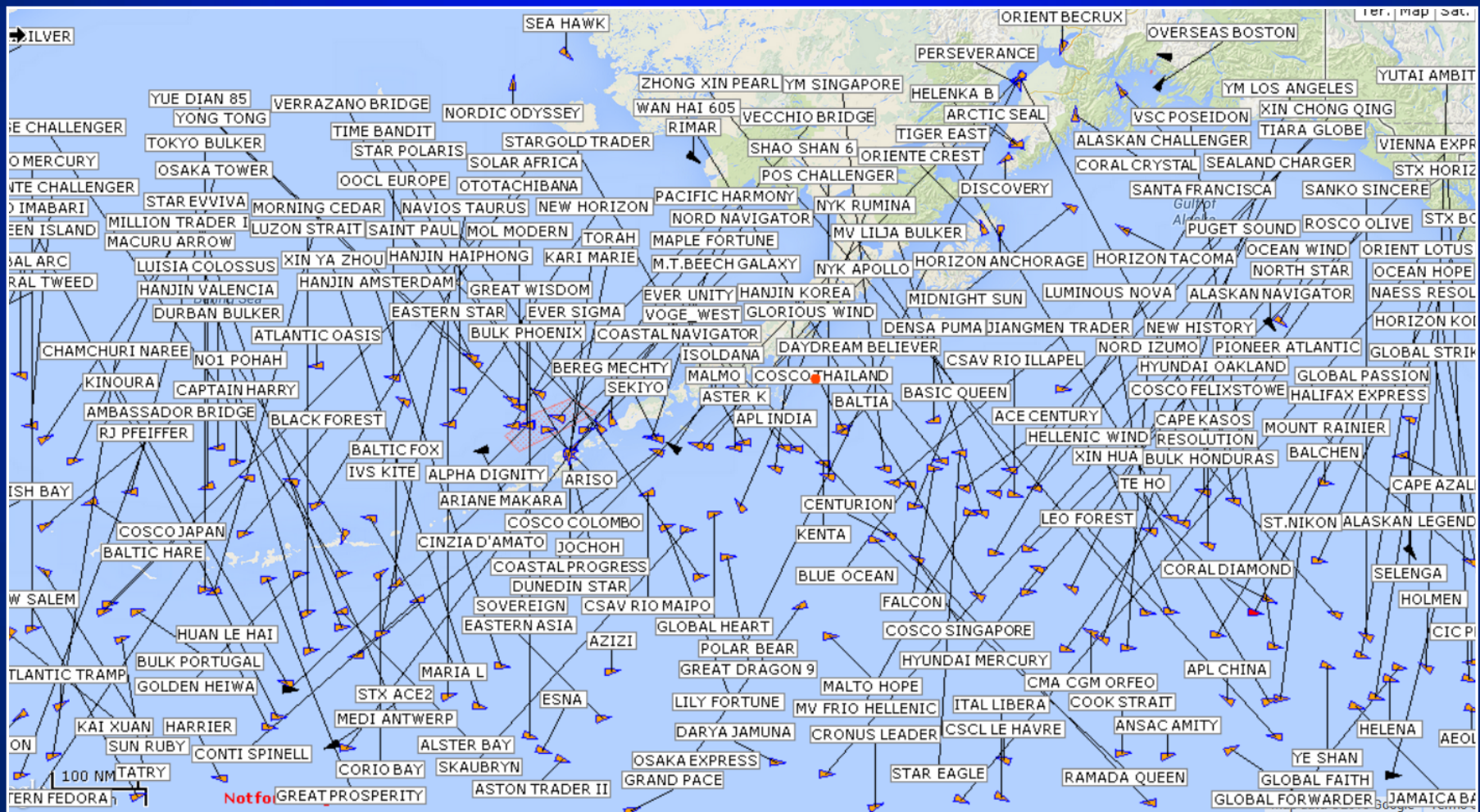
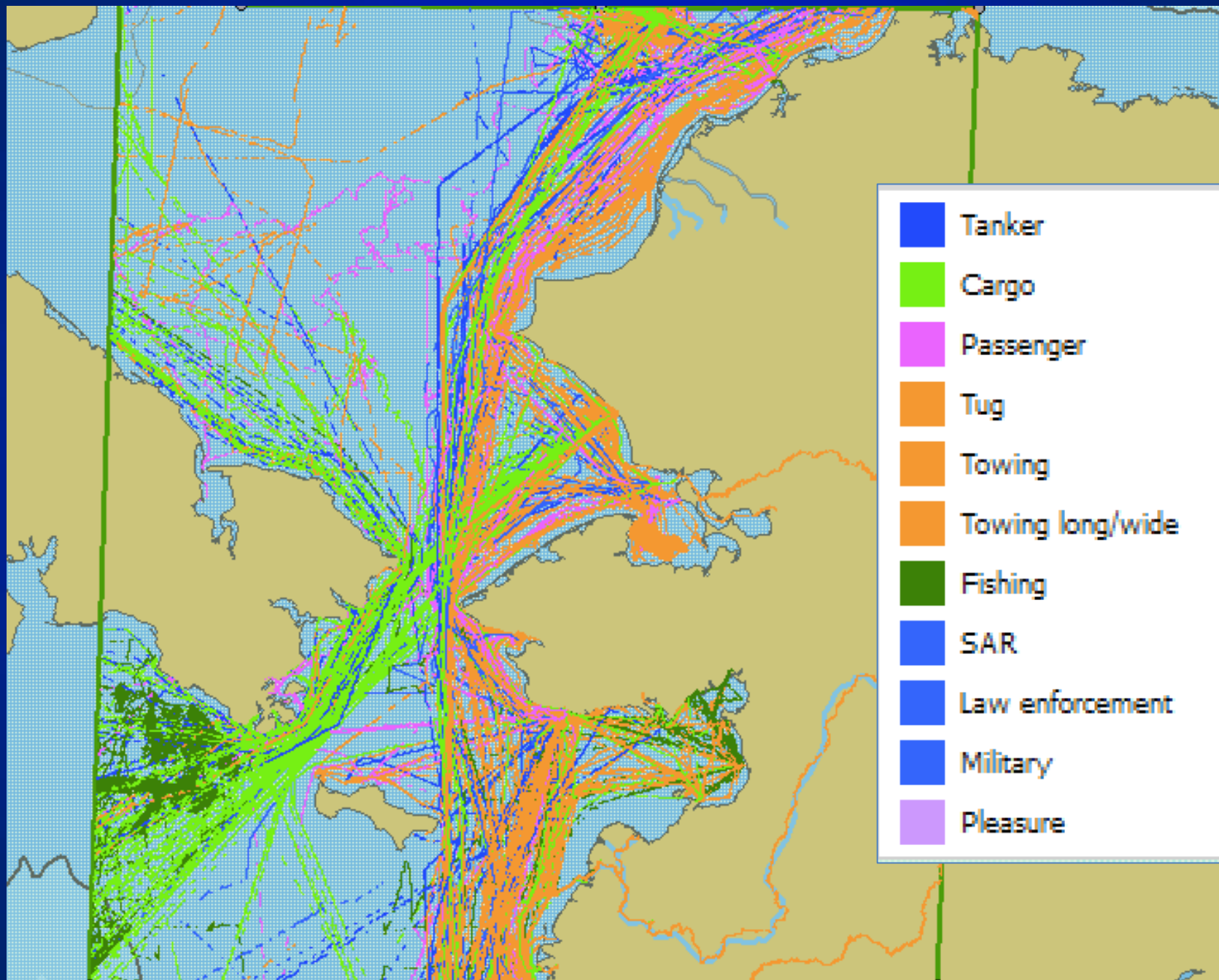




Marine Exchange Marine Safety Site Locations - 2014

# Alaska Vessel Traffic





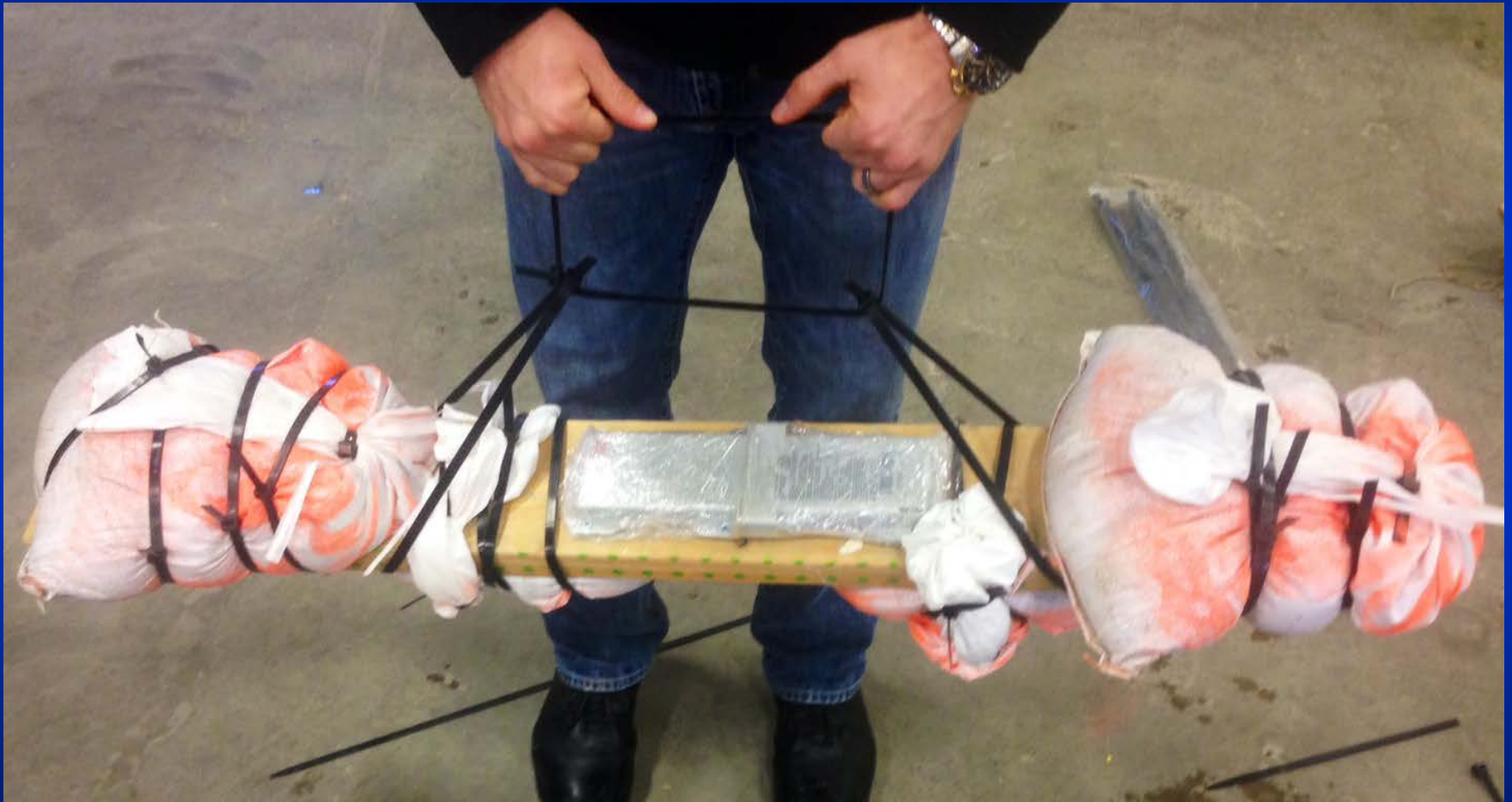
	A	B	C	D	E	F	G	H	I	J	K	
	14 Aug 2015 22:41:49.000	UTC	367167140		Klamath		0	0	0	Barge	Undefined	
	18 Aug 2015 14:33:39.000	UTC	273332830		Komandor		0	0	0	Fishing	Undefined	
	19 Jul 2015 18:09:30.000	UTC	273143900	7359644	KRASIN	UIFY	10	26	136	Other	Undefined	R
	23 Jun 2015 21:21:07.000	UTC	367103740		KRYSTALSEA	WDC9546	4	10	17	Tug	Undefined	V
	23 Aug 2015 12:21:29.000	UTC	578000700	9502518	L'AUSTRAL	FLTU	5	18	143	Passenger	Undefined	D
	17 Aug 2015 20:05:19.000	UTC	985780029		L'AUSTRAL 06	FLTU	0	2	5	Pleasure	Undefined	
	19 Aug 2015 01:16:55.000	UTC	985780034		L'AUSTRAL ZOD 11		0	0	0	Pleasure	Undefined	
	19 Aug 2015 02:52:50.000	UTC	985780035		L'AUSTRAL ZOD 12		0	0	0	Pleasure	Undefined	
	17 Aug 2015 20:22:11.000	UTC	985780025		L'AUSTRAL ZOD 2	FLTU	0	2	5	Pleasure	Undefined	
	19 Aug 2015 23:03:44.000	UTC	985780026		L'AUSTRAL ZOD 3		0	0	0	Pleasure	Undefined	
	22 Aug 2015 23:04:44.000	UTC	985780027		L'AUSTRAL ZOD 4	FLTU	0	2	5	Pleasure	Undefined	
	22 Aug 2015 22:46:15.000	UTC	985780028		L'AUSTRAL ZOD 5	FLTU	0	2	5	Pleasure	Undefined	
	17 Aug 2015 18:56:44.000	UTC	985780030		L'AUSTRAL ZOD 7	FLTU	0	2	5	Pleasure	Undefined	
	22 Aug 2015 22:37:33.000	UTC	985780032		L'AUSTRAL ZOD 9	FLTU	0	2	5	Pleasure	Undefined	
	08 Oct 2015 14:36:24.000	UTC	367315070		La Brisa		0	0	0	Fishing	Undefined	
	03 Sep 2015 02:08:19.000	UTC	566924000	9687461	LANPAN 28	9V2041	5	14	54	Other	Undefined	D
	11 Aug 2015 12:54:59.000	UTC	338174945		LATITUDE		0	0	0	Pleasure	Undefined	
	11 Aug 2015 17:33:43.000	UTC	319774000	9446922	LATITUDE	ZCTD5	2.8	9	43	Pleasure	Undefined	C
	18 Oct 2015 21:10:09.000	UTC	303350200	8218938	LAUREN FOSS	WDG8426	6	12	46	Tug	Undefined	N
	07 Oct 2015 18:40:50.000	UTC	316005877		LAURIER 1	CFN4105	0	3	7	SAR	Undefined	
	13 Sep 2015 11:44:15.000	UTC	578000500	9502506	LE BOREAL	FLSY	5	18	142	Passenger	Undefined	S
	12 Sep 2015 03:32:12.000	UTC	985780022		LE BOREAL AXE 11		0	4	6	Passenger	Undefined	
	12 Sep 2015 16:27:41.000	UTC	985780015		LE BOREAL AXE 4		0	4	6	Passenger	Undefined	
	12 Sep 2015 01:56:33.000	UTC	985780018		LE BOREAL AXE 7	FLSY	0	4	4	Passenger	Undefined	
	18 Sep 2015 17:37:36.000	UTC	578000200	9641675	LE SOLEAL	FIHV	5	18	142	Passenger	Undefined	G
	30 Oct 2015 11:31:20.000	UTC	273359830	8517839	LEV YASHIN	UBRH7	7.6	19	113	Cargo	Undefined	P
	29 Jun 2015 22:26:34.000	UTC	413200450		Lian Xing Hai		0	0	0	Fishing	Undefined	
	31 Jul 2015 00:35:43.000	UTC	538004683	9600621	LIBERTY DREAM	V7YL2	12.1	32	229	Cargo	Undefined	B
	22 Aug 2015 19:53:45.000	UTC	366983840		LOIS H	WTD4576	3	8	25	Towing long/wide	Undefined	P
	20 Aug 2015 00:29:30.000	UTC	371058000		Lowlands Camellia		0	0	0	Cargo	Undefined	
	14 Jul 2015 15:00:13.000	UTC	256628000	9724192	LOWLANDS NELLO	9HA3967	12.2	32	229	Cargo	Undefined	B
	16 Sep 2015 06:33:17.000	UTC	985780002		LS AXE02		0	2	6	N/A	Undefined	
	16 Sep 2015 06:09:33.000	UTC	985780004		LS AXE04		0	2	6	N/A	Undefined	
	16 Sep 2015 06:33:13.000	UTC	985780011		LS AXE11		0	2	6	N/A	Undefined	

C	D	E	F	G	H	I	J
367167140		Klamath		0	0	0	Barge
273332830		Komandor		0	0	0	Fishing
273143900	7359644	KRASIN	UIFY	10	26	136	Other
367103740		KRYSTALSEA	WDC9546	4	10	17	Tug
578000700	9502518	L'AUSTRAL	FLTU	5	18	143	Passenger
985780029		L'AUSTRAL 06	FLTU	0	2	5	Pleasure
985780034		L'AUSTRAL ZOD 11		0	0	0	Pleasure
985780035		L'AUSTRAL ZOD 12		0	0	0	Pleasure
985780025		L'AUSTRAL ZOD 2	FLTU	0	2	5	Pleasure
985780026		L'AUSTRAL ZOD 3		0	0	0	Pleasure
985780027		L'AUSTRAL ZOD 4	FLTU	0	2	5	Pleasure
985780028		L'AUSTRAL ZOD 5	FLTU	0	2	5	Pleasure
985780030		L'AUSTRAL ZOD 7	FLTU	0	2	5	Pleasure
985780032		L'AUSTRAL ZOD 9	FLTU	0	2	5	Pleasure
367315070		La Brisa		0	0	0	Fishing
566924000	9687461	LANPAN 28	9V2041	5	14	54	Other
338174945		LATITUDE		0	0	0	Pleasure
319774000	9446922	LATITUDE	ZCTD5	2.8	9	43	Pleasure
303350200	8218938	LAUREN FOSS	WDG8426	6	12	46	Tug
316005877		LAURIER 1	CFN4105	0	3	7	SAR
578000500	9502506	LE BOREAL	FLSY	5	18	142	Passenger
985780022		LE BOREAL AXE 11		0	4	6	Passenger
985780015		LE BOREAL AXE 4		0	4	6	Passenger
985780018		LE BOREAL AXE 7	FLSY	0	4	4	Passenger
578000200	9641675	LE SOLEAL	FIHV	5	18	142	Passenger
273359830	8517839	LEV YASHIN	UBRH7	7.6	19	113	Cargo
413200450		Lian Xing Hai		0	0	0	Fishing
538004683	9600621	LIBERTY DREAM	V7YL2	12.1	32	229	Cargo
366983840		LOIS H	WTD4576	3	8	25	Towing long/wide
371058000		Lowlands Camellia		0	0	0	Cargo
256628000	9724192	LOWLANDS NELLO	9HA3967	12.2	32	229	Cargo
985780002		LS AXE02		0	2	6	N/A
985780004		LS AXE04		0	2	6	N/A
985780011		LS AXE11		0	2	6	N/A

# Canadian Barge Adrift in U.S. Arctic



# Transponder Deployment



# Barge – 20 Miles Off Russia







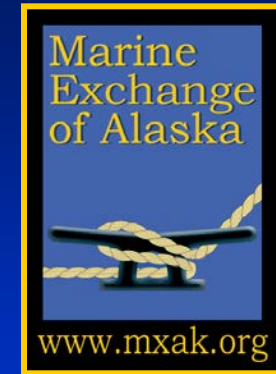
## Arctic Safety Net Project

Sponsors: Pew, IUCN, Oak Foundation and Arctic Council



# USCG-MXAK CRADA

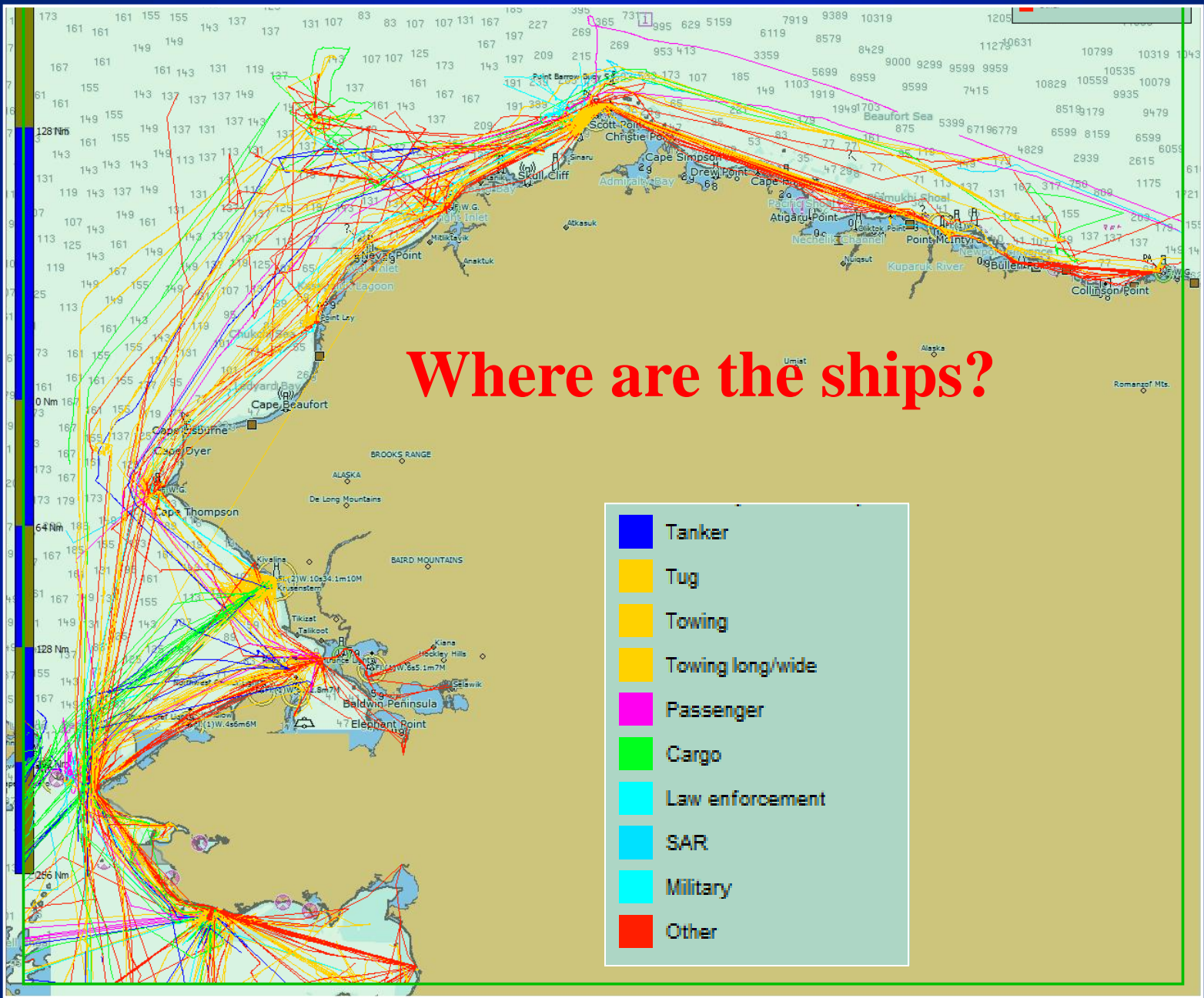
(Cooperative Research and  
Development Agreement)



## “Arctic Next Generation Navigational Safety Information System”



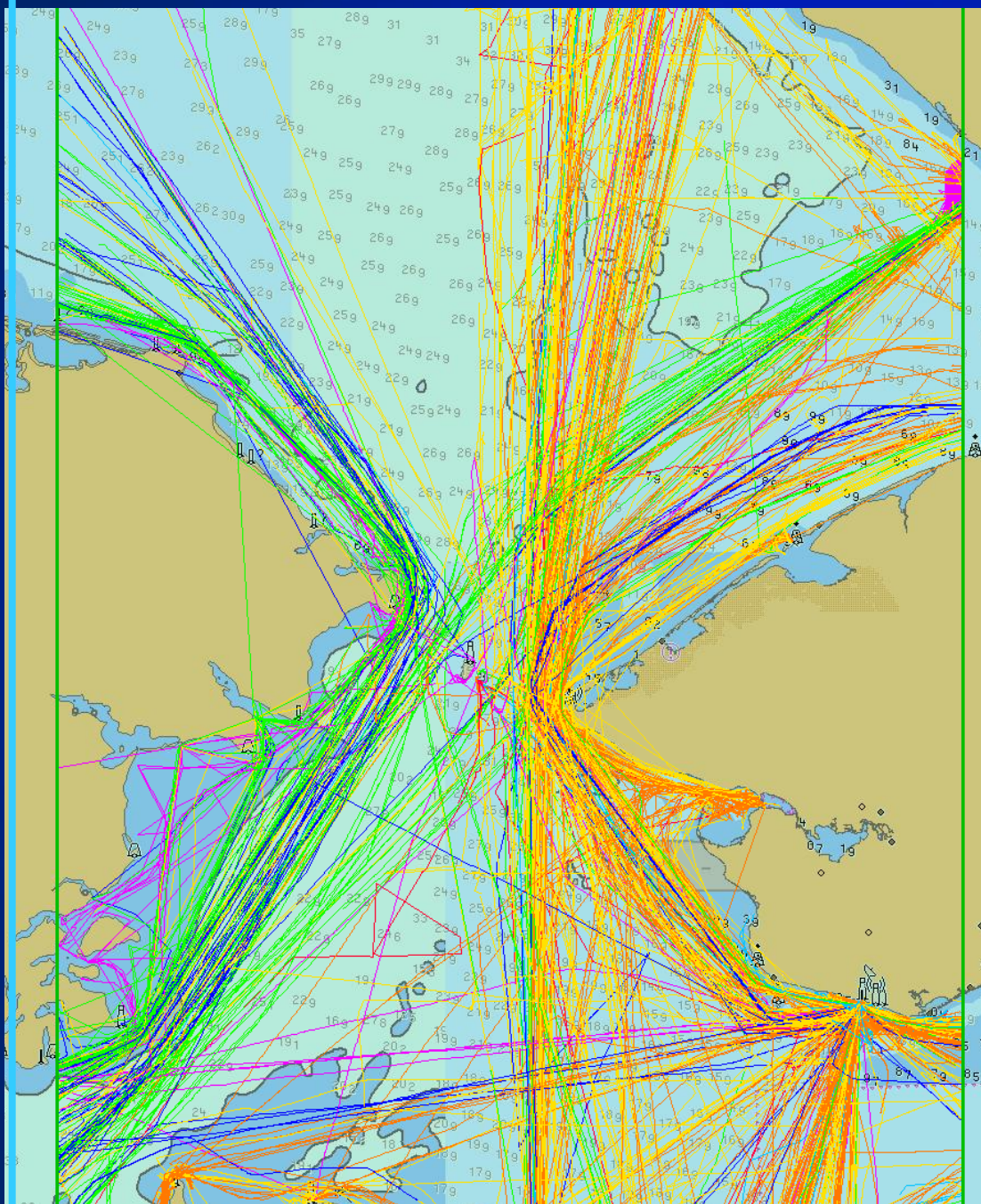
AIS transmission tests  
conducted in summer  
of 2014 with Coast  
Guard cutter Healy



# Where are the ships?

- Tanker
- Tug
- Towing
- Towing long/wide
- Passenger
- Cargo
- Law enforcement
- SAR
- Military
- Other

# Oct 2012-Oct 2013



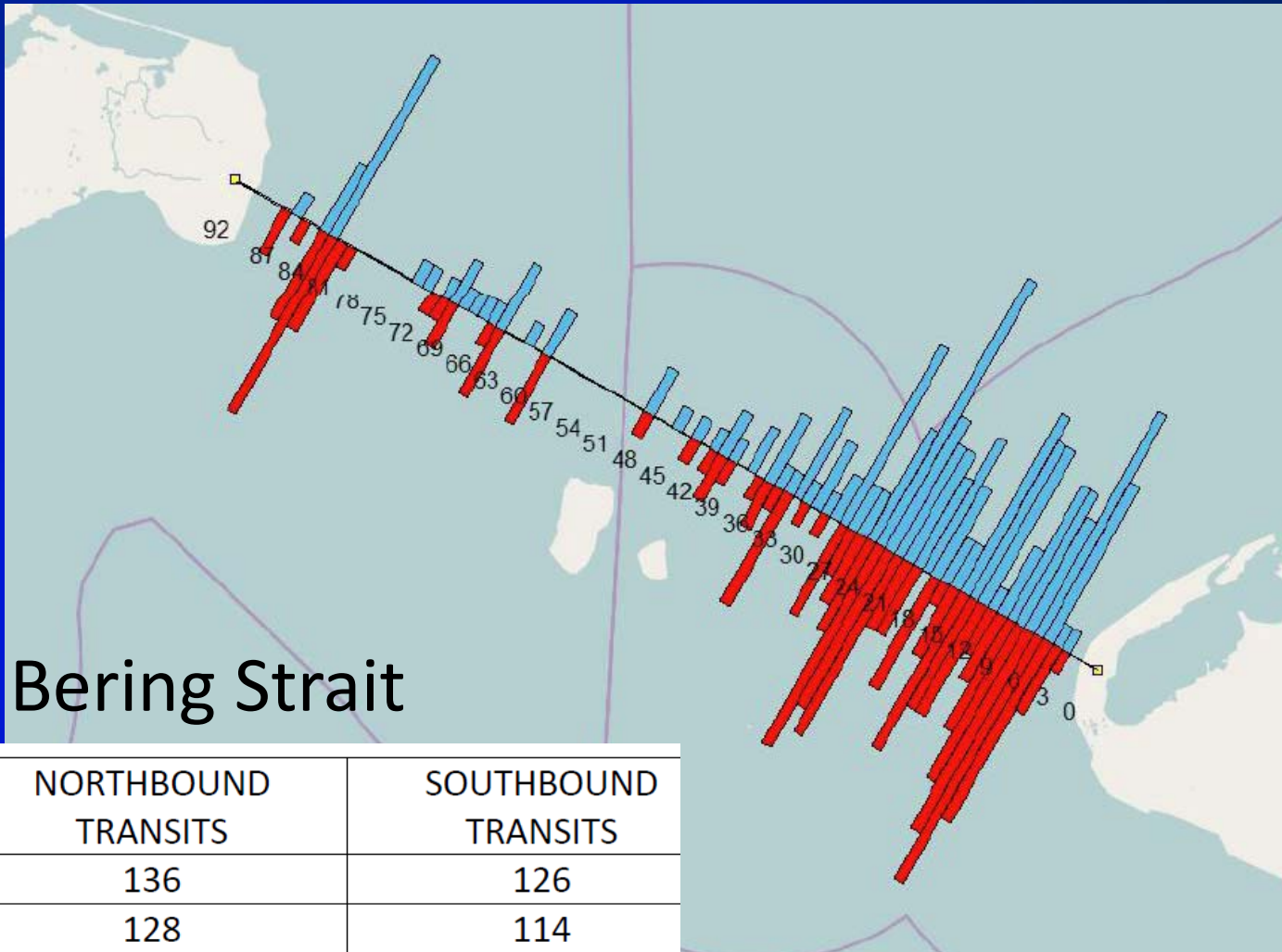
## Colour Explanation (SHIP\_TYPE)

- Tanker
- Cargo
- Tug
- Towing
- Towing long/wide
- Passenger
- Fishing
- SAR
- Military
- Law enforcement
- Others

Time	Name	Dft	Length	Ship Type	Direction	Destination	Cargo Type	Country
01 Aug	ARAON	7.2	102	Other	North	NOME	Icebreaker	kr
01 Aug	FEDERAL BAFFIN	10.7	190	Cargo	South	ONSAK/KOREA	Undefined	pa
08 Aug	SELANDIA	8.9	228	Cargo	North	RED DOG	Undefined	ag
09 Aug	WINDSOR ADVENTURE	6.6	190	Cargo	North	RED DOG,ALASKA	Undefined	pa
10 Aug	DELMAR	14.3	229	Cargo	South	VANCOUVER,CAI	Undefined	mh
12 Aug	SAMOS LEGEND	12.6	225	Cargo	South	BALBOA	Undefined	lr
14 Aug	ANEMOS	6.6	196	Cargo	North	RED DOG-ALASKA	Undefined	
16 Aug	MISHIMA	8.5	224	Cargo	North	US.RDB	Undefined	pa
17 Aug	SELANDIA	13.9	228	Cargo	South	VICTORIA PS	Undefined	ag
19 Aug	WINDSOR ADVENTURE	12.8	190	Cargo	South	LIANYUNGANG,C	Undefined	pa
23 Aug	F.D.GENARO AURILIA	7.4	225	Cargo	North	RED DOG,ALASKA	Undefined	it
23 Aug	MISHIMA	12.1	224	Cargo	South	PA BLB	Undefined	pa
23 Aug	OCEAN BREEZE	5.6	183	Cargo	North	RED DOG ALASKA	Undefined	hk
25 Aug	ANEMOS	11	196	Cargo	South	HIKOSHIMA,JAP	Undefined	
28 Aug	OCEAN BREEZE	12.2	183	Cargo	South	HACHINOHE JAP	Undefined	hk
30 Aug	FEDERAL BAFFIN	6.1	190	Cargo	North	RED DOG/USA	Undefined	pa
30 Aug	F.D.GENARO AURILIA	14.1	225	Cargo	South	VANCOUVER BC	Undefined	it
02 Aug	LEADER	7.6	106	Cargo	North	VANKAREM	Undefined	ru
03 Aug	ALDAN	7.2	132	Cargo	North	PEVEK	Undefined	ru
10 Aug	TAGANROGA	7.4	113	Tanker	North	TIKSI	Undefined	ru
10 Aug	BAY	7.5	107	Cargo	North	SHMIDT	Undefined	ru
16 Aug	IGRIM	8.1	160	Tanker	South	PROVIDENIYA	Undefined	ru
18 Aug	AION	7.8	150	Cargo	North	UELEN	Undefined	ru
19 Aug	KAPITAN KREMS	6.2	130	Cargo	North	PEVEK	Undefined	ru
19 Aug	IGARKA	8.9	176	Cargo	North	PEVEK	Undefined	ru
28 Aug	RAINFROST	9.2	153	Cargo	North	ST.PETERSBVRG	Undefined	pa
02 Aug	TRIUMPH	3.5	24	Towing lc	South	KOTZEBUE	Undefined	us
02 Aug	ISLAND SPIRIT	4	0	Tug	North	CHIFORNICK	Undefined	us
02 Aug	TUVLI	0	23	N/A	North		Undefined	us
03 Aug	SAM M TAALAK	1.5	44	Other	North		Undefined	us
03 Aug	CG SPAR	0	0	N/A	North		Undefined	us
04 Aug	FAIRWEATHER	5.5	72	Other	North	KOTZEBUE SOUN	Undefined	us
05 Aug	DUKE	6.7	67	Other	North	CHUCHI SEA	Undefined	bs
05 Aug	SAM M TAALAK	1.5	44	Other	South		Undefined	us
07 Aug	HUNTER	5.8	42	Towing lc	North	PRDHOE BAY	Undefined	us
07 Aug	PROFESSOR KHROMOV	0.5	72	Passenge	North	CHUKCHI_SEA	Undefined	ru
07 Aug	PROFESSOR KHROMOV	0.5	72	Passenge	South	CHUKCHI_SEA	Undefined	ru
07 Aug	PROFESSOR KHROMOV	0.5	72	Passenge	South	CHUKCHI_SEA	Undefined	ru
07 Aug	SAM M TAALAK	1.5	44	Other	North		Undefined	us
08 Aug	GUARDSMAN	5.8	45	Tug	North	DUTCH HARBOU	Undefined	us
08 Aug	WARRIOR	5	40	Tug	North	PRUDHOE BAY	Undefined	us
08 Aug	TRIUMPH	3.5	24	Towing lc	North	NOMEN	Undefined	us
09 Aug	SAM M TAALAK	1.5	44	Other	South		Undefined	us
10 Aug	ISLAND SPIRIT	4	0	Tug	South	CHIFORNICK	Undefined	us
10 Aug	CG SPAR	0	0	N/A	South		Undefined	us
11 Aug	ALASKA MARINER	0	37	Towing lc	North		Undefined	

## Red Dog Cargo Ships

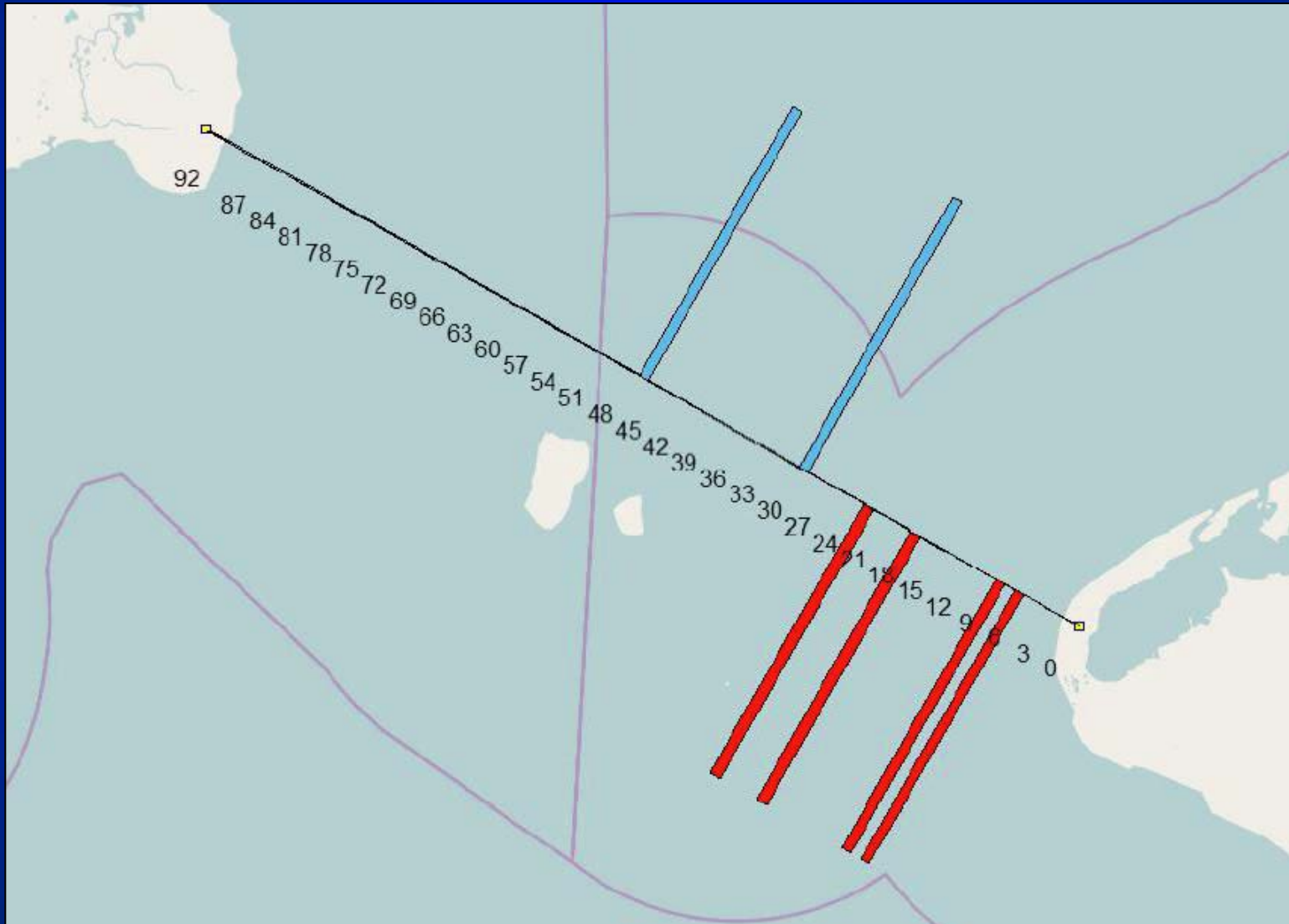
## Russian Northern Sea Route Traffic



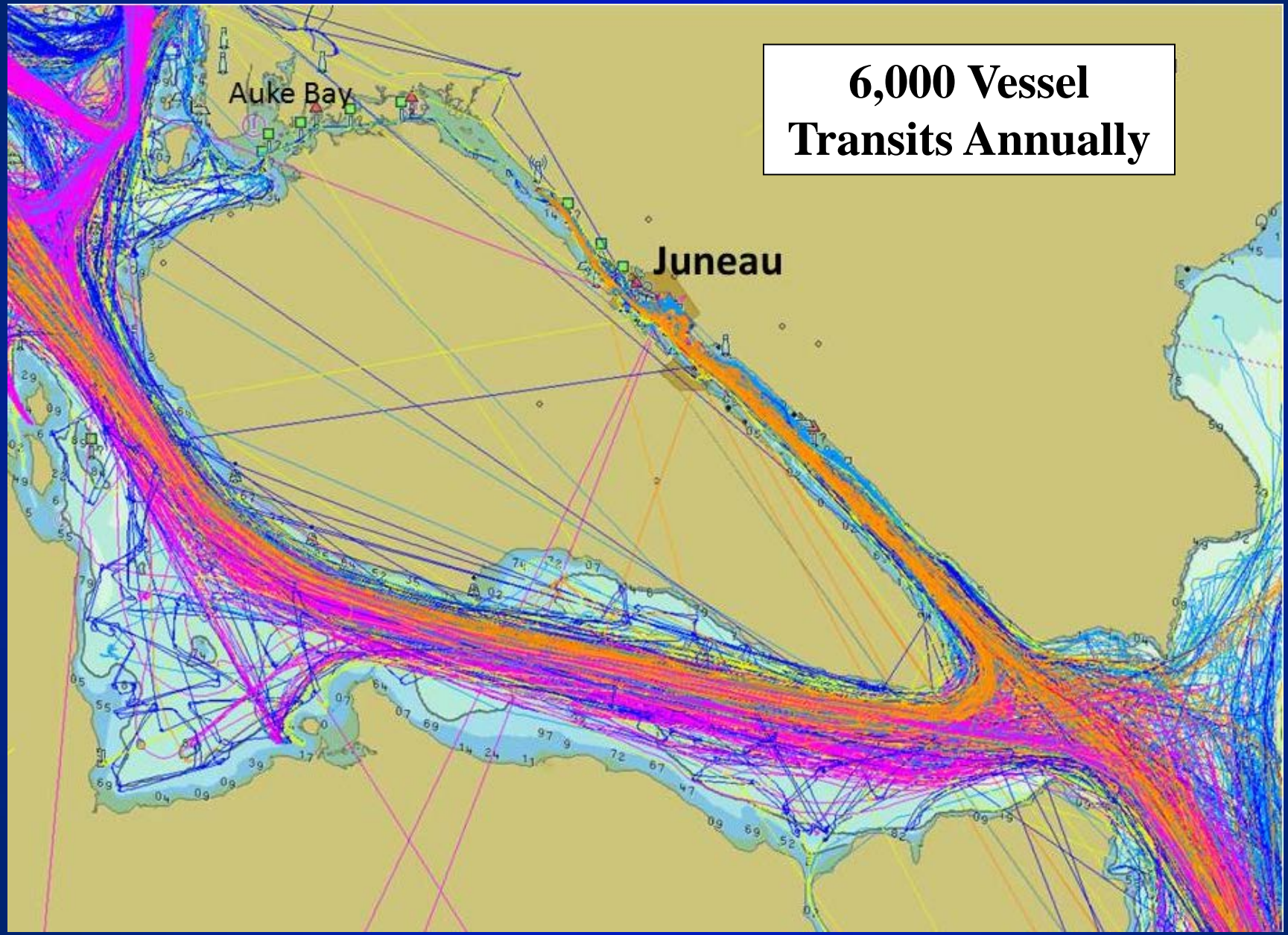
## Bering Strait

YEAR	NORTHBOUND TRANSITS	SOUTHBOUND TRANSITS
2009	136	126
2010	128	114
2011	124	115
2012	154	162
2013	171	173
2014	128*	112*

# Heaviest Traffic Day – July 25<sup>th</sup>, 2014



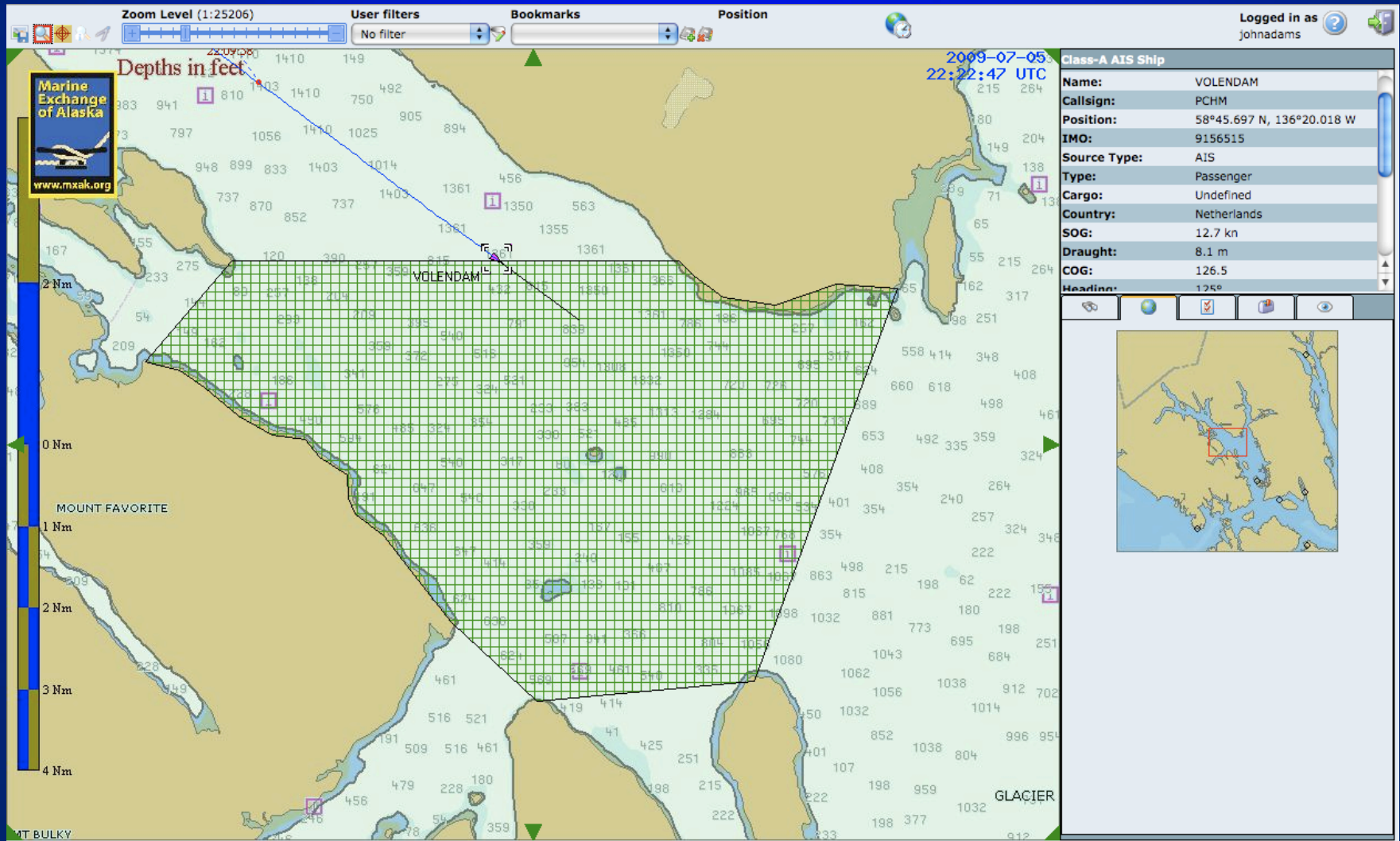
**6,000 Vessel  
Transits Annually**



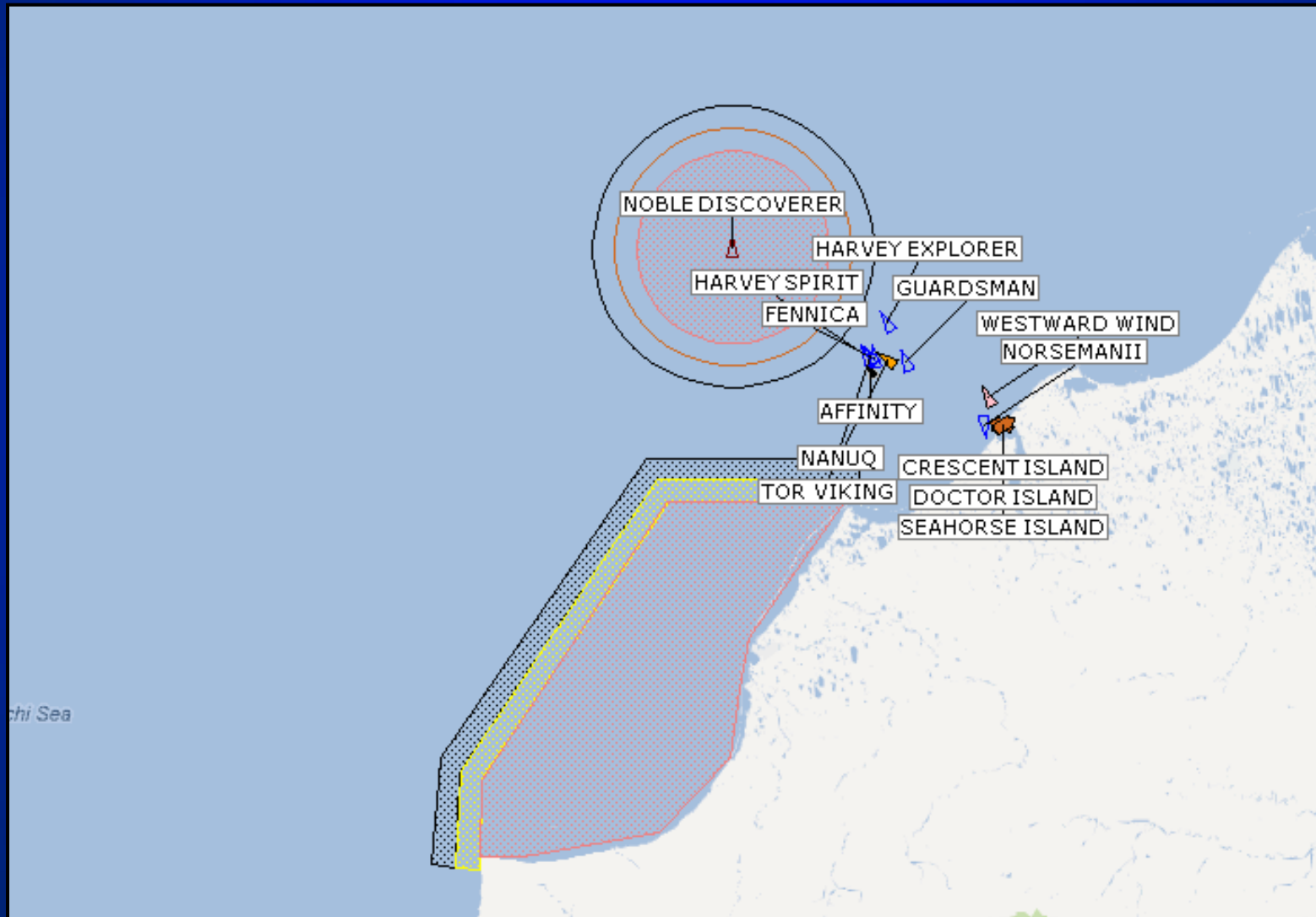


# Cruise ships Transiting Whale Waters

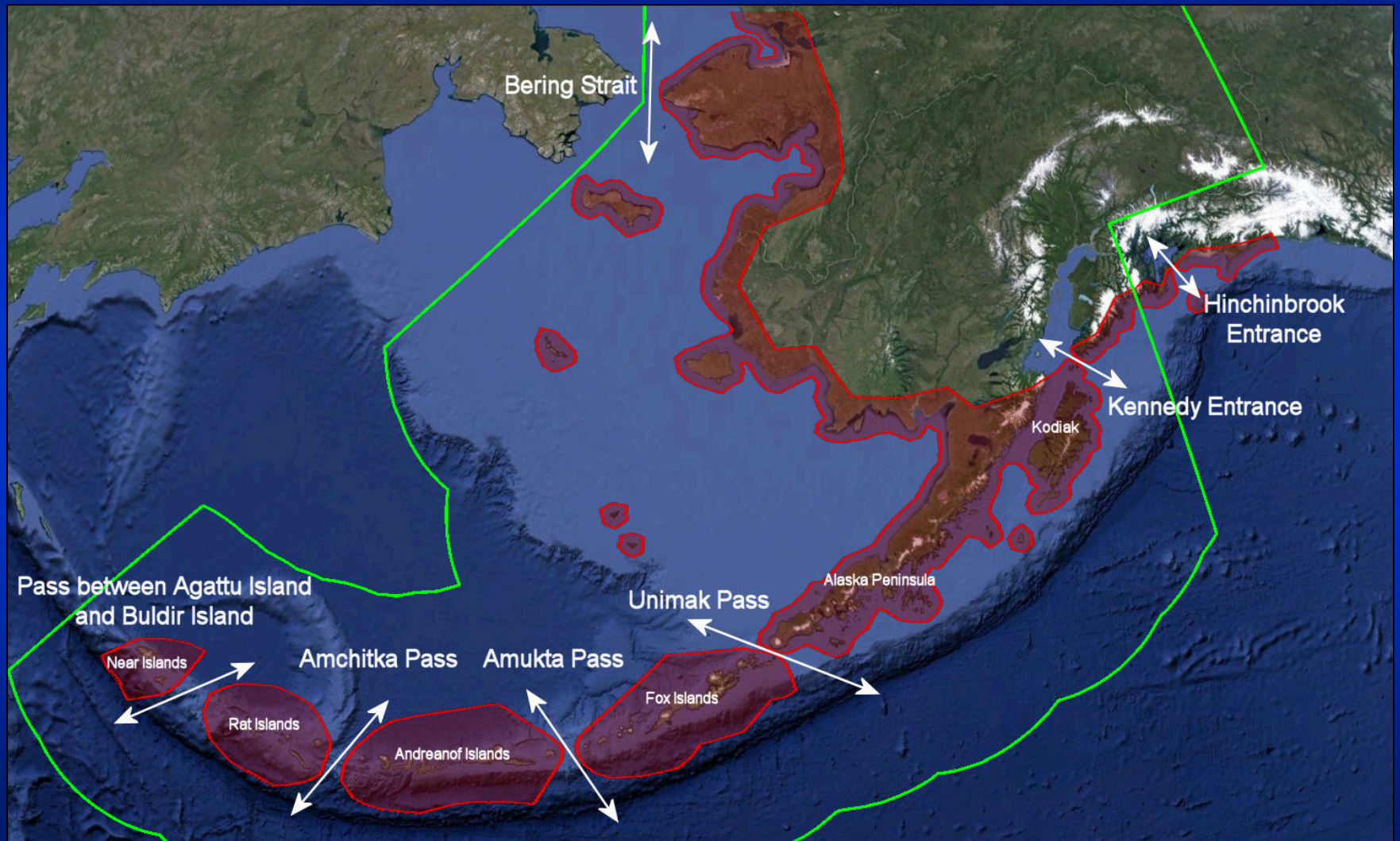
Automatic generation of e-mail and text msg alerts



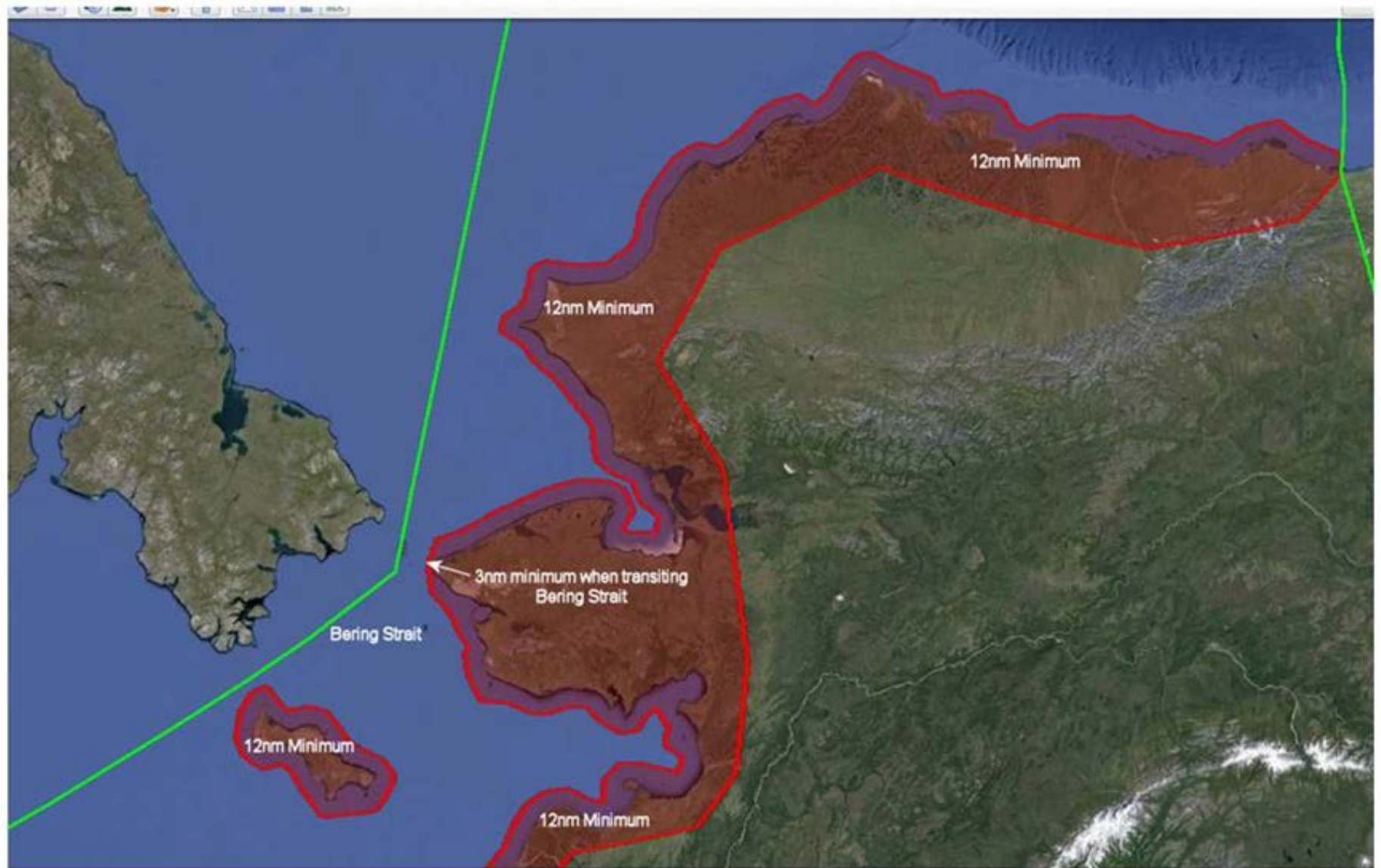
# Shell Exploration Fleet Monitoring



# Risk Mitigating Routes Through Passes



# Offshore Risk Mitigating Routes Northwest Alaska and Arctic

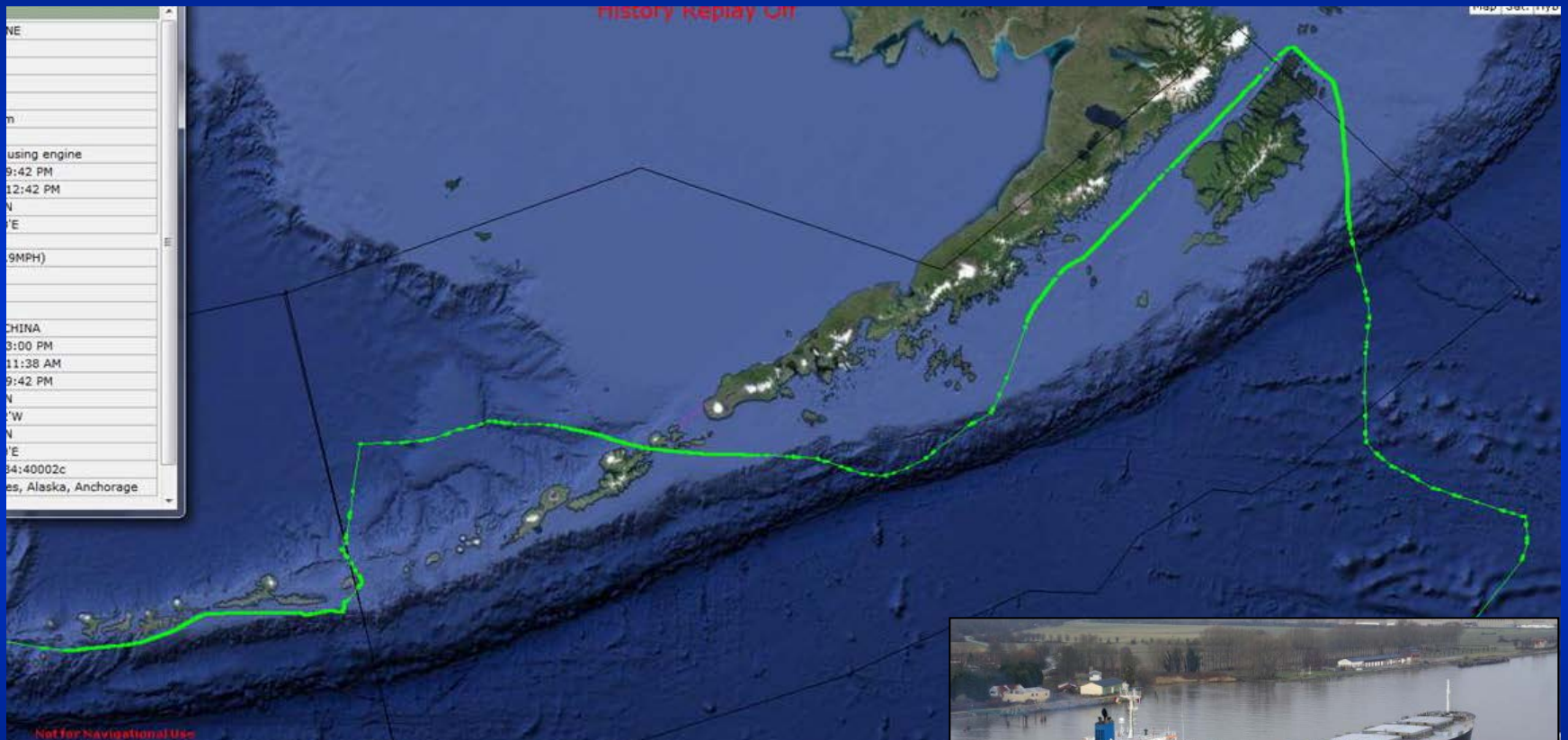


# Maritime Domain Awareness No Maritime Domain Management



# Bulk Cargo Vessel Red Jasmine

## High Risk Transit



# Bulk Cargo Vessel Red Jasmine After APC Implemented





# APC Detected Vessel Transiting High Risk Pass

164.100.39.017 / ShipInformation.asp

SHIP INFORMATION	
Name	WUHU
MMSI	563992000
IMO	9657868
Call Sign	9VCM9
Type/Cargo	Cargo ship
Length x Beam	180m x 30m
Draught	5.6m
Nav. Status	Under way using engine
Last Seen UTC	3/27/2014 4:08 PM
Last Seen Local	3/27/2014 8:08 AM
Latitude	50°37.523'N
Longitude	165°44.068'W
Nearest MM	
Speed	13.9knt(16.0MPH)
Course	117.9°
Heading	115°





# MONITORING COMPELS COMPLIANCE WITH RISK MITIGATING MEASURES

