], Rasmussen Foundation and a Marine Exchange loan.

1:58:09 PM
CAPTAIN PAGE demonstrated a live feed of the F/V Kennecott with core speed, destination, draft, location and other specific details over the last 24 hours and the search function.

1:59:51 PM
CHAIR P. WILSON said this was a fascinating office and encouraged members to visit.

2:00:41 PM
CHAIR EGAN agreed recalling one of his visits during the Gulf Oil Spill when it was tracking all the oil spill response vessels.

2:01:42 PM
PAUL FUHS, President, Board of Marine Exchange of Alaska, Juneau, Alaska, thanked the legislature for all its support over the years saying the exchange was started by using Exxon Valdez oil spill criminal money to set up the first GIS system to display it. The board is diverse with only a couple of ports on it, but other than that it is primarily a private sector board, and that is because the industry wants to have safe operations and if there is an accident they want the most responsible response.

He also highlighted that they can pinpoint a break in the fiber optic cables throughout the state, which is the lifeline of state's communication system as it runs out to the entire US. However, Mr. Fuhs said, the biggest concern the board has is the age of the building; it's old and it sits on pilings. People camp under it. Wiring isn't to code and fire is a real issue. CBJ has said it would provide land, but the MXAK needs a safe place to operate. He pointed out that cruise ship head tax monies could be used, because they have to be used specifically for the benefit of the passengers that paid it; in fact, he suggested that the Marine Exchange of Alaska is the only one that can qualify for those funds.

2:04:45 PM
CHAIR EGAN thanked him and finding no further business to come before the committees, he adjourned the Joint House and Senate Transportation Standing Committee meeting at 2:04 p.m.