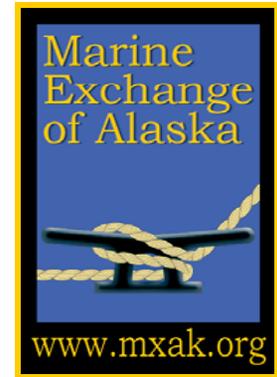
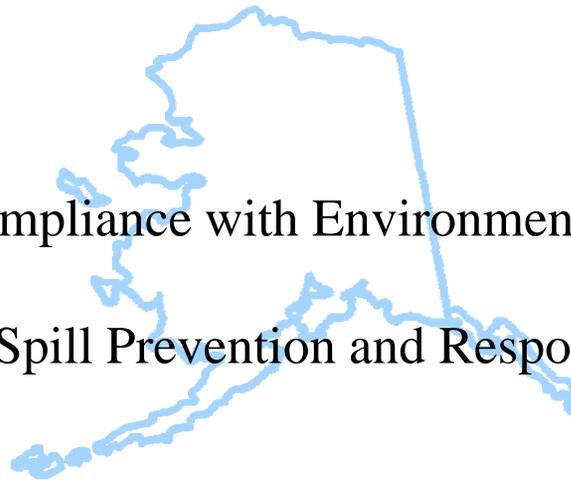


Alaska Vessel Tracking Program

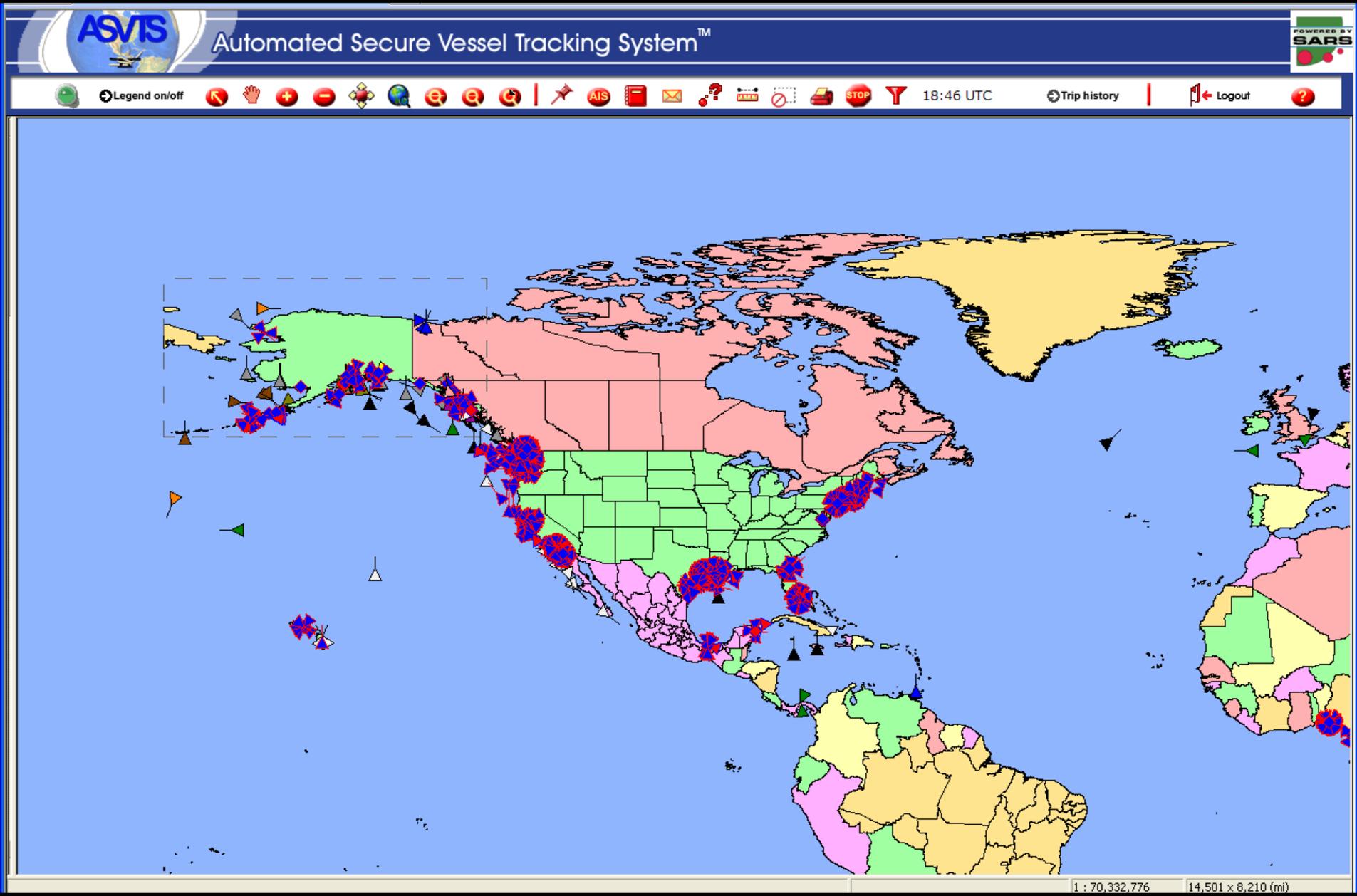


Validating Compliance with Environmental Regulations

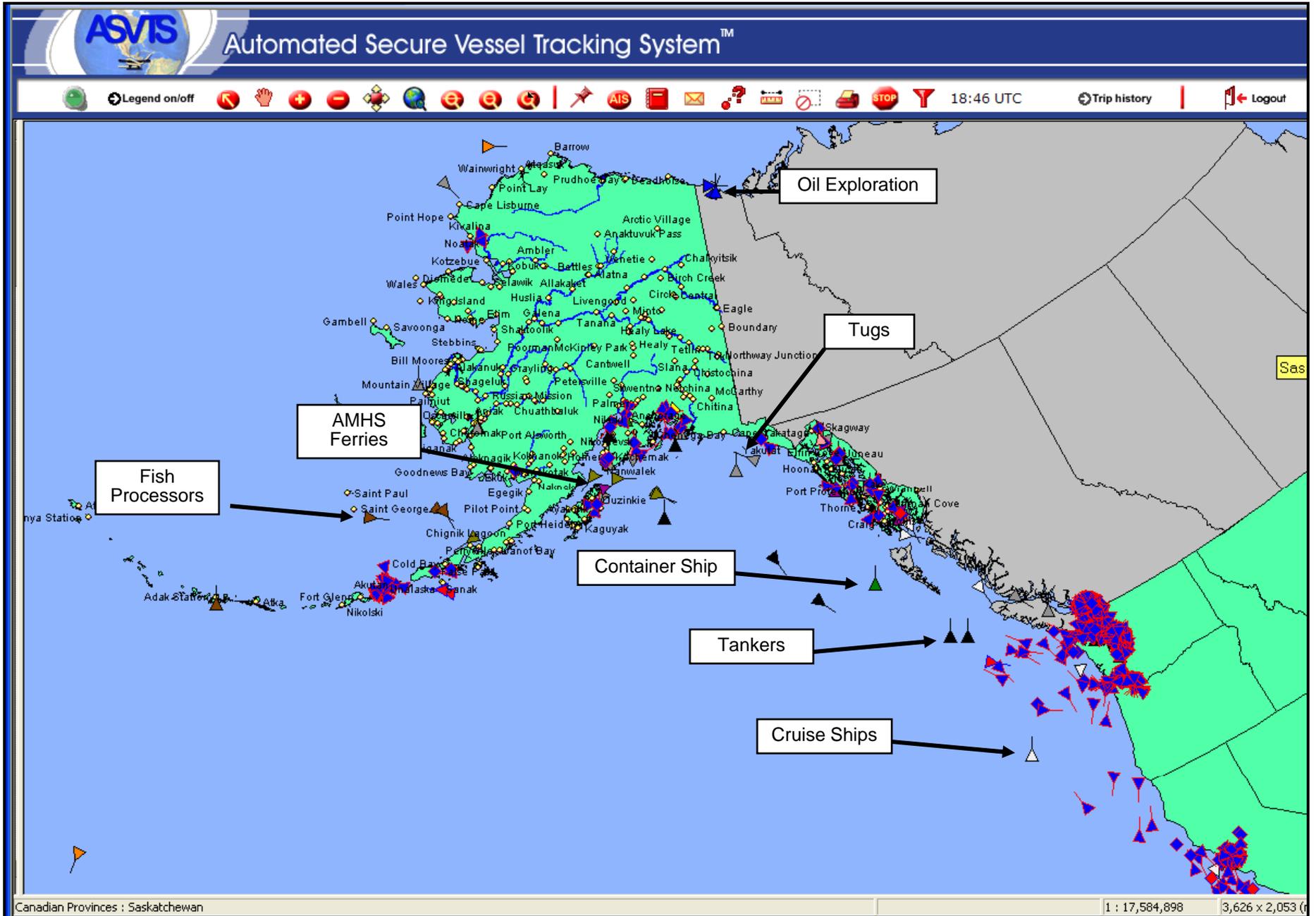
Aiding Oil Spill Prevention and Response Missions

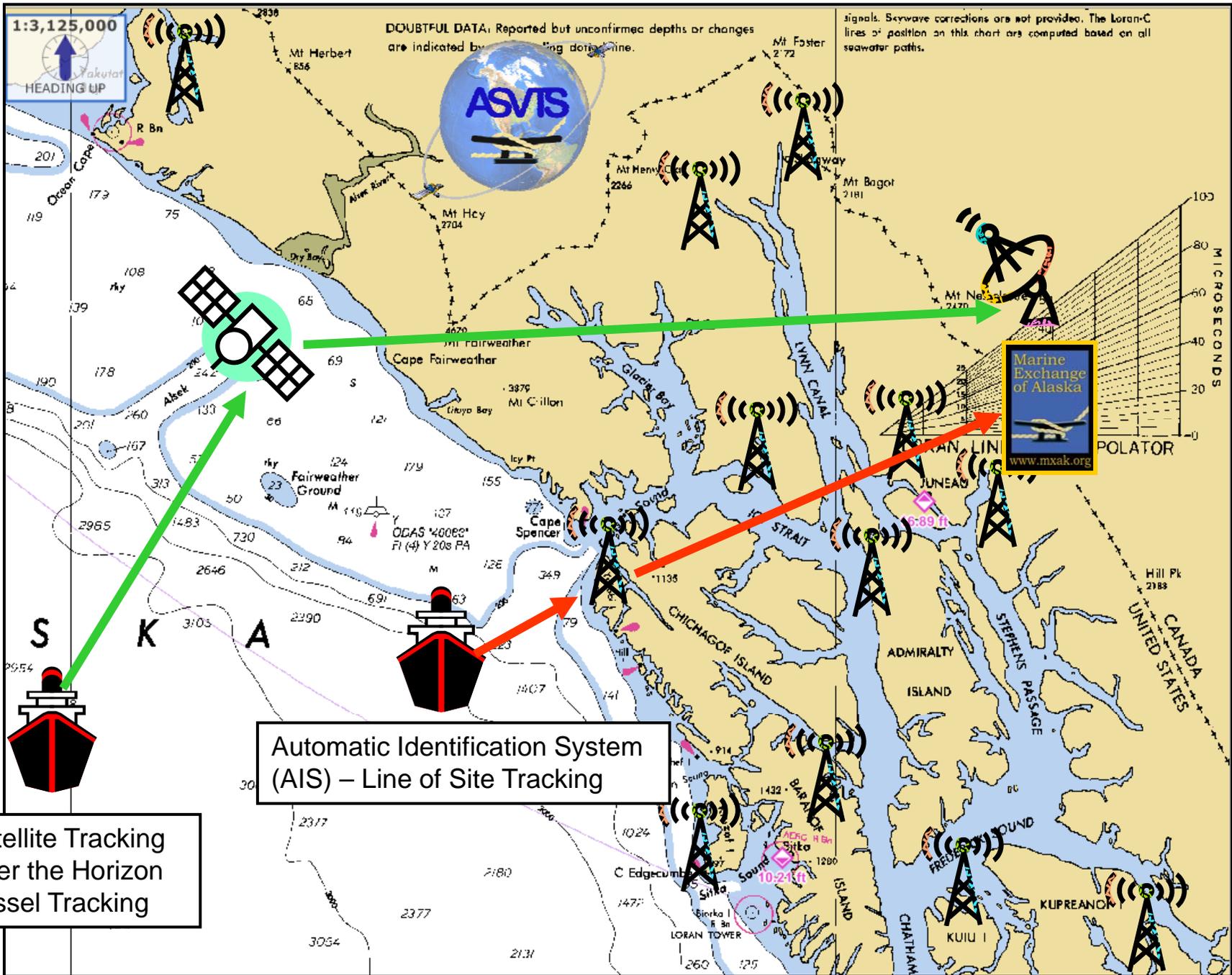


Nationwide Vessel Tracking Developed by Marine Exchange of Alaska



Long Range Satellite Tracking and AIS





1:3,125,000
 HEADING UP

DOUBTFUL DATA: Reported but unconfirmed depths or changes are indicated by ...

signals. Skywave corrections are not provided. The Loran-C lines of position on this chart are computed based on all seawater paths.



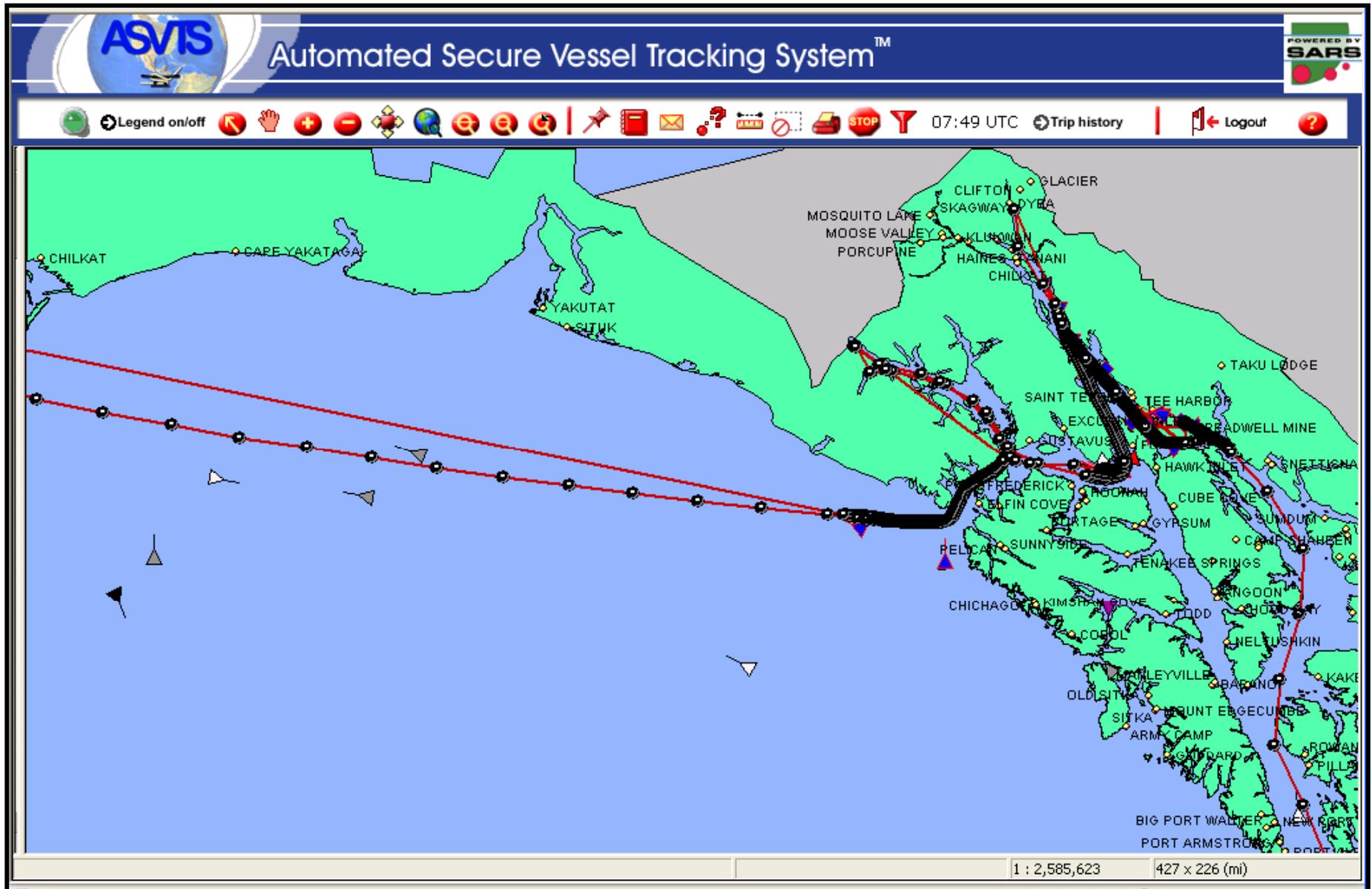
Marine Exchange of Alaska
www.mxak.org

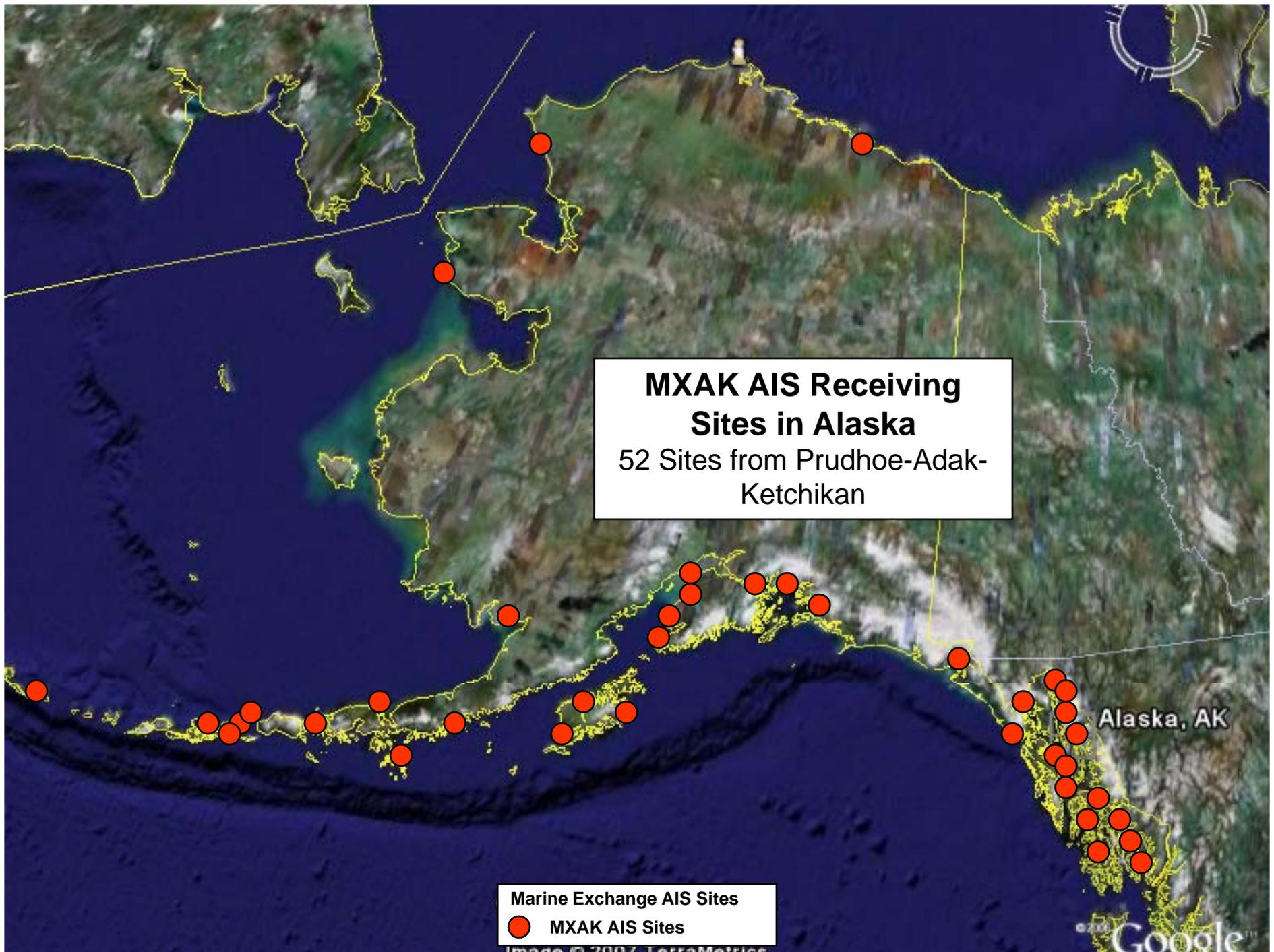
MICROSECONDS
 POLARIZER

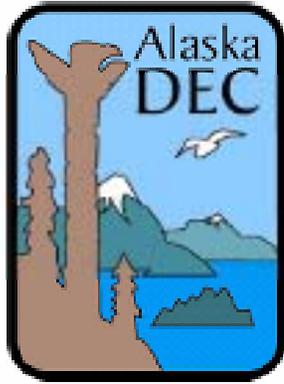
Automatic Identification System (AIS) – Line of Site Tracking

Satellite Tracking Over the Horizon Vessel Tracking

Frequency of Satellite vs AIS Position Reporting – 1 hr vs 1 minute



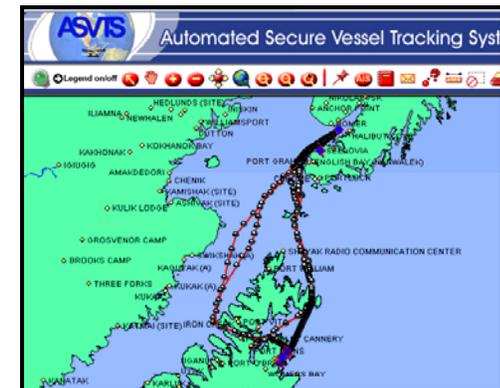




State of Alaska Environmental Requirements Vessel Tracking

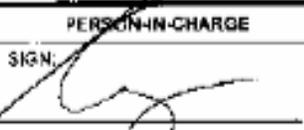


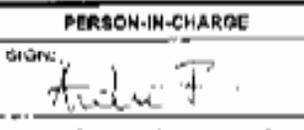
- **Requirement:** “While a commercial passenger vessel is present in the marine waters of the State, the owner or operator of the vessel shall provide an hourly report of the vessel's location based on Global Positioning System technology”
- **Marine Exchange Tracking System** used to track locations of cruise ships via satellite and terrestrial communication stations.

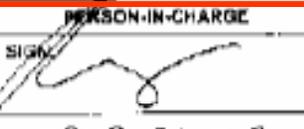


Sewage and Graywater Discharge Record Book

Vessel Name: N. Pearl Official Number: 8001150 Voyage Designation: Turkey

DISCHARGE	DATE	TIME (24 HRS)	LAT	LOX	DISCHARGE PORT (S)	EFFLUENT TYPE	VOLUME (M3)	FLOW RATE (L/MIN)	MINIMUM SPEED (KTS)	PERSON-IN-CHARGE
			N	W						SIGN: 
START	04.06.07	22:32	54° 22.1	131° 50.9	C	TSG	170	707	20.7	DATE: 2007-06-05
STOP	JUNE 5	0233	54° 40.3	134° 00.3						
REMARKS: TREATMENT TYPE:										
SCANSHIP TO C/B OUTSIDE 12 NM										

DISCHARGE	DATE	TIME (24 HRS)	LAT	LOX	DISCHARGE PORT (S)	EFFLUENT TYPE	VOLUME (M3)	FLOW RATE (L/MIN)	MINIMUM SPEED (KTS)	PERSON-IN-CHARGE
										SIGN: 
START	04.06.07	22:35	54° 22.3	131° 53.0	B	U.S	20	555.5	20.8	DATE: 04.06.2007
STOP	04.06.07	23:11	54° 24.1	132° 13.4						
REMARKS: TREATMENT TYPE:										
DISCH TO C/B FROM CLUBB TK 15P										

DISCHARGE	DATE	TIME (24 HRS)	LAT	LOX	DISCHARGE PORT (S)	EFFLUENT TYPE	VOLUME (M3)	FLOW RATE (L/MIN)	MINIMUM SPEED (KTS)	PERSON-IN-CHARGE
			N	W						SIGN: 
START	JUNE 5	0237	54° 40.3	134° 00.3	C	TSG	72	678	20.8	DATE: 2007-06-05
STOP	JUNE 5	0423	55° 37.3	134° 23.3						
REMARKS: TREATMENT TYPE:										
CLEAN EFFLUENT O/D FROM SCANSHIP IN INT. WATERS										

Master's Signature:  Date: 5/6/07 Chief Engineer:  Date: June 5, 07



Automated Secure Vessel Tracking System™

Report Date: Monday, October 22nd 2007

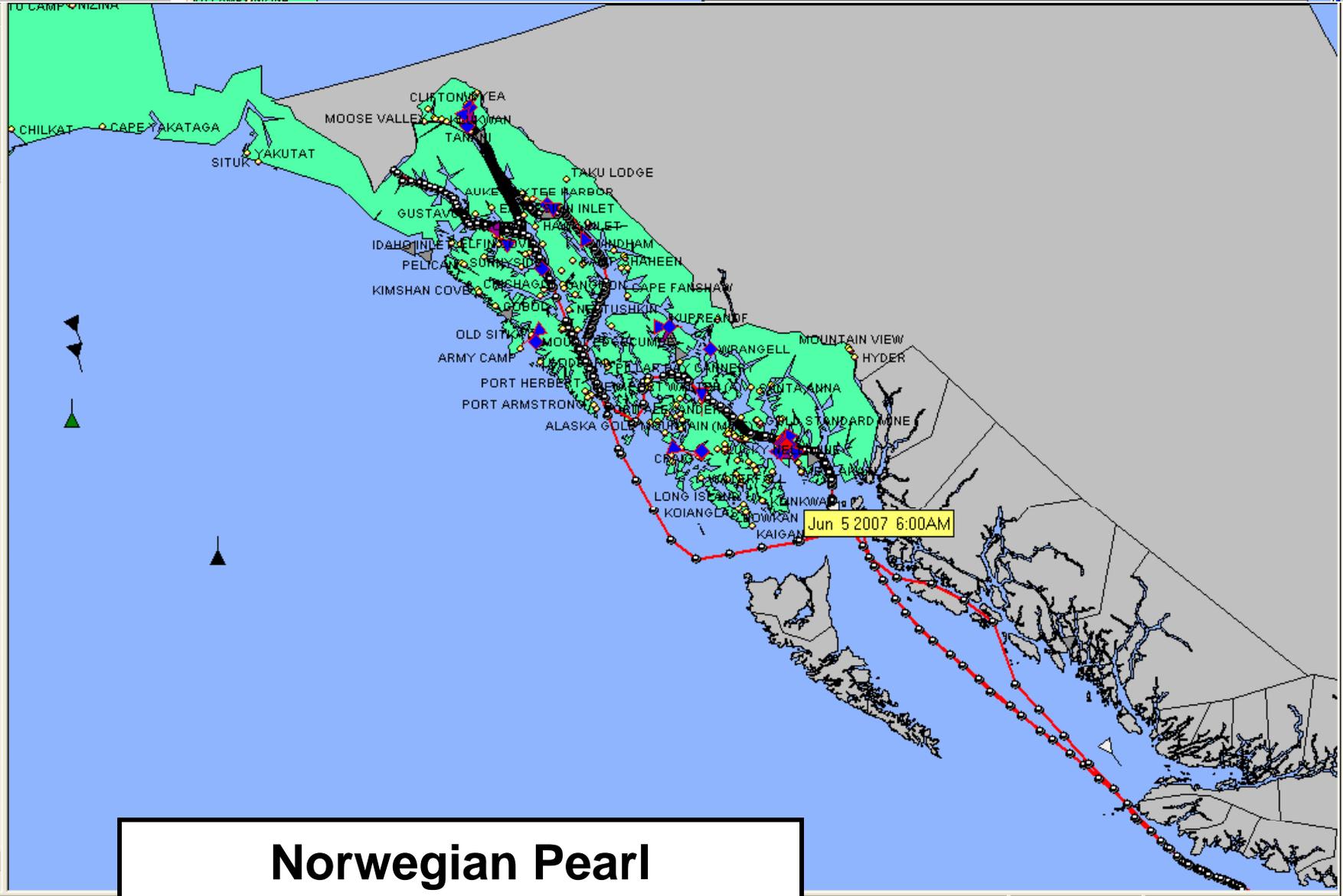
Asset Name: Norwegian Pearl

Position Reports Between 06/02/2007 00:00 and 06/10/2007 23:59

06/05/2007 15:01:19	56.44140	-134.49912
06/05/2007 14:59:43	56.44085	-134.49907
06/05/2007 14:58:27	56.44030	-134.49904
06/05/2007 14:56:46	56.50134	-134.50267
06/05/2007 14:53:55	56.43201	-134.49857
06/05/2007 14:42:15	56.36392	-134.49665
06/05/2007 13:57:40	56.15467	-134.48734
06/05/2007 12:58:21	55.75913	-134.43909
06/05/2007 12:57:01	55.80733	-134.45934
06/05/2007 11:56:55	55.46533	-134.32201
06/05/2007 10:55:58	55.12333	-134.18333
06/05/2007 09:55:02	54.78600	-134.05000
06/05/2007 08:55:27	54.53800	-133.75600
06/05/2007 07:54:48	54.48734	-133.18733
06/05/2007 06:54:12	54.44067	-132.62399
06/05/2007 06:00:57	54.38246	-131.99453
06/05/2007 05:53:22	54.38733	-132.04466



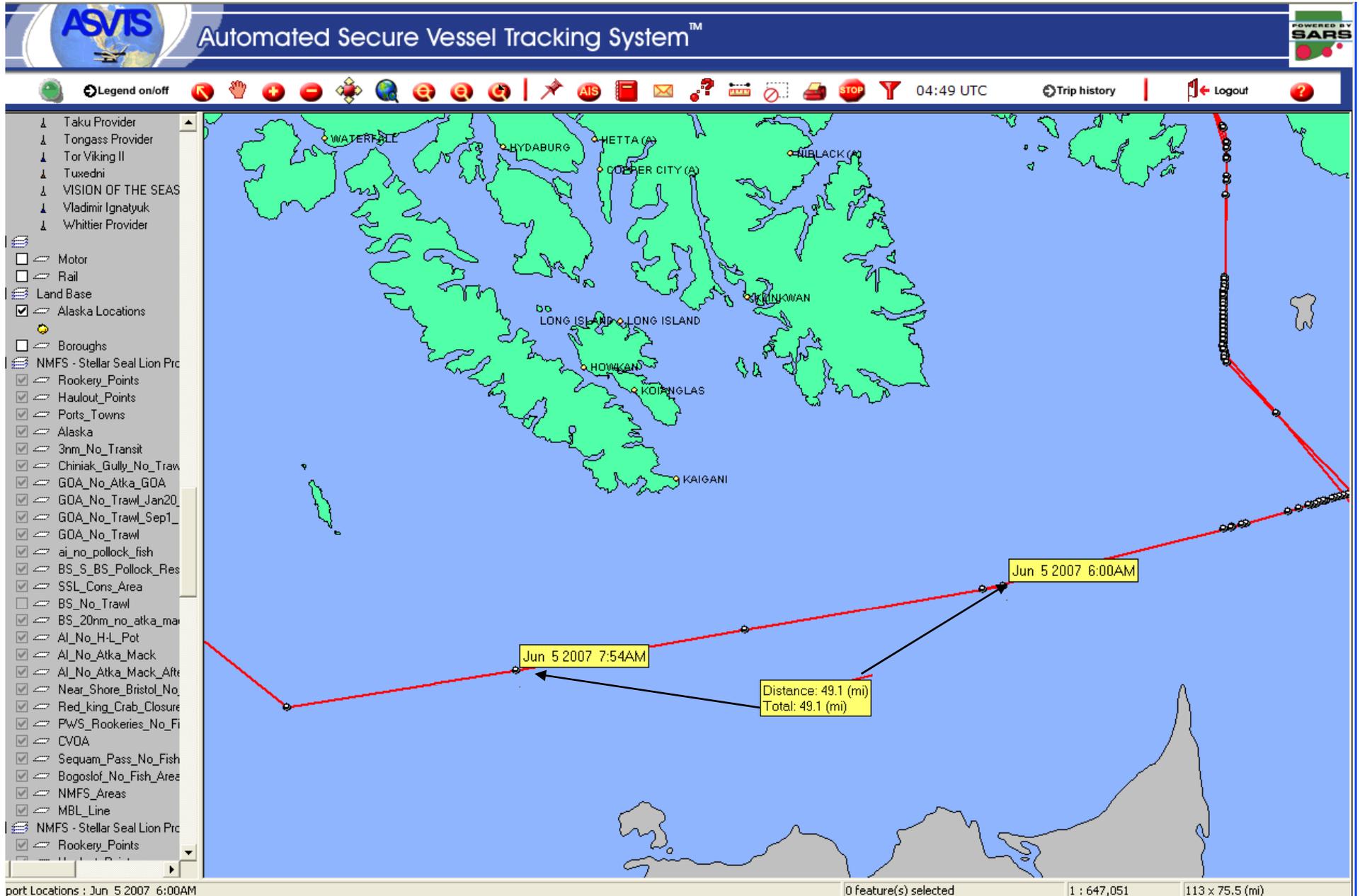
Closest Automated GPS Reported Positions Received by
Marine Exchange's Vessel Tracking System

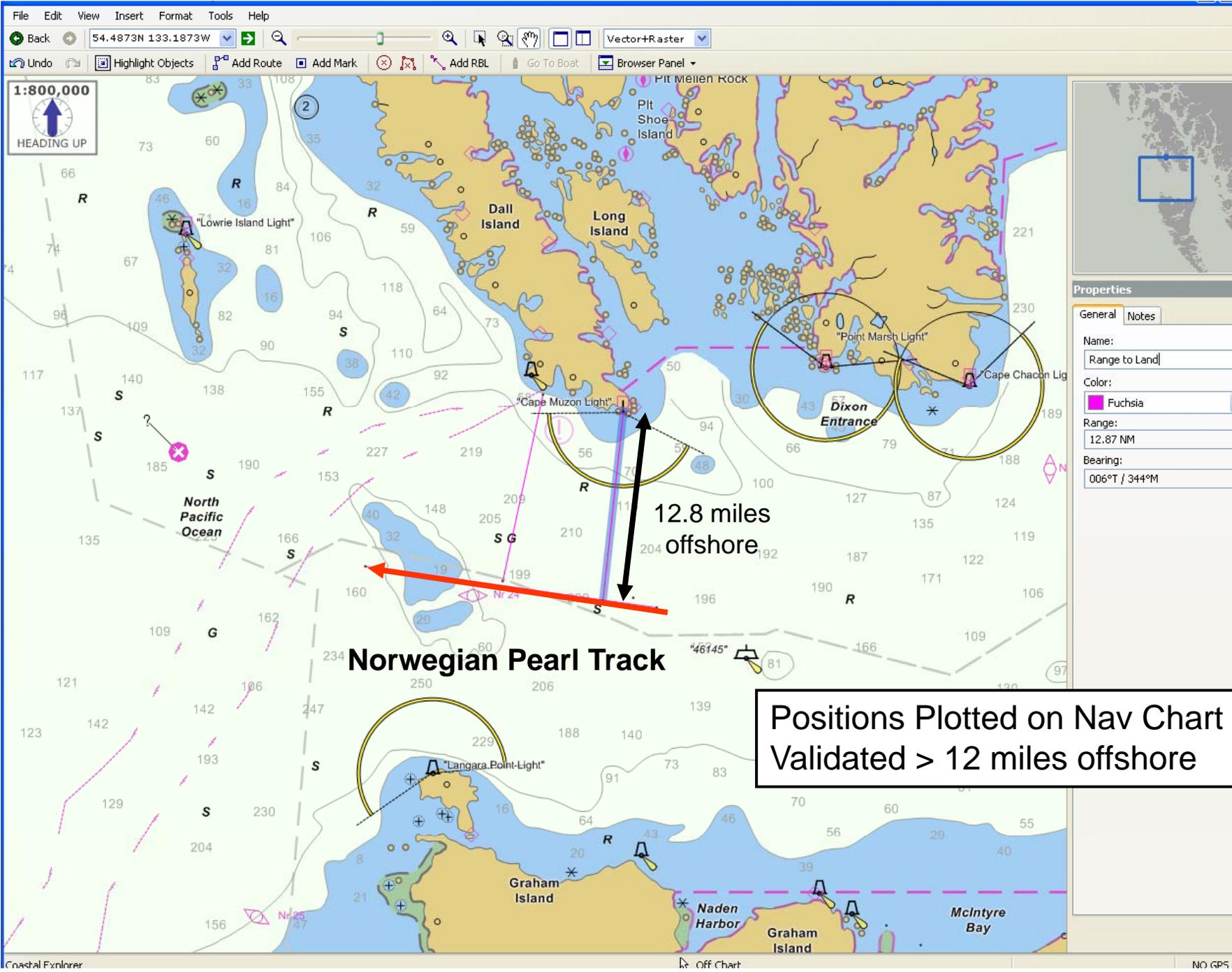


Norwegian Pearl
First Alaska Voyage Replay

Norwegian Pearl

Comparison of Vessel Logged Positions and Speed to Tracking System Reports





Sewage and Graywater Discharge Record Book

Vessel Name: Norwegian PearlOfficial Number: 800150Voyage Designation: VICTORIA

DISCHARGE	DATE	TIME (24 HRS)	LAT N	LONG W	DISCHARGE PORT (S)	EFFLUENT TYPE	VOLUME (M ³)	FLOW RATE (L/MIN)	MINIMUM SPEED (KTS)	PERSON-IN-CHARGE SIGN	
START	JUNE 8	0500	55° 23.2'	131° 55.2'						[Signature] DATE: 2007-06-08	
STOP	JUNE 8	1500	55° 11.6'	131° 17.6'	C	TSG	445	741	0.0		
REMARKS:					TREATMENT TYPE:						
CLEAN EFFLUENT FROM SCANSHIP O/B DURING PORTSTAY, KETCHIKAN											

DISCHARGE	DATE	TIME (24 HRS)	LAT N	LONG W	DISCHARGE PORT (S)	EFFLUENT TYPE	VOLUME (M ³)	FLOW RATE (L/MIN)	MINIMUM SPEED (KTS)	PERSON-IN-CHARGE SIGN	
START	JUNE 8	1500	55° 11.6'	131° 17.6'						[Signature] DATE: 2007-06-08	
STOP	JUNE 8	1631	54° 41.8'	131° 13.7'	C	TSG	69	755	7.5		
REMARKS:					TREATMENT TYPE:						
CLEAN EFFLUENT O/B FROM SCANSHIP IN ALASKAN WATERS											

DISCHARGE	DATE	TIME (24 HRS)	LAT N	LONG W	DISCHARGE PORT (S)	EFFLUENT TYPE	VOLUME (M ³)	FLOW RATE (L/MIN)	MINIMUM SPEED (KTS)	PERSON-IN-CHARGE SIGN	
START	JUNE 8	1631	54° 41.8'	131° 13.7'						[Signature] DATE: 08.06.2007	
STOP	08.06.07	21:08	52° 59.6'	130° 28.8'	C	TSG	200	722	23.3		
REMARKS:					TREATMENT TYPE:						
CLEAN EFFLUENT O/B FROM SCANSHIP IN CANADIAN WATERS											

Master's Signature: [Signature]Date: 10/6/07Chief Engineer: [Signature]Date: June 7, 07



Report Date: Monday, October 22nd 2007

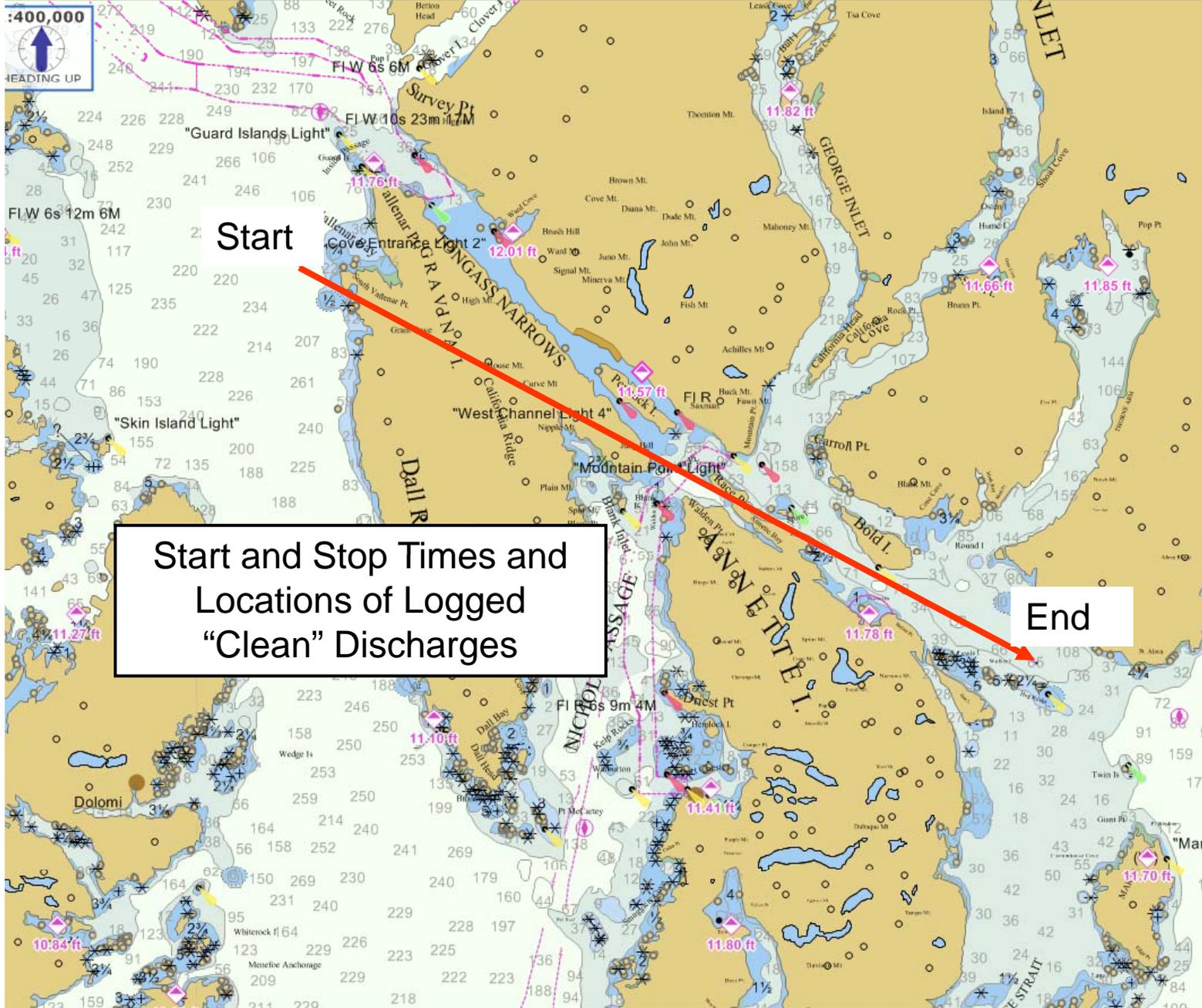
Asset Name: Norwegian Pearl

Position Reports Between 06/02/2007 00:00 and 06/10/2007 23:59

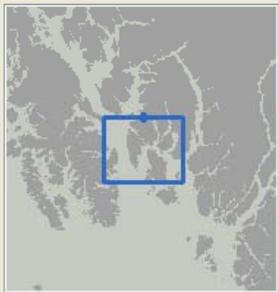
06/08/2007 23:22:00	55.13054	-131.16797
06/08/2007 23:21:00	55.13643	-131.17280
06/08/2007 23:20:00	55.14230	-131.17756
06/08/2007 23:19:00	55.14795	-131.18280
06/08/2007 23:18:00	55.15314	-131.18867
06/08/2007 23:17:00	55.15807	-131.19549
06/08/2007 23:16:06	55.16195	-131.20192
06/08/2007 23:15:30	55.16443	-131.20662
06/08/2007 23:12:19	55.20054	-131.31644
06/08/2007 23:11:04	55.17666	-131.24137
06/08/2007 23:10:06	55.17864	-131.24881
06/08/2007 23:09:50	55.21799	-131.38266
06/08/2007 23:08:17	55.18241	-131.26116
06/08/2007 23:07:13	55.18438	-131.26720
06/08/2007 23:06:07	55.21845	-131.38443
06/08/2007 23:04:03	55.21866	-131.38525
06/08/2007 23:03:22	55.19096	-131.28715
06/08/2007 23:02:36	55.21883	-131.38593
06/08/2007 23:01:03	55.19431	-131.29731
06/08/2007 22:59:06	55.22329	-131.40310
06/08/2007 22:58:42	55.19763	-131.30747



Closest Automated GPS Reported Positions Received by
Marine Exchange's Vessel Tracking System

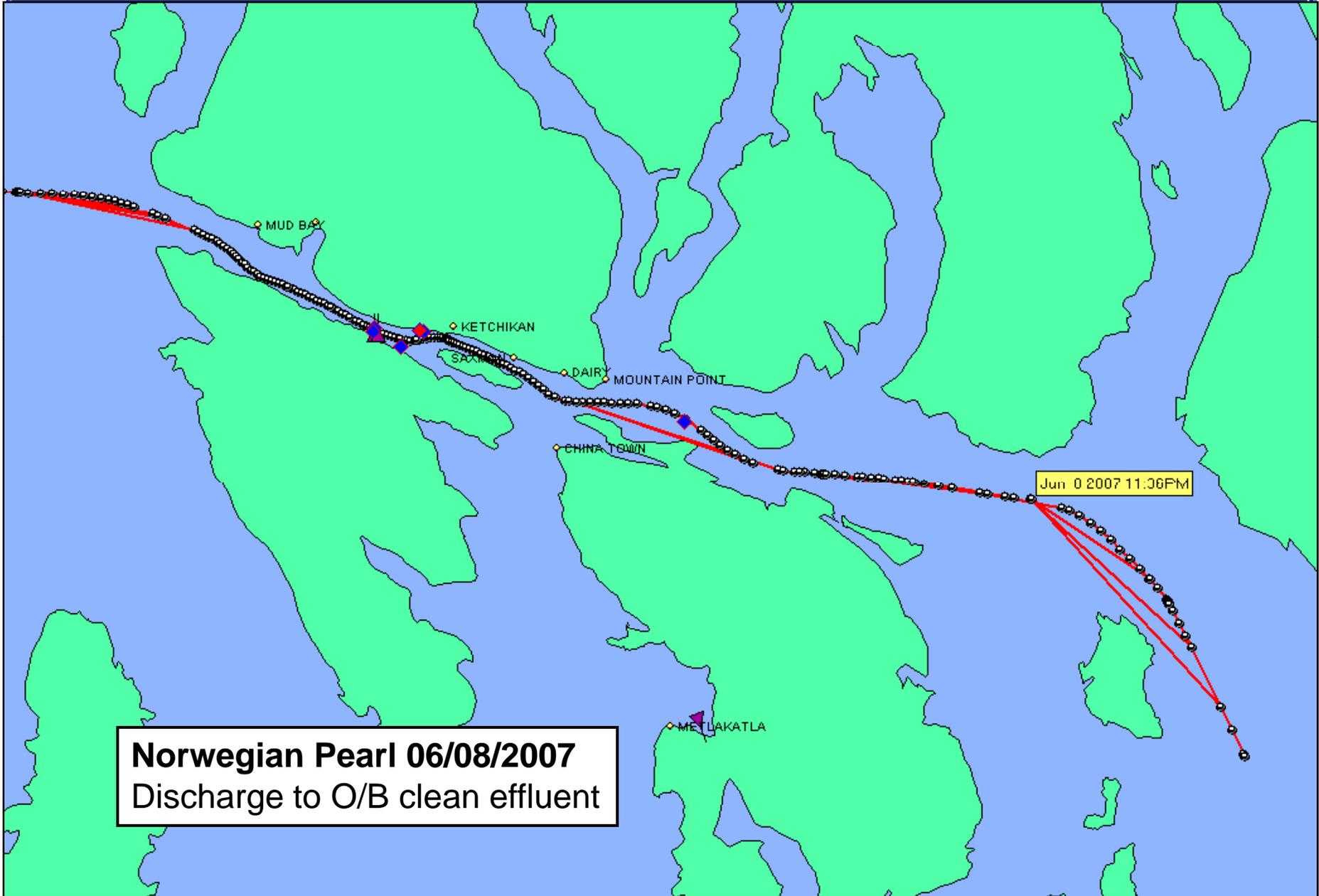


Start and Stop Times and Locations of Logged "Clean" Discharges

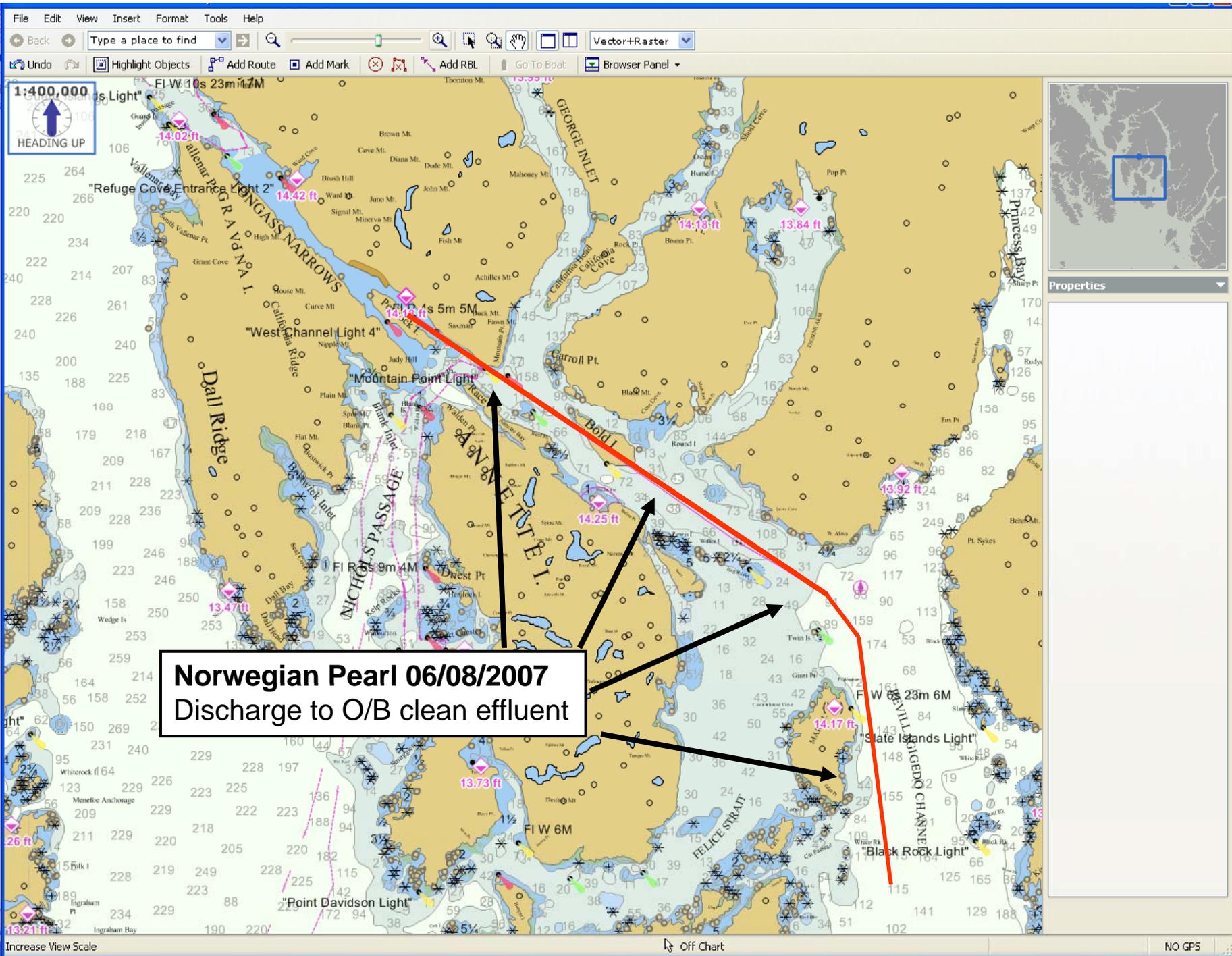


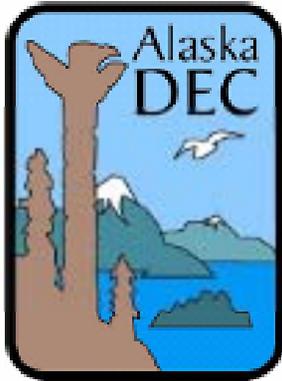
Properties

A large empty rectangular box, likely a placeholder for a table or data related to the "Start and Stop Times and Locations of Logged 'Clean' Discharges" mentioned in the text box.



Norwegian Pearl 06/08/2007
Discharge to O/B clean effluent





Vessel Tracking Oversight and Validation Processes

- Cross reference vessel generated discharge reports to vessel tracking system position reports to validate accuracy and veracity.
- Ability to determine which vessels were in an area where a discharge of oil, garbage, or sewage is discovered to determine source.
- Increase efficiency and effectiveness of responses to environmental incidents to mitigate impacts.
- Increase compliance with State marine environmental regulations through enhanced monitoring and oversight.
- Ensure maritime operations have minimal adverse impacts on State waters and land.