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# Cook Inlet Vessel Traffic Study

Report to Cook Inlet Regional Citizens Advisory Council



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*Cape International, Inc.  
Nuka Research & Planning, LLC.*



W. David Eley  
Cape International, Inc  
3300 Foster Avenue  
Juneau, Alaska 99801  
tel 907.586.2685  
fax 907.586.2692  
*capedec@alaska.com*



Nuka Research & Planning Group, LLC.  
P.O. Box 175  
Seldovia, Alaska 99663  
tel 907.234.7821  
fax 509.278.4406  
*contact@nukaresearch.com*

## Executive Summary

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The Seabulk Pride breakaway and grounding has focused attention on the oil spill risks posed by vessels transiting Cook Inlet, particularly vessels of 'high consequence' who carry petroleum or dangerous cargoes, or who carry large amounts of fuel oil.

Cook Inlet is a wide, long inlet with moderate to low levels of vessel traffic when compared to other large North America ports but which is vexed by:

- Sudden, severe weather,
- Strong tides, and
- Large ice pans aggressively moved by strong tides in the winter.

These environmental conditions have been contributing causes of significant or potentially catastrophic vessel casualties.

From January 1, 2005 through July 15, 2006, 704 deep draft vessels called at Cook Inlet ports. Twelve vessels managed among six operators accounted for 80% of this ship traffic. Nearly half (47%) of the port calls were made by container and Ro-Ro vessels operated by Horizon Lines and Totem Ocean Transport Express (TOTE), respectively, to the Port of Anchorage. Ferries operated by Alaska Marine Highway System (AMHS) represented 17% of the traffic. Twenty-nine (29%) of the vessels were gas or liquid petroleum tankships calling primarily at Nikiski. Thus, monitoring and cooperative partnerships with only a few operators and ships will promote safe shipping for the vast majority of high consequence carriers.

Tank ships calling at the Nikiski terminals and refineries transfer roughly 22 million barrels of crude and refined (non-persistent) oil each year and transfer about 4.8 million barrels of Cook Inlet crude oil from the Drift River Terminal to Nikiski each year.

About six million barrels of non-persistent fuel oil is moved into and through the Cook Inlet for domestic consumption each year on approximately 200 tug/barge voyages.

Gas carriers calling at Nikiski load over three million cubic meters of liquefied natural gas (LNG) and about 272,000 cubic meters of ammonia each year.

About 500 to 900 commercial fishing vessels operate in the five different fisheries predominantly from mid-May through mid-September throughout Cook Inlet. Fishing vessels typically have a fuel capacity of about 300 to 1,000 gallons and almost all carry non-persistent fuel.

There are 3 tugs resident in Cook Inlet that provide ship docking and escort. Approximately 150 tug voyages each year transit the area with fuel barges in tow. Other tugs manage the freight and gravel barge loads in the vicinity of the Port of Anchorage each year.

Two hundred and twenty five (225) casualties effecting vessel seaworthiness were reported in Cook Inlet from May 1, 1990 through August 1, 2006. Fifty-nine (59) casualty records indicated vessel damage in excess of \$20,000. In eleven of the incidences, vessel damage exceeded \$250,000. Over the last twenty years, the most significant casualties have been the M/V Glacier Bay spill in 1987, the capsizing of the urea barge Oregon in 1997, the Container Ship Greatland cargo hold fire in 2003, and the breakaway of the tankship Seabulk Pride in 2006.

Between January 1, 1992 and August 30, 2006 there were 295 minor oil spills from vessels operating in Cook Inlet. During that same period, there were 333 spills reported from the 15 Cook Inlet oil production platforms. Given that major or significant spills are rare, analysis of spill records yields little information that would assist in major incident prevention and response planning.

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# COOK INLET VESSEL TRAFFIC STUDY

*Report to Cook Inlet Regional Citizens Advisory Council*

## Purpose of this Report

Although ships are required to provide advance notice of arrival, we are not aware of succinct summaries of vessel traffic in Cook Inlet that would assist in developing risk assessments for contingency planning. The Cook Inlet Subarea Contingency Plan characterizes the water body, identifies sensitive areas, and develops response scenarios. It does not provide vessel traffic data.

The purpose of this project is to prepare a written narrative report and illustrative maps inventorying vessel traffic movements in Cook Inlet during 2005. The written report may be used as a reference document to support discussions regarding the environmental risks associated with vessel traffic in the area, as well as any discussions regarding mishap prevention initiatives.

## Cook Inlet Profile

The Cook Inlet Subarea Contingency Plan<sup>1</sup> describes the water body as a large, elongated body of water oriented in a SW-NE direction in southcentral Alaska. It is approximately 150 miles long, and its width ranges from about 10 miles between the East and West Forelands, toward the north, to approximately 80 miles between the Kenai Peninsula and the mouth of the McNeil River in Kamishak Bay, toward the south. The inlet experiences the second largest tidal fluctuations in the world, frequently exceeding twenty feet, with tidal current velocities as fast as 8 knots. Tidal flats are a dominant coastal feature along Cook Inlet, although marshes, rocky shores, sand and gravel beaches, and wave-cut platforms are also quite common.

According to a publication produced by the US Army Corps of Engineers<sup>2</sup>, “The ice cover in Cook Inlet is seasonal. By December about half the Inlet area north of the Forelands is normally covered with new ice and pancake ice (up to 10 cm thick) and thin, first-year ice (30-70 cm thick). The area south of the Forelands is normally still ice free in December....then the ice extent and thickness both increase through January and February, reaching maximums by mid-February and early March”. The publication further

<sup>1</sup> Cook Inlet Subarea Contingency Plan for Oil and Hazardous Substance Spills and Releases, Change 1 (June 16, 2003). Portions available at: [www.akrrt.org](http://www.akrrt.org).

<sup>2</sup> Mulherin, N.D. Marine Ice Atlas for Cook Inlet (ATLAS), ACOE. 2001. Section 3.2, p. 13.

states, “During colder winters the cold may extend into the lower Inlet as far south as Anchor Point on the east side and Cape Douglas on the west side. The thickness of the ice varies between 0.5 and 2.0 meters.”

As we conducted the research for this traffic study, reviewed the casualty records, and talked to marine pilots, agents and operators, a succinct description of the water body became quite clear:

“Cook Inlet is a wide, long inlet with moderate to low levels of vessel traffic when compared to other large North America ports, but is a water body vexed by:

- Sudden, severe weather,
- Strong tides, and
- Large ice pans aggressively moved by strong tides in the winter.”

## Vessels Trading in Cook Inlet

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Cook Inlet supports a wide variety of vessel traffic ranging from the smallest fishing vessel to crude oil tankers. Refined products and crude oil are routinely shipped in and out of the Inlet. In addition, Liquefied Natural Gas (LNG) and ammonia carriers call at the Nikiski Industrial complex. Many crude oil development and production platforms operate in the area. Crude oil and natural gas pipeline crossings exist in Cook Inlet and Turnagain Arm in several locations.

There is only moderate fuel barge traffic through out the inlet since much of the refined oil needed for regional consumption is provided to Anchorage via a pipeline from the Tesoro refinery in Nikiski.

The Port of Anchorage (POA) is a ‘classic’ port in that it imports and exports a variety of goods and raw material in bulk and containers.

### Overview of Coastwise and International Traffic

Based on US Coast Guard advance notice of arrival<sup>3</sup> records and other local sources of information<sup>4</sup>, 704 large vessels<sup>5</sup>, other than fuel barges on domestic trade, called at Cook Inlet ports from January 1, 2005 through July 15, 2006. As can be seen in Figure 1, almost two-thirds (65%) of the calls were made by container vessels operated by Horizon Lines, roll-on,

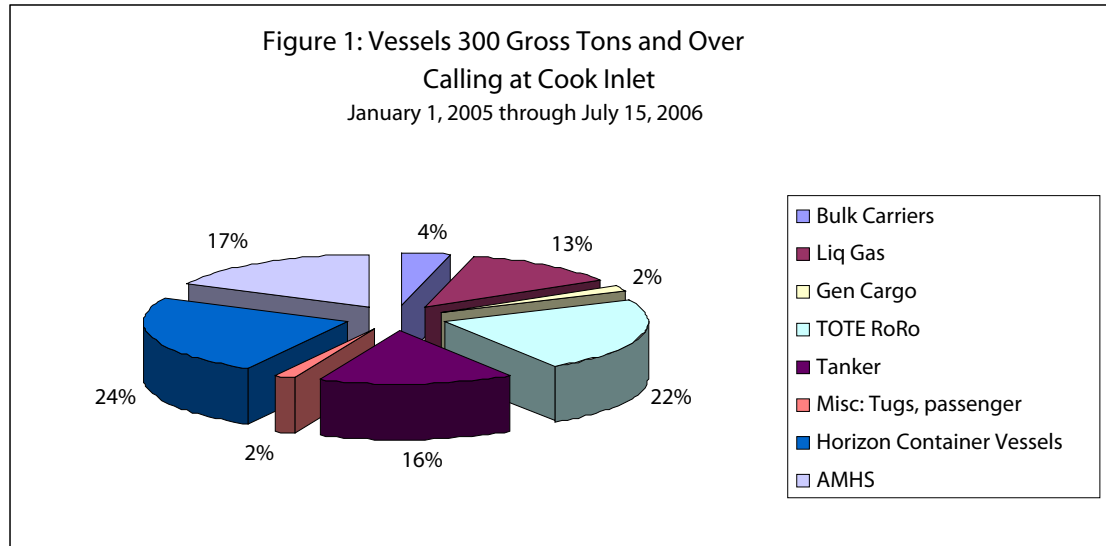
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3 Required by 33 CFR 160, Subpart C for all vessels carrying certain dangerous cargoes and all vessels at 300 gross tons or greater traveling not carrying certain dangerous cargoes.

4 Horizon Lines, TOTE, and Alaska Marine Highway Systems sailings schedules: [www.horizonlines.com](http://www.horizonlines.com), [www.totemocean.com](http://www.totemocean.com), and <http://www.dot.state.ak.us/amhs/>

5 300 gross tons or more in size. This is the Coast Guard’s break point for advance notice of arrival. Gross Tonnage refers to the volume of all ship’s enclosed spaces measured to the outside of the hull framing. It was a measurement of the enclosed spaces within a ship expressed in “tons” – a unit which was actually equivalent to 100 cubic feet. The calculation of gross tonnage is complex but important given that fees, registration requirements and, as seen here, regulatory standards are based on gross tonnage.





roll-off (RoRo) cargo ships operated by Totem Ocean Trailer Express (TOTE), or ferries operated by Alaska Marine Highway System (AMHS). Twenty-nine percent (29%) of the vessel traffic totals were gas or liquid tankships calling primarily at Nikiski. Bulk carriers and general cargo ships represented 6%. Tugs, fishing and passenger vessels combined represented 2% of the Cook Inlet vessel traffic.

Averaging from these records, 486 ships of 300 gross tons or more call at Cook Inlet each year, or 8-10 ships per week. This estimate will likely decrease slightly in 2007 due to temporary closure of the Agrium facility in Nikiski. Large vessel traffic in Cook Inlet is moderate or low when compared to other North American west coast ports and waterways. For example, in 2005, the Port of Los Angeles had 2700 ship arrivals. In 2005, about 3100 deep draft vessels passed through Unimak Pass in the Aleutian Chain. However, as noted earlier, many of the North American waterways do not have the high percentages of oil and gas carriers. None have the harsh winter maritime conditions of Cook Inlet.

### Common Carriers

Twelve vessels managed among six operators account for 80% of the deep-draft vessel<sup>6</sup> traffic in Cook Inlet. See Table 1. Therefore a more detailed description of these operators and their ships is instructive. These vessels and their operations are described in subsequent sections of this report.

Coast Guard records indicate that these twelve ships or their owner/operators accounted for only 9 of the 226 marine casualties and 295 spills reported between January 1, 1991 and July 15, 2006.

<sup>6</sup> 'Deep-draft vessel' is a somewhat arbitrary but descriptive term used to distinguish ocean-going large ships from fuel barges and other vessels that are more than 300 gross tons but not considered ships. A deep-draft vessel generally has a draft greater than 4 meters.

**Table 1: Vessels Frequently Trading in Cook Inlet (2005-2006). (From Coast Guard and ADEC Records)**

Name	Estimated Annual Calls	Calling at	Type	Year Built	Length (Meters)	Gross Tons	Bunker or Cargo Capacity (Barrels)	Owner or Operator	IMO Number
Tustumena	80	Homer/ Seldovia	Ferry	1973	81.8	2174	1598	Alaska Marine Highway	6421086
North Star	52	Anchorage	Ro-Ro	2003	258	35825	12589	TOTE	9232280
Midnight Sun	52	Anchorage	Ro-Ro	2003	258	35825	12589	TOTE	9232278
Horizon Tacoma	35	Anchorage	Container	1987	216.4	20965	21870	Horizon Lines	8419154
Horizon Anchorage	34	Anchorage	Container	1987	216.4	20965	21870	Horizon Lines	8419142
Horizon Kodiak	31	Anchorage	Container	1987	216.4	20965	21870	Horizon Lines	8419166
Seabulk Arctic	23	Nikiski & Drift River/ Tesoro	Tankship	1998	183	30415	342,042	Lightship Tankers	9131371
Polar Eagle	18	Nikiski/ Conoco Phillips	Gas Ship	1993	239	66174	22379	Eagle Sun Company Limited	9001772
Arctic Sun	18	Nikiski/ Conoco Phillips	Gas Ship	1993	239	66174	22340	Eagle Sun Company Limited	9001784
Captain H. Downing	16	Nikiski & Drift River/ Tesoro	Tankship		207	24458	275,676	AHL Shipping Co	1046031
Seabulk Pride	15	Nikiski & Drift River/ Tesoro	Tankship	1998	183	30415	342,000	Lightship Tankers	9118630
Horizon Fairbanks	13	Anchorage	Container	1973	204	22033	26,690	Horizon Lines	7218462
Combined Total	387	(80% of total)							
All vessels	486								

**Table 2: Annual Vessel Calls at Cook Inlet Facilities and Marine Terminals.**

Facility	Est. Annual Calls	Vessel type	Purpose	Est. Average Cargo Transferred per Port Call	Units	Annual Cargo Transfer	Comments and Reference Source
Homer/Seldovia	83	AMHS Ferry	Transport passengers and vehicles	100 passengers, 20 vehicles	n/a	n/a	AMHS published schedule.
Homer, vessel anchorage	25	Primarily tank ships, (liquid and gas)	Await pilot and favorable mooring conditions at Nikiski and/or await Coast Guard inspection	n/a	n/a	n/a	Coast Guard ANOA
Port Graham	5	Fuel barge	Offload fuel for domestic consumption	476	barrels oil	2,380	Port Graham Corp
Seldovia	6	Fuel barge	Offload fuel for domestic consumption	2381	barrels oil	14,286	Plant operator, Seldovia Fuels
Homer	24	Fuel barge	Offload fuel for domestic consumption	9524	barrels oil	228,576	Plant operator, PetroMarine
Tyonek	0	Fuel barge	Offload fuel for domestic consumption (none in 2005)	0	barrels oil	0	Tyonek Village
Nikiski, Tesoro, KPL	90 tankships, 40 tank barges	Petroleum tank ship and tank barge	See footnote 1.	250,000 per tank ship. 84,000 per barge. See footnote 1.	barrels oil	22,500,000 tank ships 3,360,000 tank barges	Coast Guard ANOA, Tesoro
Drift River Terminal	24 or less	Tank ship	Load crude for off load at Tesoro Nikiski	200,000 but varies considerably	barrels oil	4,800,000 or less	Cook Inlet Pipeline
Nikiski, Conoco Phillips	36	LNG gas ship	Load liquefied natural gas (LNG)	88,150	cubic meters	3,173,400	Coast Guard ANOA
Nikiski, Agrium	20	Bulk urea freight ship	Load urea	25,000	metric tonnes	500,000	Agrium. Note: Port calls in 2006 were only 60% of 2005 levels. Port calls will be reduced further in 2007.
Nikiski, Agrium	8	Gas ammonia carrier tank ship	Load ammonia	23,500	metric tonnes	188,000	Agrium. Note: Port calls in 2006 were only 60% of 2005 levels. Port calls will be reduced further in 2007.
Port of Anchorage, POL#1 & #2	4	Tank ship	Off-load refined oil for supply to local markets and military	300,000	barrels oil	1,200,000	Port of Anchorage Master Plan
Port of Anchorage, POL#1 & #2	60	Tank barge	Load fuel off railcars from North Star refinery (Williams Alaska Petroleum (formerly MAPCO)	28,000	barrels oil	1,680,000	Port of Anchorage Master Plan

Table footnote 1: Tank vessels calling at KPL load and off load a range of cargo: off-loading crude oil from Valdez and Drift River, off-loading light oil from other West Coast refineries, and loading refined product from the Tesoro refinery for export. Total barrels transferred is only a rough estimate based on number of dockings.

Facility	Est. Annual Calls	Vessel type	Purpose	Est. Average Cargo Transferred per Port Call	Units	Annual Cargo Transfer	Comments and Reference Source
Port of Anchorage, Terminal 2	113	Container Ship (Horizon Lines)	Off-load, load freight containers		Twenty-foot Equivalent Unit (TEU)		Port of Anchorage Master Plan, Horizon Lines website
Port of Anchorage, Terminal 3	104	Ro-Ro Freight Ship (TOTE)	Off-load, load freight containers and vehicles				Port of Anchorage Master Plan, TOTE Lines website
Port of Anchorage, Terminal 3	2	Passenger	Passenger operations	n/a			Port of Anchorage Master Plan
Port of Anchorage, POL #1	4 ships/4 barges	bulk carriers	Unload dry cement	15,357	tons	122,855	Port of Anchorage Master Plan, Alaska Maritime Agencies
Anchorage, North Star Dock	24	Primarily freight barges	Transfer containers, break bulk, oil field equipment.	n/a			Port of Anchorage Master Plan
Anchorage, Northland Marine	20	Container barges	Off-load containers	270	Twenty-foot Equivalent Unit (TEU)	5,400	Port of Anchorage Master Plan
Anchorage, Minch Dock	480 (varies considerably)	Gravel barges, one salt barge	Import gravel				Gravel barged in from a site near Knik Arm. Port of Anchorage Master Plan
Port McKenzie	1	Ship: Bulk carrier	Load wood chips				Alaska Maritime Agencies

### ***Totem Ocean Trailer Express (TOTE) and Horizon Line Vessels calling at Anchorage***

Given that 56% of the deep-draft vessel traffic calling at Cook Inlet is operated by two shipping lines, a more detailed description of these operators is instructive. According to their website<sup>7</sup> TOTE's new Orca Class roll-on, roll-off (RoRo) vessels entered Alaska service in 2003 replacing three older, 'Ponce-class' vessels. Each of the new vessels, and M. V. North Star, call at the Port of Anchorage once a week. They have the capacity to carry over 600 containers (40-foot equivalent) and 220 vehicles. These RoRo ships differ from container cargo vessels in that freight is not lifted by crane but driven by tractor-trailer on to the ship using a flat bed or van. Vehicles for shipment are also driven on board. Each vessel makes continuous round trips between the ports of Tacoma, Washington and Anchorage, covering the 1450 nautical miles between ports in about 66 hours, one way. In Anchorage, the vessels take ten hours to off-load and load.

One vessel casualty (loss of electric power) in Cook Inlet was reported to the Coast Guard by the M/V Midnight Sun in May 2003. No pollution incidents have been reported by either vessel.

<sup>7</sup> [www.totemocean.com](http://www.totemocean.com)

Principal Characteristics	TOTE M/V's Midnight Sun and North Star
Overall Length	839' - 0"
Beam	118' - 0"
Speed at 90% MCR	24 knots
Trailer Capacity	600 FEU (Forty-foot equivalent unit container)
Auto Capacity	220
Internal Ramps	13
Propulsion Plant	diesel-electric
Bunker Capacity	12589 bbls, 528,738 gallons, 1900 tonnes* IFO 180 (persistent fuel oil)

\* Assuming 6.60 barrels equals one metric ton of IFO 180.



**TOTE's MV North Star (left) and MV Midnight Sun (right)**  
 Photos by Neil Rabinowitz - [www.neilrabinowitz.com](http://www.neilrabinowitz.com)

Horizon Line LLC operates four container vessels between Alaska and Tacoma, Washington that service not only Port of Anchorage but Kodiak and Dutch Harbor. See Figure 6. The transit time from Tacoma to Anchorage takes about 80 hours. The vessels are moored at Port of Anchorage for about 22 hours off-loading and loading freight. Three spills in Cook Inlet from Horizon Line vessels have been reported to the Coast Guard since 1992. Two groundings, one allision, and one loss of maneuverability casualty have been reported during the same period. The spills and casualties were classified as 'not serious'<sup>8</sup>.

<sup>8</sup> The Coast Guard groups casualty and vessel spill reports into three categories: : Major marine casualty (loss of six or more lives, loss of vessel larger than 100 gross tons, or serious threat to the environment), significant marine casualty (multiple loss of life, loss of Coast Guard inspected vessel, accident of high media interest, or creating a hazard to life, property or marine environment), serious marine casualty (an International Maritime Organization definition where there is a loss or a large vessel or loss of life on a large vessel).

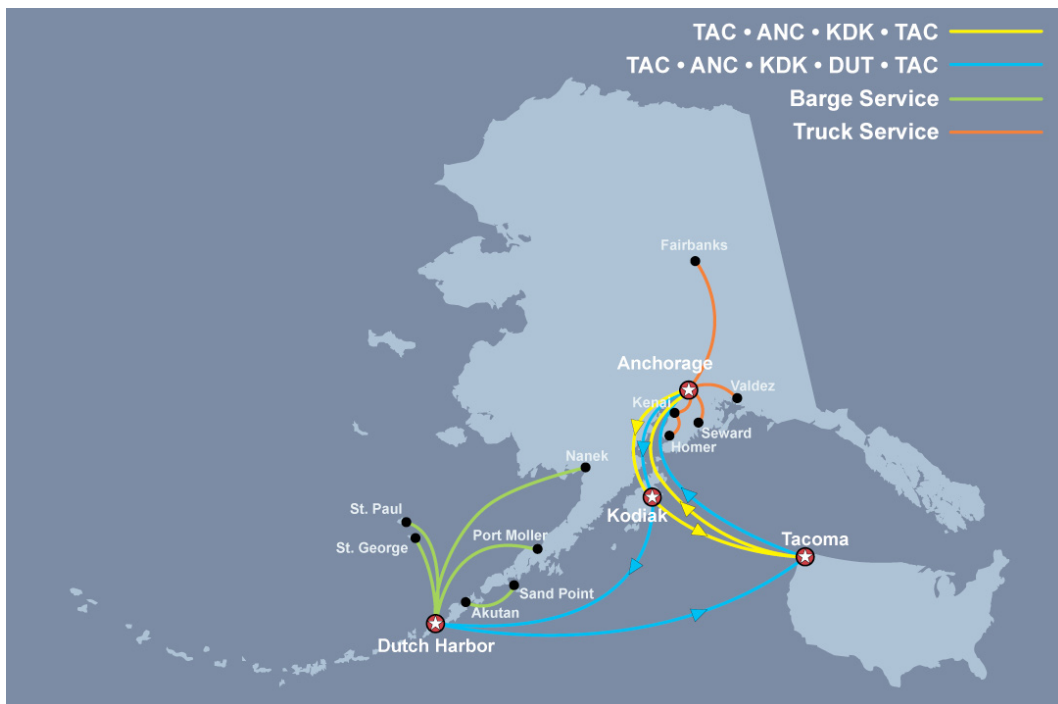
Principal Characteristics	Horizon Line M/V's Horizon Tacoma, Horizon Kodiak, Horizon Anchorage
Built	1987
Overall Length	709.79 feet
Beam	70.06 feet
Gross Tons	20,965
Service Speed	20 knots
Trailer Capacity	1 668 TEU (Twenty-foot equivalent unit container)
Propulsion Plant	diesel-electric
Bunker Capacity	21,870 bbls, 918,540 gallons, 3315 tonnes* IFO 180 (persistent fuel oil)

\* Assuming 6.60 barrels equals one metric ton of IFO 180.

Principal Characteristics	Horizon Line M/V Fairbanks
Built	1973
Overall Length	669.12 feet
Beam	89.87 feet
Gross Tons	22,033
Service Speed	22 knots
Trailer Capacity	1412 TEU (Twenty-foot equivalent unit container)
Propulsion Plant	diesel-electric
Bunker Capacity	26,690 bbls, 1,121,000 gallons, 4044 tonnes,* IFO 180 (persistent fuel oil)

\* Assuming 6.60 barrels equals one metric ton of IFO 180.

**Figure 3: Horizon Line service. Source: <http://www.horizon-lines.com/>**





## Alaska Marine Highway System

Alaska Marine Highway System (AMHS) operates the ro-ro ferry Tustumena year round between Homer, Seldovia and Kodiak. The M/V Kennicott makes a few 'fill-in' runs for the Tustumena throughout the year. Published schedules for 2007 show that the Tustumena or Kennicott will make on average of 14 to 19 calls per month at Seldovia and Homer from March through December and 5 to 7 calls each month in January and February.



Since 1992, the Coast Guard has recorded two casualties on the Tustumena; an allision with damage estimated at \$20,000 and a loss of maneuverability without damage or accident. There have been no reports of pollution from the Tustumena. The Kennicott has not reported either a casualty or oil spill while operating in Cook Inlet.

Principal Characteristics	AMHS M/V Tustumena	AMHS M/V Kennicott
Built	1973	1998
Overall Length	268.30 feet	347.02 feet
Beam	59.70 feet	85.61 feet
Gross Tons	2174	9978
Average Load	60-220 passengers, 37 crew members, 20-46 vehicles	60-499 passengers, 56 crew members, 20-200 vehicles
Propulsion Plant	diesel-electric	diesel-electric
Bunker Capacity	1,598 bbls, 67,116 gallons diesel	5,030 bbls, 211,260 gallons diesel

## Overview of Cook Inlet Facilities and Terminals

Cook Inlet has a few marine facilities and terminals. Vessel calls at those facilities are summarized in Table 2. This table provides the most succinct portrait of all vessel activity other than fishing in Cook Inlet. Each port facility or terminal will be described in subsequent sections of this report.

### Deep Draft Traffic at Homer

All vessels calling at Nikiski industrial facilities dock during a flood tide.<sup>9</sup> Therefore, often vessels will anchor in Kachemak Bay in a position roughly 1 nautical mile north-northeast of Coal Point on Homer Spit and Coal Point (59° 36.6' N, 151° 24.0' W) to await necessary mooring conditions at Nikiski which is 80 nautical miles to the north. During the ice season and on the occasion of a vessel's first transit, the vessel will anchor for US Coast Guard inspection before continuing north.

<sup>9</sup> As agreed between the ship operators and the Alaska marine pilots.

## Nikiski Industrial Terminals

The industrial terminals at Nikiski (60° 40.5' N, 151° 23.7' W) are located roughly midway between Homer and Anchorage, on the east side of Cook Inlet, and 2.3 nautical miles south of the geographically prominent East Forelands. Three moorages side-by-side extend for one nautical mile north-northwest with the Agrium wharf to the south, the Kenai Pipeline pier at the north and the Conoco Phillips pier between them.

### **Agrium, Nikiski**

Gas ships call at Agrium Agricultural Products Plant to load anhydrous ammonia. Bulk carriers call to load urea. These vessels are spot chartered. Because of difficulties in obtaining a competitive cost source of natural gas, the Agrium facility output has been uneven in past years. In 2005, the facility loaded ammonia to 14 gas ships and urea to 34 bulk carrier ships. In 2006 through November, only 28 vessels called at the facility (8 ammonia gas ships and 20 urea bulk carrier ships). The facility intends to shutdown between mid-November 2006 and March 2007. Vessel traffic for 2007 is expected to be at about the 2006 levels.

### **Conoco Phillips Gas Plant, Nikiski**

Two Liberian flagged LNG carriers, MV's Polar Eagle and Arctic Sun, currently make regular runs between Nikiski and Japan; 9 days transit one-way, eighteen (18) annual round trips each. Voyage schedules are consistent and the ships seldom need to wait in Kachemak Bay for favorable tides at Nikiski.

Principal Characteristics	M/V's Polar Eagle and Arctic Sun
Type	Gas carrier tank ships
Overall Length	783.92 feet
Gross Tons	66174
Tank Capacity	88200 cubic meters liquefied gas
Bunker Capacity	22380 bbls, 940,000 gallons, 3390 tonnes*

\* Assuming 6.60 barrels equals one metric ton of IFO 180.

### **Kenai Pipeline, Nikiski**

Three US flag tank ships, MV's Seabulk Pride, Seabulk Arctic, and Captain H. Downing, service Tesoro's Kenai Pipeline terminal in Nikiski and transfer crude oil from the Drift River terminal to Nikiski.<sup>10</sup> Typically, a vessel from this group calling at Nikiski will anchor in Kachemak Bay if necessary for favorable tides at Nikiski, then travel to Kenai Pipeline terminal to discharge light oil stock. After discharge, the

<sup>10</sup> Recently, since the data was collected for this study, the M/V Seabulk Mariner has been added to the Seabulk fleet calling at the Kenai Pipeline and Drift River terminals. However, the average number of overall port calls has remained the same.

vessels may make one or more round trips between the facility and the Drift River terminal<sup>11</sup> 23 nautical miles west-southwest of Nikiski on the west shore of Cook Inlet. In the winter, the cross-inlet route will take the tankships south of Kalgin Island. In the summer months, transit between Drift River and Nikiski is north of Kalgin Island. See Figure 5. Occasionally, these vessels will make runs to Valdez and back. The Drift River terminal supplies crude oil collected from the various Cook Inlet oil production platforms. See Figure 5 and Table 3 for the location of the various production platforms. The tank ships will moor at Drift River terminal for 12-18 hours while loading crude oil, then transport the oil back to the Kenai Pipeline terminal where the oil is offloaded and refined. These vessels will moor at Kenai Pipeline terminal for 12 hours to several days, depending on whether tanks need cleaning. Other foreign flag tank ships load refined product and occasionally crude oil at the Nikiski Tesoro terminal (Kenai Pipeline) on spot charter. Based on trends seen in the study period (January 1, 2005 through July 15, 2006), 18 to 20 foreign tank ships per year call at KPL Nikiski on spot charter.

### Port of Anchorage

The Port of Anchorage (POA) maintains five docks that accommodate barges and ships of all types. According to the POA master plan<sup>12</sup>, the port managed in 2004 the loading or off-loading of:

- 8,779,913 barrels of refined petroleum,
- 148,284 vehicles,
- 217,532 containers, and
- 122,855 tons of dry cement.

As seen in Table 1 and in the section on common carriers, TOTE and Horizon Lines are the primary users of POA. Fuel barges loaded for domestic supply to lower Cook Inlet and western Alaska are common in the non-ice months (about 60 barge loadings, annually). The port receives on average 4 tank ship calls to off-load refined product for local consumption, including military facilities. Dry cement is loaded on to a bulk carrier (usually the M/V Captain Correlli, Figure 4) four times a year, on average. Passenger vessels are infrequent. There are no current plans for cruise ships to call at Anchorage.



**Figure 4: Dry cement loaded on the Hong Kong registered bulk carrier M/V Captain Correlli in 2006. (US Coast Guard photo)**

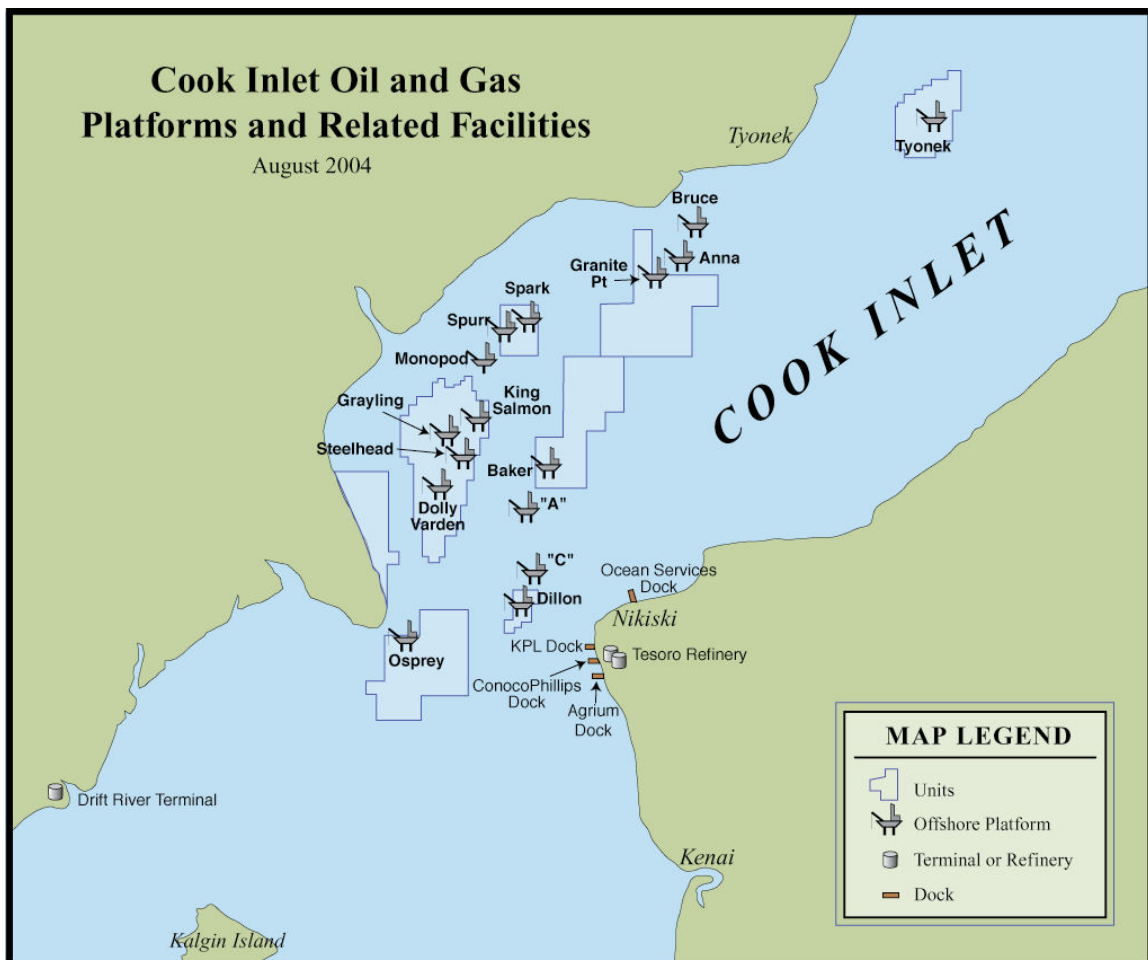
11 The Drift River terminal is sometimes referred to as the Christy Lee platform.

12 Port of Anchorage Master Plan (rev 2005) <http://www.muni.org/port/expansion.cfm>

## Domestic Fuel Barge Traffic

Compared to other water bodies of similar size and area, fuel barge traffic throughout Cook Inlet is light to moderate. The Tesoro refinery at Nikiski provides much of the fuel for Anchorage, including the international airport, by pipeline. About 6 million barrels of non-persistent fuel oil is moved into and through the Cook Inlet for domestic consumption each year on approximately 200 tug/barge voyages. Nearly half of the fuel transported and 40 or more of the tug/barge voyages originate from the KPL Tesoro refinery in Nikiski. A summary of activity can be seen in Table 2. Typically, the type barge employed is double hulled with a capacity ranging from 30,000 to 148,000 barrels. A barge will be moved by a single tug of 1500-2500 horsepower operated by Seacoast Towing or Crowley Marine to supply Port Graham, Seldovia, Homer, and western Alaska.

**Figure 5. Cook Inlet Oil and Gas Platforms and Related Facilities.**



**Table 3. Platform installation date, location, owners.**

PLATFORM	DATE INSTALLED	LEASE NUMBER	UNIT LOCATION	ORIGINAL OPERATOR	CURRENT OWNER(S)	CURRENT OPERATOR
XTO A	1964	18754	Outside Unit Boundary	Shell	XTO Energy	XTO Energy
Baker (Operations suspended*)	1965	17595	North Middle Ground Shoal	Amoco	Unocal Forest Oil	Unocal
Granite Point	1966	18761	South Granite Point	Mobil	Exxon Mobil Unocal	Unocal
Monopod	1966	18731	Outside Unit Boundary	Unocal	Marathon Unocal	Unocal
Anna	1966	18742	Outside Unit Boundary	Amoco	Unocal	Unocal
Bruce	1966	18742	Outside Unit Boundary	Amoco	Unocal	Unocal
Dillon (Operations suspended)	1966	18746	South Middle Ground Shoal	Amoco	Unocal	Unocal
XTO C	1967	18756	Outside Unit Boundary	Shell	XTO Energy	XTO Energy
King Salmon	1967	18772	Trading Bay	Arco	Marathon Unocal	Unocal
Grayling	1967	17594	Trading Bay	Unocal	Marathon Unocal	Unocal
Dolly Varden	1967	18729	Trading Bay	Unocal	Marathon Unocal	Unocal
Tyonek	1968	17589	North Cook Inlet	Phillips Petroleum	Conoco Phillips	Conoco Phillips
Spurr (Operations suspended)	1968	17597	North Trading Bay	Texaco	Marathon Unocal	Marathon
Spark (Operations suspended)	1968	17597	North Trading Bay	Texaco	Marathon Unocal	Marathon
Steelhead	1986	18730	Trading Bay	Arco	Marathon Unocal	Unocal
Osprey	2000	381203	Redoubt	Forest Oil	Forest Oil	Forest Oil

\* All wells on Spurr and Spark have been plugged except for a gas well and a disposal well. The wells on Dillon and Baker are inactive—save for gas and disposal wells—but have not been plugged.

### Cook Inlet Commercial Fishery Vessel Traffic

Alaska Department of Fish and Game (ADFG) fishery salmon/groundfish data was cross-referenced with the Commercial Fisheries Entry Commission (CFEC) vessel database to develop Table 5. The data set includes state-water groundfish registrations, Lower Cook Inlet salmon seine fleet and Upper Cook Inlet salmon drift gill net fleet. There are some limitations in using this data to determine the number of commercial fishing vessels operating in Cook Inlet. The state-waters registration list does not indicate



whether a vessel was actively fishing in Cook Inlet. Not all CFEC database information was complete. Therefore, median/average calculations use the number of vessels reporting this information and are not necessarily a reflection of the total number of vessels in each size class. However, we can draw some general conclusions from this data. As indicated by Table 5, 86% of 570 vessels included in the ADFG records are between 31 feet and 50 feet and predominantly carry diesel as a fuel source. The leading vessel size class (31'-40') has a median fuel capacity of 355 gallons.

**Table 5: Commercial vessels registered for Cook Inlet ADFG salmon/groundfish fishery.**

Vessel Length	Number of Vessels	Number of Diesel	Number of Gas	Median Fuel Capacity (gallons)	Average Gross Tonnage
> 20	1	0	1	30	0
21 - 30	66	32	34	250	10
31 - 40	401	304	94	355	15
41 - 50	82	82	0	1,000	28
51 - 60	7	7	0	1,200	51
61 - 70	0	0	0	0	0
71 - 80	1	1	0	1,000	131
81 - 90	0	0	0	0	0
91 - 100	1	1	0	18,000	210
100 <	0	0	0	0	0

Appendices B1 and B2 are the results of a CFEC vessel database query for 2005 Kenai Peninsula vessel license applications, categorized by vessel owner home address. Vessels participating in any portion of commercial fishing operations, with the exception of set net skiffs and vessels used in certain areas outside of the Cook Inlet, are required to register for a vessel license. However, these vessels may not necessarily participate in Kenai Peninsula or Cook Inlet fisheries. Nor do the tables reflect specific vessel traffic for the Cook Inlet, but rather give an overview of vessel owners registered on the Kenai Peninsula and what percentage of the 990 registered vessels are diesel or gasoline powered commercial fishing vessels. As can be seen in Appendices B1 and B2, the average fuel capacity for all commercial fishing vessels is 692 gallons with roughly 60% of the vessels burning diesel fuel and 40% powered by gasoline. In Appendix B2 the median length of the registered vessel is 32.0 feet with a positive skew of 1.7, meaning most vessels registered are greater than 32.0 feet in length. The average fuel tank capacity is 692.1 gallons.

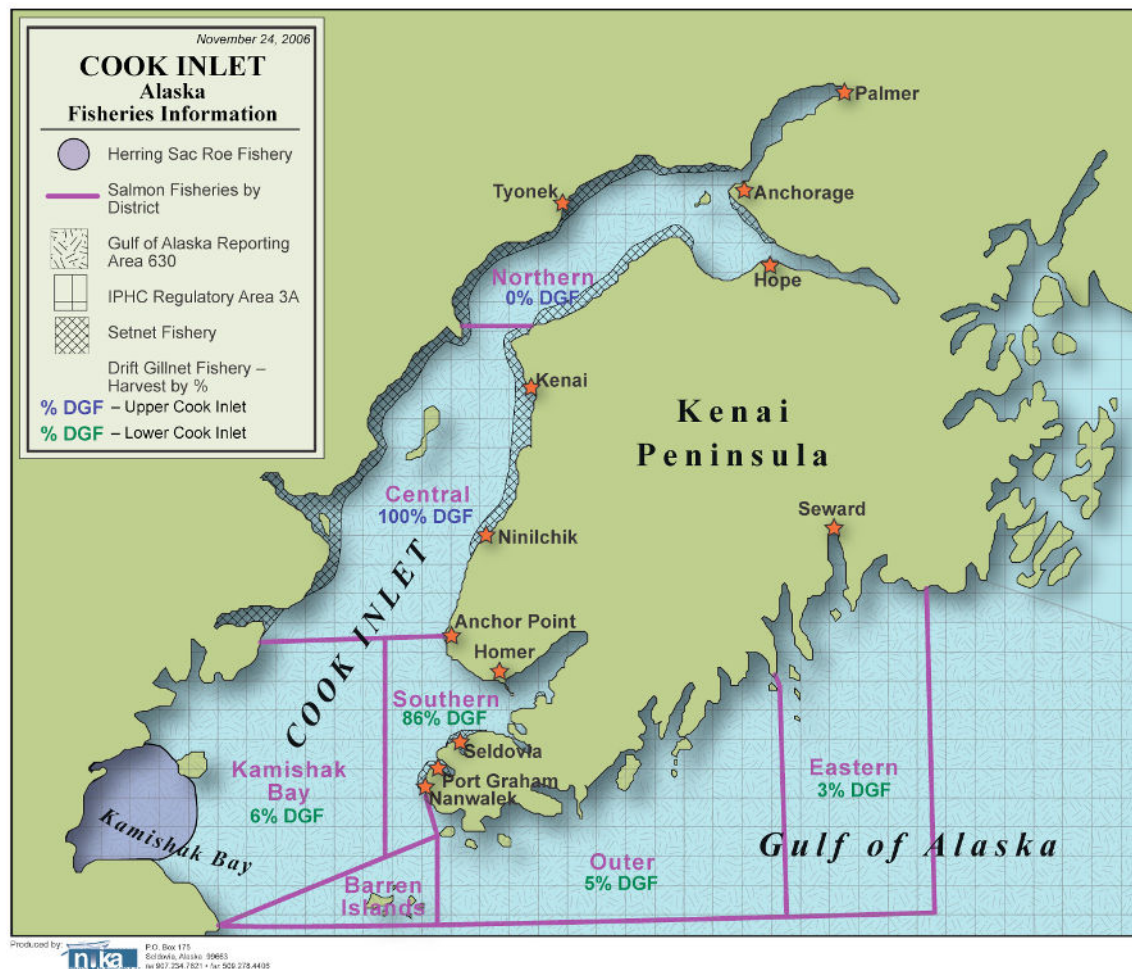


Upper Cook Inlet has two management districts, Northern and Central. Drift gill net fishing occurs only in the Central district. The Lower Cook Inlet management area has four management districts with the Southern district accounting for 85% of drift gill salmon harvest (see Figure 6). ADFG 2005 landing data shows 479 vessels landed salmon in Upper Cook Inlet. For the Lower Cook Inlet, 187 vessels landed groundfish and 37 vessels landed salmon in the seine fishery.

In Appendix C, 2005 fishery dates collected from managing agency publications show a monthly overview of fishing activity by openings/closures for the Cook Inlet. Based on the Appendix C, the most commercial fishing vessel traffic for Cook Inlet occurs mid-May through mid-September, with year-round Pacific cod effort.

Safe navigation can be compromised when fishing vessels set their nets in areas where deep draft vessels are restricted in their ability to maneuver. However, marine pilots report that this is rarely a problem. When it is the most likely location is the approach to Nikiski during drift gill net fishery openings. See Figure 6. We are not aware of any casualties involving a commercial fishing vessel and a large tank ship or freight carrier.

**Figure 6. Cook Inlet, Alaska Fisheries Information.**



### General Conclusions Regarding Commercial Fishing Vessel Traffic

Given the limitations in the data, it is difficult to make precise statements regarding commercial fishing vessel activity. However, if a commercial fishing vessel were to be involved in a casualty (collision, sinking, or grounding) it would likely:

- Have on board 300-1000 gallons of diesel fuel,
- Occur in mid Cook Inlet during late spring or summer,
- Be between 30 and 40 feet in length, and
- Be constructed of fiberglass or aluminum.

### Tugs

As mentioned earlier, tug traffic is relatively light. Tugs made approximately 150 fuel barge transits a year, assist in docking and undocking ships in Nikiski and Anchorage, and move miscellaneous deck and gravel barges in and out of the Port of Anchorage. The most capable vessel is the tractor tug *Stellar Wind*, operated by Cook Inlet Tug and Barge and moored in Anchorage. This vessel is employed whenever a tankship of 90,000 deadweight tons (DWT) or more calls at Nikiski or Anchorage. Coast Guard records indicate that fourteen (14) tankers of this size moored at Cook Inlet facilities over a 18 month period. See Table 6. Marine pilots report that they use docking tugs only about 5% of the time at the Nikiski terminals.



Photo used with permission of Jay Potts [www.americanfocus.com](http://www.americanfocus.com).

**Table 6. Ships in Excess of 90,000 Deadweight Tons Calling at Cook Inlet from January 1, 2005 to 15 July 2006.**

Ship Name	Ship Number	Cook Inlet Port Calls	Ship Registry	Type	Gross Tons	Deadweight Tons	Cargo	Cargo Capacity	Length (Feet)
SANKO QUALITY	9066174	2	LIBERIA	Tanker	52498	95628	Oil	110323	810
RATNA URVI	8813568	3	INDIA	Tanker	54980	96088	Oil	108358	795
PALMSTAR LOTUS	9002506	1	BAHAMAS	Tanker	57450	100314	Oil	118528	803
CAPE AVILA	9167033	3	CYPRUS	Tanker	57148	105337	Oil	117834	800
ANGELICA SCHULTE	9296822	3	LIBERIA	Tanker	56153	106433	Oil	499000	797
BUNGA KELANA DUA	9131125	1	MALAYSIA	Tanker	57017	106976	Oil	117972	800
ALASKAN FRONTIER	9244659	1	UNITED STATES	Tanker	110693	193049	Oil	Not reported	905

Source: US Coast Guard Advance Notice of Arrival records, US Coast Guard Port State Information Exchange, and Lloyd's Registry.

The USCG at Sector Anchorage maintains a list of companies capable of providing marine towing resources. See pages B-119 and B-155, Part Two, of the Cook Inlet Sub-area Contingency Plan.

The following area companies provide tugs and towing services. Tugs listed here may not be available or out of the area on any given date.

Company	Location	Tug Name and Horsepower
Cook Inlet Marine	Homer	Various
Cook Inlet Tug & Barge	Anchorage	Tractor Tug Stellar Wind (3000 hp) Tug Pacific Bay (1800 hp)
SeaCoast Towing Marine Services	Anchorage	Various tugs for towing fuel barges
Hooper Bay	Anchorage	Tug Hooper Bay (1800 hp)

## Casualties in Cook Inlet

We examined Coast Guard incident investigations from May 1, 1990 through August 1, 2006. These records included vessel casualties and reports of pollution from vessels, facilities and offshore platforms in Cook Inlet. See Figure 5 and Table 4 for a list and locations of the platforms.

A vessel casualty must be reported to the US Coast Guard if it occurs upon the navigable waters of the U.S., its territories or possessions; or whenever and wherever a casualty involves a U.S. vessel. Public vessels and recreational vessels are exempt from these reporting requirements.<sup>13</sup> Casualties include: groundings; loss of main propulsion; primary steering or reduction in maneuverability; occurrences that reduce seaworthiness (fire, flooding, damage to or loss of fire extinguishing, lifesaving or bilge pumping systems); loss of life; injuries requiring professional medical treatment; vessel damage exceeding \$25,000; and spills of oil and hazardous material.

Typically, accidents, fatalities, injuries and other casualties are reported on Coast Guard standard form CG-2692 and entered into the Marine Information for Safety and Law Enforcement (MISLE). Approximately 13,300 accident and spill reports from U.S. vessels operating in or near Alaska territorial waters were entered into the Coast Guard MISLE database, between June 22, 1990 and August 1, 2006. The majority of these reports were for pollution or personnel injury. For this study, we focused only on casualties affecting the seaworthiness of the vessel. Casualties were grouped by first event. For example, if a vessel lost steering, resulting in grounding, flooding, and damage to the environment by oil spill, the

<sup>13</sup> 46 CFR 4.01-3.

casualty was classed as a loss of maneuverability. We excluded first-event spills and personnel casualties that did not effect the overall safe navigation of the vessel. Table 7 summarizes 225 of those casualties (3.7% of total Alaska reports), reported to have occurred in Cook Inlet.<sup>14</sup> Appendix E lists each casualty by date, vessel name, vessel type (when reported), degree of monetary damage, and latitude/longitude.

Close-quarters or near-miss incidents are not required to be reported. Near-miss reports are helpful in determining areas of risk.<sup>15</sup> We have included an informal Coast Guard report of a near-miss incident in the ‘Casualties of Interest’ section of this report, although this event was not entered in the Coast Guard MISLE system.

Of the 225 casualties, nine (9) were reported to have caused subsequent damage to the environment by oil pollution. We suspect that there were more incidents of secondary pollution than reported. For example, there were several reports of sinking or total loss due to fire. Invariably, small amounts of oil leak from vessels subject to these types of casualties. We assume, however, that if the spills were significant the Coast Guard investigators would have reported them.

For this study we separated, or in two cases combined, the accident reports into ten casualty groups:

- Allision (Collision with a fixed object: dock, pier, dolphin, etc)
- Capsize
- Collision
- Explosion
- Fire
- Flooding, sinking, or abandonment
- Grounding
- Loss of Maneuverability
- Material Failure (subsequent structural damage to hull or through-hull fittings)
- Set Adrift/Breakaway

Please note that these groupings do not necessarily depict root cause of the event. For exemplifying the 26 groundings reported were caused by bad navigation or seamanship, uncharted rocks (maybe), and equipment failure. In addition, loss of maneuverability is reported for incidents where the risk is small. For example, a vessel will report a radar off-line even though

<sup>14</sup> To place this in perspective, about 47% of the casualty reports originated in Southeast Alaska, 8.0% in Dutch Harbor, 5.0% in Kodiak, and 10% in Prince William Sound. Nearly 25% of the casualty reports occurred on mainly fishing vessels operating in the Bering Sea, western Alaska or Gulf of Alaska.

<sup>15</sup> The New Zealand Maritime Safety Agency recently released a report of ferry safety in Cook Strait where much use was made of near miss reports. See: <http://www.msa.govt.nz/publications/general/CookStraitReview.pdf>



two other radars are still functional. In other words, there are degrees of 'loss of maneuverability' that are not obvious within the summary of Coast Guard records displayed in Table 7. These notes also apply to the full list of casualties in Appendix E.

**Table 7: Cook Inlet Summary of Vessel Casualties Reported to US Coast Guard June 22, 1990 through August 1, 2006.**

Accident or Event	Total	Comments
Allision	27	Includes one allision with oil production platform and one barge damaged by ice.
Capsize	2	
Collision	20	Includes two barge/tug collisions.
Explosion	2	One explosion resulted in subsequent fire, sinking and pollution.
Fire	18	Included cargo hold fire on container ship moored at Port of Anchorage.
Flooding, sinking	40	Includes four abandonments
Grounding	26	
Material Failure	17	
Set Adrift/Breakaway	4	Includes breakaway of Seabulk Pride in February 2006.
Loss of Vessel Maneuverability	69	Includes loss of electric power.
Total	225	
Total, Alaska waters	5,922	

During the period of study, there were 59 casualties resulting in damage to a vessel in excess of \$20,000. In eleven of the incidences, vessel damage exceeded \$250,000. The most significant casualties were M/V Glacier Bay spill in 1987 (which is earlier than the records studied in this report), the capsizing of the barge Oregon in 1997, the Container Ship Greatland cargo hold fire in 2003, and the breakaway of the tankship Seabulk Pride in 2006.

### Casualties of Interest<sup>16</sup>

1. Explosion and subsequent fire (on board the 113-ft supply vessel Alaska Constructor on November 2, 1988). The explosion ignited a tank truck containing 3,000 gallons of gasoline, thus multiplying the consequences of the casualty. Three lives were lost and the vessel was destroyed. Water pollution was minor.
2. Potential for ammonia release (M/V EEKLO at Agrium Wharf on February 11, 2005): During loading ammonia, an able bodied seaman (AB) inadvertently slacked instead of tightened one of the bow mooring

<sup>16</sup> Sources: (1) Conversation and follow-up e-mail with Lt Ken Phillips, Marine Safety Detachment supervisor Kenai. 1 Nov 2006, (2) Whitney, John. 2002. Cook Inlet, Alaska Oceanographic and Ice Conditions and NOAA's 18-Year Oil Spill Response History 1984-2001, and (3) ADEC records.

wires in heavy (5.7 kt) current and ice coverage. This caused the gas ship M/V EEKLO to move 3-12 feet aft, shifting the loading arm, and subsequently shutting down the loading process. The Coast Guard issued a requirement to secure loading when currents exceed 4kt on the flood.

3. Tow-Tug collision (SCT Barge 282 and tugboat Pacific Challenger near Homer March 22, 2006): The SCT Barge 282 was departing from Pioneer Dock in Homer under the Tugboat PACIFIC CHALLENGER. The tug and barge were about to round the spit in Kachemak Bay when the PACIFIC CHALLENGER rolled in a swell pushing the PACIFIC CHALLENGER into the starboard bow of the SCT Barge 282. At that time no damages were identified. The barge continued onto Port Graham where they discovered damage to the bow. This collision resulted in a fracture in the #1 starboard cargo tank in way of the deck edge. No spill observed. The product in tank #1 was offloaded at Port Graham.
4. Tow-Tug collision (towing vessel Paragon and Barge 344, underway in Cook Inlet, January 21, 2006): The Paragon was struck by the barge it was towing when an ice pan slowed the progress of the Paragon and allowed the barge to overtake it. Barge 344 struck the Paragon's stern causing a 4" wide by 18" long hole in the port forward void space of Barge 344.
5. Ship allision with dock (M/V PEONY at Agrium dock, October 18, 2005): Unexpected heavy weather set the ship into the pier causing structural damage to the pier initially estimated at less than \$100,000. A pilot was requested and arrived on board but was unable to move the ship due to low tide levels. Damage to the vessel is minimal on the port bow and does not affect seaworthiness. Allision was caused by unexpected extreme weather conditions and was ruled unavoidable by Coast Guard investigators.
6. Dragging anchor and near miss in Kachemak Bay (Informal report by the Coast Guard). Two Coast Guard marine safety personnel were on board the M/V STEWART ISLAND conducting an ice rules boarding when it began to drag anchor. The wind was 'blowing pretty hard'. The STEWART ISLAND came within 30-40 yards of colliding with the SEABULK PRIDE, which was anchored as well. Anchoring guidelines for Kachemak Bay were written as a result. See Appendix D.
7. Container ship fire (M/V Greatland at the Port of Anchorage, May 19, 2002): Shortly after mooring at the Port of Anchorage, personnel on the container ship M/V Greatland discovered a fire in one of the cargo holds. Trained marine firefighters from the Anchorage Fire Department entered the compartment and found several school buses smoldering.



They extinguished the fire and there was no serious damage to the vessel. The fire was believed to have originated from a small fuel oil leak on one of the buses. This was the first serious marine fire at Port of Anchorage since the 1960's.

8. Freight Barge capsized (Crowley Barge OREGON, south Cook Inlet, January 25, 1997) . This barge suffered a breach (hole) amidships, took on water, and overturned. The entire load of 12,500 tons solid urea was lost.
9. Vessel collision with a moorage (M/V Chesapeake Trader and Christy Lee Dock, January 1, 1998). While coming along side, the Chesapeake Trader hit and damaged the catwalk of the moorage. Damage to the vessel was superficial, but the moorage catwalk needed to be replaced, costing \$425,000.
10. Freight ship breakaway (M/V OCEAN LAUREL, Nikiski, January 31, 1999). While moored at the pier during periods of heavy icing the vessel was struck by a large pan of ice, estimated to be  $\frac{3}{4}$  mile in length. The vessel was sheared off the pier, parting 19 mooring lines, and struck the pier face, resulting in approximately \$40,000 in damage to the mooring structure and \$20,000 in damage to the vessel. The hull was indented in two locations above the waterline along the portside.
11. Tank barge breakaway (T/B ENERGIZER, Nikiski, January 19, 2000). The barge was moored to the Kenai Pipeline (KPL) dock when it was struck by a large pan of ice, parting mooring lines and the cargo transfer hose. Approximately 60 gallons of isomerate (an oil distillate used in blending gasoline) spilled into the water. The barge cargo pipe header and deck crane were damaged.
12. Freight ship breakaway (M/V TORM PACIFIC, Nikiski, January 20, 2000). The ship was moored portside to the Alaska Nitrogen Products Terminal (Agrium) when it was struck by a large pan of ice moving at approximately 5.3 knots. The vessel was sheared from the pier, parting 24 mooring lines, and struck the terminal's northern catwalk. The catwalk was destroyed and the ship sustained some damage above the waterline.
13. Tank ship breakaway (Seabulk Pride, Nikiski, February 2, 2006). This 601-foot double-hull oil cargo tanker, broke free of its moorings at Kenai Pipeline Dock, Nikiski. It drifted north until grounding about a half mile away along the bluff at the East Forelands. Initial investigations indicate that heavy ice and strong tidal currents were main factors in causing the breakaway. The vessel was re-floated without significant oil spillage. However, catastrophe was narrowly averted, given the numerous rocks and reefs in the vicinity.

## Pollution from Vessels

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Between January 1, 1992 and August 30, 2006 there were 295 oil spills reported to the Coast Guard from vessels operating in Cook Inlet. Of that total, 286 were spills not connected to a vessel casualty (grounding, collision, fire, or sinking). One hundred and twenty eight (128) spills (43% of the total) were small diesel or gasoline spills from fishing vessels and pleasure craft. All the spills were reported as “not serious”. This means that the Coast Guard classified the spills as minor.<sup>17</sup>

During the same period there were 333 spills reported from the 15 Cook Inlet oil production platforms.

Between 1996 and 2002 ADEC reported 126 spills in Cook Inlet from vessels.<sup>18</sup> All were minor. All spills combined only contributed 7415 gallons of the 500,359 gallons of oil spilled in the Cook Inlet sub-area during that period.

Most significant spills of the past 20 years have come from oil platforms or on-shore facilities. Vessel spills<sup>19</sup> of interest include:

- On July 2, 1987 at 0334, the tank ship Glacier Bay grounded south of the mouth of the Kenai River while enroute Nikiski to offload North Slope crude oil. Hull damage resulted in a 130,000 gallon spill. The vessel reportedly ran aground on an uncharted rock. (Note: This incident is a pre-spills database era report.)
- Spill response vessel M/V Sun Tide collision with the jack-up drilling rig, Gilbert Rowe, on August 23, 1993. The collision ruptured a fuel oil tank on the Sun Tide, releasing 6000 gallons of diesel fuel.
- Five hundred gallon light oil spill during loading operations on the tank barge Annahootz at the Port of Anchorage on September 1, 1994.

As can be seen, significant oil spills from vessels are rare. Furthermore, ADEC and Coast Guard records of the minor spills over the last 14 years do not provide any particular insights that would assist prevention and response planning for major or high consequence vessel spills.

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17 The US Coast Guard categorizes oil spills into these sizes: minor - less than 10,000 gallons; medium - 10,000 to 99,999 gallons; and major - 100,000 gallons or more.

18 ADEC. Statewide Summary of Oil and Hazardous Material Spill Data July 1, 1995 - June 30, 2002 (provisional report) See <http://www.dec.state.ak.us/spar/perp/data.htm>

19 Sources: (1) Whitney, John. 2002. Cook Inlet, Alaska Oceanographic and Ice Conditions and NOAA's 18-year Oil Spill Response History 1984-2001, and (2) ADEC spills database. See <http://www.dec.state.ak.us/spar/perp/data.htm>.

## Summary and Recommendations

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1. Risk is traditionally defined as:

$$\text{Risk} = \text{Probability} \times \text{Consequence}$$

Twelve vessels make 80% of the large vessel port calls in Cook Inlet. These vessels have the greatest potential (probability) for a Cook Inlet marine casualty due simply to their time in the inlet. Of the twelve, five are gas or oil carriers where the consequence of environmental damage from a casualty is high. On the non-tank vessels, six vessels carry a 0.5 to 1.2 million gallons of persistent fuel oil. The remaining common carrier – AMHS ferry Tustumena – carries a much smaller quantity of diesel fuel oil but its cargo (passengers) is of the highest value. Thus, continued or enhanced partnerships with and monitoring of the operators of these vessels will address the majority of the risk of significant or major vessel casualties and oil spills in Cook Inlet.

2. Risk analysis could be improved by requiring that near-miss incidents be reported.
3. Severe environmental conditions (high winds, ice, strong tide currents) coupled with human error in negotiating these conditions during vessel operations pose the most likely root cause of the next major vessel casualty and oil spill.
4. Cook Inlet is unique in that potentially the most serious casualties can occur while a vessel is moored. Ice and strong tides broke the tankship Seabulk Pride from its moorings in 2006. A serious ammonia spill was narrowly averted when a gas ship shifted at the Agrium dock while loading in 2005. A study of best mooring practices and monitoring of their effectiveness will be an important contribution to vessel traffic risk management in Cook Inlet.

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## Appendices

### Appendix A:

**Ship Arrivals at Cook Inlet January 1, 2005 to July 15, 2006 (Compiled from US Coast Guard Advance Notice of Arrival and Lloyd's List).**

Ship Name	Ship Number	# Port Calls	Arrival Port	Ship Registry	Vessel Type	Gross Tons	Net Tons	Cargo	Cargo Capacity (Tonnes)	Bunkers (tonnes)	Length (meters)
Alaska Rose	610984	1	Anchorage	UNITED STATES	Fishing	197					
ALASKAN FRONTIER	9244659	1	Anchorage	UNITED STATES	Tanker	110693	193049	Oil			
AMMON ACE	9143049	1	Kenai	PANAMA	Gen Cargo	15354	24157	Grain		10651	158
ANDRE	9123972	2	Kenai	HONG KONG	Bulk Carrier	17671	27836	Grain	38000	7844	177
ANDROMAR	9265885	1	Homer/ Nikiski/Anch	CYPRUS	Tanker	30000	46195	Oil	53500		
Angelica Schulte	9296822	3	Nikiski	LIBERIA	Tanker	56153	106433	Oil	499000		240
ANTWERPEN	9318321	1	Kenai	HONG KONG	Liq Gas	22901	26361	Gas	34500	11322	174
ARCTIC SUN	9001784	28	Nikiski	LIBERIA	Liq Gas	66174	48857	Gas	88200	22340	239
AURORA ACE	9149732	1	Nikiski	PANAMA	Gen Cargo	15355	23923	Grain	28000	10713	158
BERGE HUGIN	9237747	7	Homer	NORWAY	Liq Gas	22902	26616	Gas	35197	13062	
BERLIAN EKUATOR	9265548	5	Kenai	PANAMA	Liq Gas	22209	26776	Gas	35878	16847	165
BRUGGE VENTURE	9132789	4	Kenai	HONG KONG	Liq Gas	22352	26777	Gas	35418	13158	169
BRUSSELS	9142150	3	Homer	BELGIUM	Liq Gas	22323	26943	Gas	34745	14412	170
BUNGA KELANA DUA	9131125	1	Nikiski	MALAYSIA	Tanker	57017	106976	Oil	117972		244
CANMAR DYNASTY	9062984	1	Anchorage	UNITED KINGDOM	Container	23540	30621	TEU	2070	23540	187
CAPE AVILA	9167033	3	Nikiski	CYPRUS	Tanker	57148	105337	Oil	117834		244
CAPE FLATTERY	1111595	1	Homer	UNITED STATES	Other	495				1635	178
CAPE NELSON	9218076	2	Kenai	HONG KONG	Bulk Carrier	17433	28456	Grain	37732	9493	170
CAPE ORLANDO	7909968	1	Anchorage	UNITED STATES	Roro Cargo	15632	20731	TEU	1050		194
CAPTAIN ADAMS	9324710	1	Kenai	BAHAMAS	Bulk Carrier	16960	28398	Grain	37523	9512	169
CAPTAIN CORELLI	9237395	6	Homer/ Anch/Kenai	HONG KONG	Bulk Carrier	16963	28378	Grain	37523	9500	169
CAPTAIN H A DOWNING	5137767	25	Nikiski	UNITED STATES	Tanker	24458	39999	Oil	275676		207
CASTLE PEAK	9180011	1	Kenai	HONG KONG	Bulk Carrier	16764	28545	Grain	37523	16764	169
CHALLENGE PROSPECT	9310692	1	Anchorage	PANAMA	Tanker	28823	48539	Oil	57298		180
CHEMBULK BARCELONA	9278662	2	Anchorage	PHILIPPINES	Tanker	20088	32345	Oil	35468		174
CLIPPER ODYSSEY	8800195	2	Homer/ Anchorage	BAHAMAS	Passenger	5218	938	Passenger		2421	103
COASTAL PILOT	7307184	1		UNITED STATES	Fishing	196					
COLUMBIA RIVER	9181508	1	Kenai	HONG KONG	Bulk Carrier	17429	28527	Grain	37695	8631	170
COURCHEVILLE	8804725	2	Kenai	BELGIUM	Liq Gas	19719	29171	Gas	28006	18079	167
DISCOVERY STAR	500072	1	Homer	UNITED STATES	Fishing	1432					
EEKLO	9102198	9	Homer/ Kenai	BELGIUM	Liq Gas	23519	29458	Gas	36770	15193	179
ETERNAL CONFIDENCE	9257199	1	Kenai	PANAMA	Bulk Carrier	17953	29905	Grain	40031	12122	171
FILIA	9127681	1	Kenai	PANAMA	Gen Cargo	18812	27908	Grain	36254	9659	169
GLADIATOR	7390911	1	Nikiski	UNITED STATES	Tug	199					
GOLDEN HARVEST	9172399	1	Kenai	PANAMA	Bulk Carrier	20947				10199	559
GREAT MORNING	9282780	1	Kenai	HONG KONG	Bulk Carrier	17679	28710	Grain	39052	9178	177
GUANG XING ZHOU	9295062	1	Nikiski	CHINA	Tanker	43062	74066	Oil	82000		229

# Cook Inlet Vessel Traffic Study

Ship Name	Ship Number	# Port Calls	Arrival Port	Ship Registry	Vessel Type	Gross Tons	Net Tons	Cargo	Cargo Capacity (Tonnes)	Bunkers (tonnes)	Length (meters)
HIGH CONSENSUS	9296585	1	Nikiski	PANAMA	Tanker	28059	45896	Oil	52499		180
HIGH PEACE	9288277	1	Nikiski	SINGAPORE	Tanker	28059	45888	Oil	53797		180
HORIZON ANCHORAGE	8419142	52	Anchorage	United States	Container	20965	7854	Containers	1668		216.4
HORIZON FAIRBANKS	7218462	20	Anchorage	United States	Container	22033	15357	Containers	1412 TEU		204
HORIZON KODIAK	8419166	47	Anchorage	United States	Container	20965	7854	Containers	1668		216.4
HORIZON TACOMA	8419154	53	Anchorage	United States	Container	20965	7854	Containers	1668		216.4
JAG VAYU	7413244	1	Kenai	INDIA	Liq Gas	21308	28400	Gas	70706	22763	191
KEOYANG MAJESTY	9131072	2	Homer	PANAMA	Gen Cargo	43181	48618	Grain	10800	23112	221
LAUREL ISLAND	9322748	1	Kenai	PANAMA	Bulk Carrier	16980	28556	Grain	37528	8688	169
MIDNIGHT SUN		80	Anchorage	UNITED STATES	Roro Cargo			Containers	600 FEU		258
MOUNT TRAVERS	9263772	1	Kenai	HONG KONG	Bulk Carrier	16978	28484	Grain	37523	8687	169
NAVIGATOR	562688	1	Nikiski	UNITED STATES	Fishing	148					
NEW DIAMOND	9117868	1	Homer	KOREA, REPUBLIC OF	Bulk Carrier	16498	27239	Grain	35387	10546	167
NIN	9211547	1	Homer/ Kenai	MALTA	Bulk Carrier	17928	28373	Grain	38473	13688	172
NORTH STAR		80	Anchorage	UNITED STATES	Roro Cargo			Containers	600 FEU		258
NORTHERN DAWN	9275995	1	Nikiski	PANAMA	Tanker	28822	47994	Oil	352815		180
Oak Harbour	9114610	3	Kenai	HONG KONG	Gen Cargo	17879	20760	Grain	38320	9996	171
OCEAN LOTUS	9312315	1	Kenai	PANAMA	Gen Cargo	16960	28432	Grain	37523	8687	169
PACIFIC HONOR	9267948	1	Nikiski	PANAMA	Tanker	28144	45800	Oil	337362		180
PACIFIC POLARIS	9270737	1	Nikiski	PANAMA	Tanker	28799	47999	Oil	360468		180
PALMSTAR LOTUS	9002506	1	Nikiski	BAHAMAS	Tanker	57450	100314	Oil	118528		245
PEONY	9250323	1	Kenai	PANAMA	Bulk Carrier	17979	29756	Grain	40031	11972	171
PITT ISLAND	9146807	2	Kenai	CHINA	Gen Cargo	66174	28611	Grain	38320	9995	172
POLAR EAGLE	9001772	27	Nikishka	LIBERIA	Liq Gas	29188	48817	Gas	88100	22379	239
PRO GIANT	9257723	1	Nikiski	PANAMA	Liq Gas	14704	46732	Gas	52599		183
RAFFLES LIGHT	9119074	1	Kenai	HONG KONG	Bulk Carrier	17979	24325	Grain	30716	15032	154
RANUNCULUS	9293868	1	Nikiski	PANAMA	Bulk Carrier	17879	29678	Grain	40031	11641	171
RATNA URVI	8813568	3	Kenai	INDIA	Tanker	54980	96088	Oil	108358		242
SANKO QUALITY	9066174	2	Homer	LIBERIA	Tanker	52498	95628	Oil	110323		247
SEA PRINCE	555271	2	Homer	UNITED STATES	Tug	198					38
SEABULK ARCTIC	9131371	35	Drift River/ Nikiski	UNITED STATES	Tanker	30415	46094	Oil	342042		183
SEABULK PRIDE	9118630	23	Drift River/ Nikiski	UNITED STATES	Tanker	30415	46094	Oil	342000		183
SH GRACE	9316957	1	Nikiski	PANAMA	Bulk Carrier	17944	29828	Grain	40031	11696	171
SHINYO CHALLENGE	9124146	1	Kenai	HONG KONG	Gen Cargo	18108	27940	Grain	36255	10291	169
SIAM OCEAN	9123934	1	Homer	PANAMA	Bulk Carrier	30153	33800	Grain	74152	9361	175
SILVER BAY	9159050	1	Kenai	HONG KONG	Bulk Carrier	15949	26516	Grain	35944	8422	170
SILVER SHADOW	9192167	1	Homer	BAHAMAS	Passenger	28258	2980	Passengers		9045	182
Spirit of Oceanus	8802868	1	Homer	BAHAMAS	Passenger	4200	645	Passengers		1284	90
TASMAN SEA	9218064	1	Kenai	HONG KONG	Bulk Carrier	17433	28456	Grain	37732	8503	170
TORM CARINA	9263708	1	Homer	DENMARK	Tanker	30024	44990	Oil	52162		183
TRISTAR DUBAI	8613281	1	Homer	BAHAMAS	Tanker	27997	50600	Oil	49941		182
TUSTUMENA	6421086	122	Homer/ Seldovia	UNITED STATES	Ferry	2174		Passengers, Vehicles	220 passengers; 46 vehicles	257	81.8
		704									



### Appendices B1 and B2:

These table are the results of a Commercial Fisheries Entry Commission (CFEC) vessel database query for 2005 Kenai Peninsula vessel license applications, categorized by vessel owner home address. Vessels participating in any portion of commercial fishing operations, with the exception of set net skiffs and vessels used in certain areas outside of the Cook Inlet, are required to register for a vessel license. However, these vessels may not necessarily participate in Kenai Peninsula or Cook Inlet fisheries. Nor do the tables reflect specific vessel traffic for the Cook Inlet, but rather give an overview of vessel owners registered on the Kenai Peninsula. Appendix B1 show what percentage of the 990 registered vessels are diesel or gasoline powered and the predominant hull construction material. In Appendix B2 the median length of the registered vessel is 32.0 feet with a positive skew of 1.7, meaning most vessels registered are greater than 32.0 feet in length. The average fuel tank capacity is 692.1 gallons.

<a href="#">Link to Different Year or Menu...</a>		<a href="#">Report Description</a>
Year: <b>2005</b>	State or Census Area: <b>KENAI PENINSULA</b>	City: <b>All Cities</b>
<b>Part 1: Number of Vessels and Percentages</b> (1) (2)		
	<b>Number of Vessels</b>	<b>Percentage of Total Vessels</b>
<b>Total Number of Vessels</b>	990	100%
<b>Engines</b>		
Diesel	612	61.8
Gas	362	36.6
<b>Refrigeration</b>	113	11.4
<b>Registered for a Salmon Net Area</b>	728	73.5
<b>Company or Partnership Owned Vessels</b>	72	7.3
<b>Hull Type</b>		
Aluminum	350	35.4
Concrete	1	0.1
Fiberglass/Plastic	542	54.7
Iron/Steel/Alloy	37	3.7
Rubber	11	0.0
Wood	46	4.6
<b>Type of Activity</b> (3)		
Freezer/Canner	2	0.2
Tender/Packer	86	8.7
Guided Sport (Charter)	0	0.0
Comercial Fishing	972	98.2
<b>Gear(s) Intended to be Used</b> (3)		
Diving Gear	5	0.5
Fish Wheel	0	0.0
Gill Net - Drift	521	52.6
Gill Net - Herring	111	11.2
Gill Net - Set	111	11.2
Longline	465	47.0
Mechanical Jig	97	9.8
Pot Gear	155	15.7
Ring Net	0	0.0
Scallop Dredge	6	0.6
Seine - Purse Seine	221	22.3
Seine - Beach Seine	17	1.7
Trawl - Beam	7	0.7
Trawl - Double Otter	1	0.1
Trawl - Otter	10	1.0
Trawl - Pair Trawl	2	0.2
Troll - Dinglebar	4	0.4
Troll - Hand	42	4.2
Troll - Power	7	0.7
Other Gear Types	58	5.9

Year: <b>2005</b>	State or Census Area: <b>KENAI PENINSULA</b>			City: <b>All Cities</b>	
<b>Part 2: Averages (1)</b>					
	<b>Average (Mean)</b>	<b>Median</b>	<b>Skewness</b>	<b>Number of Vessels Represented (Percentage of Total) (4)</b>	
Year Built	1982	1982	-1.3	983	(99.3 %)
Age (in the year 2005)	23 yrs.				
Number of Gear Types per Vessel	1.9	2.0	2.1	956	(96.6 %)
Horsepower	306.8 hp	270.0	2.4	955	(96.5 %)
Fuel Tank Capacity	692.1 gal.	300.0	7.5	882	(89.1 %)
Hold Tank Capacity	1,738.8 cu. ft.	400.0	5.4	471	(47.6 %)
Live Tank Capacity	1,424.3 cu. ft.	1,000.0	2.5	101	(10.2 %)
Length	32.9 '	32.0	1.7	990	(100.0 %)
Length by Hull Type					
Aluminum	26.0 '	24.0	1.1	350	(35.4 %)
Concrete	34.0 '	34.0	.	1	(0.1 %)
Fiberglass/Plastic	34.8 '	35.0	0.3	542	(54.7 %)
Iron/Steel/Alloy	68.3 '	62.0	0.2	37	(3.7 %)
Rubber	10.6 '	10.0	-0.5	11	(1.1 %)
Wood	39.4 '	32.0	1.0	46	(4.6 %)

## Notes:

- (1) This report is based on information provided on vessel license application forms. The information may contain omissions or errors. If information is omitted (unknown) the sum of the vessels in the category will be less than the total number of vessels. For example, the sum of the vessels by hull type will be less than the total number of vessels in the area if this information not been provided on all applications.
- (2) Vessels can be used for more than one activity and can use multiple gear types. As a result, in these categories a vessel may be counted multiple times. Some vessels may not be counted at all if the activity or gear information was not provided on the vessel license application.
- (3) The Number of Vessels Represented is the number of vessels used to calculate the average, median, and skewness. Since the vessel application may contain omissions, not all vessels can be used when developing this information. A low percentage of the total vessels indicate that the figure comes from a very small group and may not be representative of the area's fleet.

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## Appendix C:

## Fishery Timeline for Cook Inlet.

Cook Inlet												
SPECIES	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3A Halibut			Fishery Open: 02/27 - 11/15									
Salmon						Fishery Open: 05/15 - 09/15						
CGOA Cod "A"	Fishery Open: 01/01 - 09/01											
CGOA Cod "B"									Fishery Open: 09/01 - 12/31			
State Water Cod						Fishery Open: 05/01 - 09/30						
Rockfish/Lingcod							Fishery Open: 07/01 - 12/01					
Sablefish							Fishery Open: 07/15 - 08/15					

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**Appendix D:**

***Captain of the Port, Western Alaska Navigation Advisory: Special Operating Guidelines for Vessels Anchoring in Kachemak Bay, Alaska. February 6, 2006.***



U.S. Coast Guard  
Captain of the Port  
Western Alaska

510 L Street, Suite 100  
Anchorage, AK 99501-1946  
Staff Symbol: MSD Kenai  
Phone: (907) 271-6700  
Fax: (907) 271-6751

16710  
February 4, 2006

## CAPTAIN OF THE PORT, WESTERN ALASKA NAVIGATION ADVISORY

Subj: SPECIAL OPERATING GUIDELINES FOR VESSELS ANCHORING IN  
KACHEMAK BAY, ALASKA

Working in consultation with the Southwest Alaska Pilot's Association (SWAPA) and representatives of the marine industry, the Coast Guard has developed special operating guidelines for vessels anchoring in Kachemak Bay. The waters of Cook Inlet and Kachemak Bay are environmentally sensitive and a precious economic and environmental resource. These guidelines were developed in response to past instances of vessels dragging anchor in Kachemak Bay. While the majority of companies and vessels have good procedures for responding to heavy weather, it is apparent by these past incidents that there are gaps that need to be filled to ensure all are taking the appropriate precautions. These guidelines shall be followed at all times by any vessel anchoring in Kachemak Bay. Failure to follow these guidelines may result in the issuance of a Captain of the Port Order under Title 33 United States Code (USC) 1221.

### GENERAL REQUIREMENTS FOR ALL VESSELS:

1. 33 CFR Part 164.19 (a) & (b): Ensure that a proper anchor watch is maintained at all times. Utilize all means available in order to detect the dragging of the anchor.

While anchored in Kachemak Bay, a 24-hour bridge watch shall be maintained by an English-speaking deck watch officer.

2. 33 CFR Part 164.19 (c): Whenever the weather conditions are such that it is likely the anchor will drag, appropriate actions are taken in order to ensure the safety of the vessel, structures, and other vessels. Appropriate actions include: veering more chain, letting go a second anchor or getting underway using the vessel's own propulsion or tug assistance.
3. 33 CFR Part 160.215: A vessel dragging anchor in port during severe weather always constitutes a hazardous condition. As such, the requirement to give a Notice of Hazardous Condition(s) applies. The agent, master, operator, or person in charge shall ensure that the Marine Safety Office Anchorage or Marine Safety Detachment Kenai is immediately notified of a hazardous condition as soon as practicable.

<u>Coast Guard Unit</u>	<u>Office Number</u>	<u>After Hours Number</u>
Marine Safety Office Anchorage	(907) 271-6700	(907) 229-8203
Marine Safety Detachment Kenai	(907) 283-3292	(907) 398-6267

16710

February 4, 2006

**SPECIFIC ACTIONS FOR HEAVY WEATHER:**

1. **Gale Warnings** (forecasted and/or actual winds in excess of 34 knots)
  - a. The propulsion plant shall be on standby and ready to provide immediate propulsion.
  - b. The vessel's position and under-keel clearance shall be confirmed at a minimum of once every 15 minutes by the licensed deck watch officer.
  - c. Ensure second anchor is made ready for letting go.
2. **Storm Warnings** (forecasted and/or actual winds in excess of 48 knots) *All of above plus*

**The vessel master shall consult with the local Coast Guard, SWAPA and the vessel agent to discuss the following measures.**

- a. Consider increasing the scope of anchor chain as appropriate.
- b. Determine the availability and locations of potential stand by tugs (with appropriate size and horsepower), which could assist the vessel in holding position.
- c. Assess the need to get a pilot on board.
- d. If the Master and Pilot deem it necessary, put to sea for the duration of the heavy weather.

**ENFORCEMENT ACTIONS:**

1. Any vessel found not maintaining an adequate anchor watch in accordance with 33 CFR 164.19(a) & (b) may be assessed civil penalties of up to \$27,500 assessed for each violation.
2. Any vessel failing to give notice of a hazardous condition, as defined by 33 CFR 160.215, may be assessed civil penalties of up to \$27,500 assessed for each violation.
3. Any U.S. Coast Guard licensed master of a U.S. flagged vessel who fails to abide by this navigation advisory may be subject to suspension and revocation hearings of their license under 46 USC 7701.
4. The Captain of the Port reserves the authority at all times to order a vessel to operate or anchor in a manner directed when there is reasonable cause to believe the vessel is not in compliance with any regulation, law, or treaty. Further, a Captain of the Port Order is justified in the interest of safety by reason of weather, visibility, sea conditions, port congestion, temporary hazardous circumstances, or the condition of the vessel. (33 CFR 160.111)

16710  
February 4, 2006

I invite comment or proposed revision to these guidelines. As best practices evolve and lessons are learned, I anticipate and welcome changes to these guidelines.

Sincerely,

M. R. DEVRIES  
Captain, U.S. Coast Guard  
Captain of the Port  
Western Alaska

Copy: Southwest Alaska Pilot's Association  
Alaska Maritime Agencies

## Appendix E:

**Vessel Casualties in Cook Inlet Recorded by the US Coast Guard (May 1, 1990 through August 1, 2006).**

NOTE: This list is likely not exhaustive, particularly for the earlier years. When the location of the incident is not recorded, the latitude and longitude is "zero" degrees.

Activity Date	Vessel Name	Vessel Type	Initial Event Type	Vessel Property Damage	Latitude	Longitude
09/12/1991	FLAMENCO	Not Specified	Grounding	Not Reported	N 61° 13' 30.00"	W 149° 53' 18.00"
11/17/1991	MONARCH	Offshore Supply Vessel	Grounding	Not Reported	N 60° 45' 00.00"	W 151° 23' 00.00"
11/18/1991	MONARCH	Offshore Supply Vessel	Grounding	\$150,000.00	N 60° 44' 30.00"	W 151° 18' 24.00"
12/21/1991	MALOLO	Towing Vessel	Flooding	\$0.00	N 59° 22' 30.00"	W 152° 02' 30.00"
02/03/1992	SEA VENTURE I	Fishing Vessel	Sinking	\$150,000.00	N 59° 24' 12.00"	W 151° 55' 24.00"
02/16/1992	LAFAYETTE	Offshore Supply Vessel	Collision	\$55,000.00	N 60° 46' 48.00"	W 151° 31' 36.00"
02/22/1992	MORNING STAR	Fishing Vessel	Grounding	\$0.00	N 59° 29' 48.00"	W 151° 40' 00.00"
02/29/1992	LAFAYETTE	Offshore Supply Vessel	Collision	\$10,000.00	N 60° 44' 30.00"	W 151° 18' 24.00"
03/06/1992	255	Barge	Grounding	\$0.00	N 60° 41' 12.00"	W 151° 23' 42.00"
03/19/1992	CAPRICORN	Fishing Vessel	Fire	\$295,000.00	N 59° 33' 00.00"	W 151° 54' 00.00"
05/12/1992	AK4709H	Recreational Vessel	Sinking	\$0.00	N 59° 36' 06.00"	W 151° 25' 00.00"
05/16/1992	SEA VIKING/Barge 101	Fishing Vessel/Barge	Collision	\$0.00	N 60° 41' 18.00"	W 151° 23' 48.00"
05/20/1992	LAFAYETTE	Offshore Supply Vessel	Vessel Maneuverability	\$5,000.00	N 60° 44' 30.00"	W 151° 18' 24.00"
06/04/1992	NO PROBLEM	Uninspected Commerical Vessel	Allision	\$0.00	N 59° 25' 00.00"	W 151° 54' 30.00"
07/13/1992	DONNA B	Fishing Vessel	Sinking	\$89,200.00	N 60° 31' 48.00"	W 151° 22' 18.00"
07/29/1992	NOVIC	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 10' 00.00"	W 151° 55' 00.00"
07/30/1992	PEGASUS	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 20' 00.00"	W 152° 10' 00.00"
08/20/1992	LITTLE ALEX	Fishing Vessel	Sinking	\$50,000.00	N 59° 15' 00.00"	W 151° 55' 00.00"
08/30/1992	SPECULATOR	Not Specified	Sinking	Not Reported	N 61° 13' 30.00"	W 149° 54' 30.00"
09/03/1992	SONIC BOOM	Not Specified	Vessel Maneuverability	\$0.00	N 59° 32' 00.00"	W 151° 40' 00.00"
09/15/1992	SEALAND KODIAK	General Dry Cargo Ship	Allision	Not Reported	N 61° 13' 00.00"	W 149° 53' 18.00"
10/11/1992	FAMILY AFFAIR	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 39' 00.00"	W 151° 26' 30.00"
11/15/1992	DAROL TIDE	Offshore Supply Vessel	Vessel Maneuverability	\$6,000.00	N 61° 02' 36.00"	W 150° 58' 42.00"
11/19/1992	ATLANTIC SEAHORSE	Offshore Supply Vessel	Grounding	Not Reported	N 60° 42' 18.00"	W 151° 24' 12.00"
12/07/1992	TEAM HADA	Tank Ship	Vessel Maneuverability	Not Reported	N 61° 14' 54.00"	W 149° 55' 00.00"
12/23/1992	BANDA SEAHORSE	Offshore Supply Vessel	Vessel Maneuverability	\$0.00	N 60° 00' 36.00"	W 151° 00' 24.00"
12/26/1992	COAST RANGE	Tank Ship	Vessel Maneuverability	\$0.00	N 61° 10' 36.00"	W 150° 18' 18.00"
12/28/1992	ZB19	Barge	Allision	Not Reported	N 61° 02' 30.00"	W 151° 10' 00.00"
12/28/1992	ENGINE OIL COOLER	Not Specified	Vessel Maneuverability	\$0.00	N 60° 44' 24.00"	W 151° 18' 24.00"

02/12/1993	CORNUCOPIA	Tank Ship	Vessel Maneuverability	\$0.00	N 60° 32' 00.00"	W 151° 28' 00.00"
02/20/1993	LAFAYETTE	Offshore Supply Vessel	Grounding	\$0.00	N 60° 44' 36.00"	W 151° 19' 30.00"
02/22/1993	ATLANTIC SEAHORSE	Offshore Supply Vessel	Loss of Electrical Power	\$0.00	N 60° 30' 00.00"	W 151° 30' 00.00"
02/23/1993	ATLANTIC SEAHORSE	Offshore Supply Vessel	Vessel Maneuverability	\$0.00	N 60° 45' 00.00"	W 151° 24' 30.00"
03/21/1993	MUSTANG ISLAND	Not Specified	Vessel Maneuverability	\$0.00	N 61° 04' 18.00"	W 150° 56' 30.00"
04/03/1993	OVERSEAS WASHINGTON	Tank Ship	Vessel Maneuverability	\$0.00	N 59° 33' 54.00"	W 151° 28' 12.00"
04/21/1993	PACIFIC VENTURE/ SHADY LADY	Fishing Vessel	Collision	Not Reported	N 59° 09' 12.00"	W 154° 06' 06.00"
05/05/1993	AK 0180 E	Recreational Vessel	Flooding	\$0.00	N 59° 36' 00.00"	W 151° 35' 00.00"
05/09/1993	LISA MARIE	Fishing Vessel	Fire	\$0.00	N 59° 36' 00.00"	W 151° 25' 00.00"
05/10/1993	REDOUBT/BMC38	Not Specified	Allision	Not Reported	N 61° 18' 00.00"	W 149° 45' 00.00"
05/18/1993	BORN FREE	Passenger Vessel	Flooding	\$50.00	N 59° 35' 00.00"	W 151° 40' 00.00"
05/20/1993	VOLNA	Fishing Vessel	Grounding	Not Reported	N 59° 15' 00.00"	W 151° 56' 00.00"
05/29/1993	SUN TIDE	Not Specified	Vessel Maneuverability	\$0.00	N 59° 35' 30.00"	W 151° 26' 30.00"
06/06/1993	ATLANTIC SEAHORSE	Offshore Supply Vessel	Vessel Maneuverability	\$0.00	N 60° 54' 00.00"	W 151° 10' 00.00"
06/11/1993	GLADYS M	Not Specified	Sinking	Not Reported	N 59° 31' 36.00"	W 153° 03' 00.00"
06/23/1993	ATLANTIC SEAHORSE	Offshore Supply Vessel	Collision	\$0.00	N 60° 54' 18.00"	W 151° 10' 18.00"
06/30/1993	CHAR DAN	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 36' 00.00"	W 151° 25' 00.00"
07/02/1993	BLACK FISH	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 35' 30.00"	W 151° 26' 30.00"
07/21/1993	INUPIAT	Fishing Vessel	Collision	\$0.00	N 60° 34' 06.00"	W 151° 23' 12.00"
07/23/1993	DUTCH TREAT	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 36' 06.00"	W 151° 25' 00.00"
07/25/1993	PHALAROPE	Fishing Vessel	Grounding	\$0.00	N 59° 40' 00.00"	W 151° 54' 00.00"
08/03/1993	NUNIVAK	Fishing Vessel	Loss of propulsion/ Collision	Not Reported	N 59° 37' 00.00"	W 151° 27' 00.00"
08/03/1993	SALLY G	Fishing Vessel	Vessel Maneuverability	Not Reported	N 59° 40' 12.00"	W 151° 50' 00.00"
08/06/1993	CASCADE	Fishing Vessel	Grounding	\$0.00	N 60° 30' 12.00"	W 151° 20' 06.00"
08/07/1993	BARCONI	Fishing Vessel	Fire	Not Reported	N 59° 17' 36.00"	W 152° 02' 36.00"
08/07/1993	PRESTON BROOKS	Fishing Vessel	Sinking	\$0.00	N 58° 51' 12.00"	W 152° 01' 18.00"
08/23/1993	SEA FLIGHT I	Fishing Vessel	Abandonment	\$0.00	N 59° 25' 48.00"	W 152° 06' 24.00"
09/03/1993	FREE TRADER	Towing Vessel	Sinking	\$90,000.00	N 59° 31' 36.00"	W 151° 52' 30.00"
09/18/1993	DENA'INA	Fishing Vessel	Flooding	\$0.00	N 59° 46' 00.00"	W 152° 04' 00.00"
10/12/1993	DIMITROS	Not Specified	Sinking	\$0.00	N 60° 40' 06.00"	W 151° 23' 12.00"
11/04/1993	JOLLY ROGER	Not Specified	Vessel Maneuverability	\$0.00	N 60° 40' 24.00"	W 151° 23' 18.00"
11/16/1993	BANDA SEAHORSE	Offshore Supply Vessel	Vessel Maneuverability	Not Reported	N 60° 45' 00.00"	W 151° 18' 00.00"
02/17/1994	OVERSEAS WAHSINGTON	Tank Ship	Vessel Maneuverability	\$0.00	N 60° 06' 00.00"	W 151° 04' 00.00"
03/12/1994	BANDA SEAHORSE	Offshore Supply Vessel	Fire	Not Reported	N 60° 47' 00.00"	W 151° 50' 00.00"
03/25/1994	WESTERN AVENIR	Not Specified	Vessel Maneuverability	Not Reported	N 60° 40' 18.00"	W 151° 23' 42.00"
05/14/1994	DAWNING STAR	Not Specified	Allision	Not Reported	N 59° 37' 00.00"	W 151° 27' 00.00"



05/21/1994	STELLAR WIND	Towing Vessel	Allision	Not Reported	N 59° 36' 18.00"	W 151° 24' 48.00"
05/27/1994	STORMBIRD	Not Specified	Grounding	\$0.00	N 59° 36' 06.00"	W 151° 25' 00.00"
06/05/1994	NO PROBLEM	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 40' 00.00"	W 152° 00' 00.00"
06/05/1994	ROBIN	Fishing Vessel	Vessel Maneuverability	Not Reported	N 59° 16' 24.00"	W 151° 59' 18.00"
06/12/1994	KILL SHOT	Fishing Vessel	Grounding	Not Reported	N 59° 26' 18.00"	W 151° 49' 36.00"
07/02/1994	DEVA	Not Specified	Flooding	Not Reported	N 60° 04' 00.00"	W 152° 08' 00.00"
07/07/1994	YA SHUR	Fishing Vessel	Collision	Not Reported	N 59° 33' 00.00"	W 151° 56' 00.00"
07/08/1994	LUCKY PIERRE II	Fishing Vessel	Vessel Maneuverability	Not Reported	N 59° 35' 36.00"	W 151° 23' 54.00"
07/12/1994	JOLLY ROGER	Fishing Vessel	Vessel Maneuverability	Not Reported	N 59° 31' 00.00"	W 151° 28' 00.00"
08/17/1994	WARDS COVE PACKING CO. SCOW	Fishing Vessel	Sinking	\$0.00	N 60° 30' 42.00"	W 151° 37' 30.00"
10/04/1994	SEALAND KODIAK	General Dry Cargo Ship	Vessel Maneuverability	Not Reported	N 61° 13' 00.00"	W 149° 53' 00.00"
11/27/1994	MONARCH	Offshore Supply Vessel	Grounding	\$100,000.00	N 60° 50' 00.00"	W 151° 19' 00.00"
12/03/1994	BALTIMORE TRADER	Tank Ship	Vessel Maneuverability	Not Reported	N 59° 30' 00.00"	W 151° 50' 00.00"
12/08/1994	CHAMPION	Not Specified	Allision	\$0.00	N 60° 57' 24.00"	W 151° 19' 30.00"
12/08/1994	POTOMAC TRADER	Tank Ship	Material Failure	\$0.00	N 60° 41' 00.00"	W 152° 23' 24.00"
12/29/1994	VAMANOS	Recreational Vessel	Sinking	\$0.00	N 59° 36' 00.00"	W 151° 23' 00.00"
02/04/1995	KATMAI	Fishing Vessel	Allision	\$0.00	N 59° 36' 00.00"	W 151° 25' 00.00"
03/11/1995	POTOMAC TRADER	Tank Ship	Allision	\$0.00	N 60° 41' 00.00"	W 151° 23' 30.00"
03/19/1995	KELLY MARIE	Fishing Vessel	Grounding	\$0.00	N 58° 55' 12.00"	W 152° 13' 30.00"
03/23/1995	BALTIMORE TRADER	Tank Ship	Vessel Maneuverability	\$0.00	N 60° 41' 00.00"	W 151° 23' 30.00"
03/24/1995	BALTIMORE TRADER	Tank Ship	Vessel Maneuverability	\$0.00	N 60° 41' 00.00"	W 151° 23' 30.00"
07/07/1995	ENTERPRISE II	Not Specified	Flooding	\$0.00		
08/08/1995	LAWRENCE H. GIANELLA	Tank Ship	Allision	Not Reported	N 61° 13' 00.00"	W 149° 53' 18.00"
09/12/1995	SEA HAWK	Not Specified	Grounding	Not Reported	N 61° 11' 30.00"	W 150° 09' 00.00"
09/26/1995	FRANCES E	Not Specified	Sinking	\$0.00	N 59° 26' 00.00"	W 151° 42' 00.00"
11/14/1995	YAHTSE	Fishing Vessel	Flooding	\$0.00	00° 00' 00.00"	000° 00' 00.00"
12/15/1995	MONARCH	Offshore Supply Vessel	Vessel Maneuverability	\$2,000.00	N 60° 52' 00.00"	W 151° 36' 00.00"
12/27/1995	CRYSTAL RIVER	Tank Ship	Vessel Maneuverability	Not Reported	N 61° 00' 54.00"	W 150° 57' 36.00"
03/09/1996	GREAT LAND / STELLAR WIND	General Dry Cargo Ship/Towing Vessel	Material Failure	Not Reported	N 61° 13' 06.00"	W 149° 53' 36.00"
06/27/1996	Not Named	Fishing Vessel	Flooding	\$0.00	N 59° 36' 00.00"	W 151° 25' 00.00"
07/28/1996	SIERRA MADRE	Tank Ship	Vessel Maneuverability	Not Reported	N 61° 13' 06.00"	W 149° 53' 18.00"
12/17/1996	ALTAIR	Not Specified	flooding	\$0.00	N 59° 28' 00.00"	W 151° 29' 00.00"
01/01/1997	BARGE 103	Barge	Allision, Ice Damage	Not Reported	N 61° 14' 12.00"	W 149° 53' 30.00"
01/25/1997	OREGON	Barge	Sinking/Capsize	\$1,000,000	N 60° 06' 00.00"	W 151° 52' 00.00"
02/25/1997	Not Named	Unknown	Vessel Maneuverability	\$0.00	N 60° 39' 30.00"	W 150° 23' 00.00"

02/27/1997	DESTROYER	Not Specified	Loss of Electrical Power	Not Reported	N 59° 41' 00.00"	W 149° 43' 00.00"
03/01/1997	NOVIC	Fishing Vessel	Flooding	\$0.00	N 59° 18' 48.00"	W 152° 00' 00.00"
05/06/1997	ALASKA	Fishing Vessel	Grounding	Not Reported	N 58° 53' 24.00"	W 152° 26' 00.00"
08/08/1997	BLUE OX	Fishing Vessel	Vessel Maneuverability	\$0.00	N 59° 12' 30.00"	W 150° 57' 48.00"
09/07/1997	N. LIGHTS	Not Specified	Vessel Maneuverability	Not Reported	N 61° 30' 30.00"	W 150° 20' 30.00"
09/08/1997	MARINE COMMANDER/ SHELL C	Offshore Supply Vessel	Allision	\$250,000.00	N 60° 46' 00.00"	W 151° 30' 06.00"
09/27/1997	Not Named	Not Specified	Sinking	\$0.00	N 59° 02' 00.00"	W 151° 43' 00.00"
01/01/1998	Chesapeake Trader	Tankship	Allision with Dock	\$432,000.00	N 60° 33' 12.00"	W 152° 08' 00.00"
01/03/1998	CHAMPION	Offshore Supply Vessel	Allision	\$0.00	N 60° 57' 24.00"	W 151° 19' 30.00"
05/15/1998	HANJIN ISTANBUL	General Dry Cargo Ship	Collision	\$20,000.00	N 59° 37' 24.00"	W 151° 24' 18.00"
06/02/1998	CHEECHAKO	Fishing Vessel	Abandonment	\$60,000.00	N 59° 58' 30.00"	W 152° 07' 00.00"
09/12/1998	GREATLAND	General Dry Cargo Ship	Vessel Maneuverability	Not Reported	N 61° 20' 00.00"	W 150° 30' 00.00"
09/23/1998	ABBY M	Towing Vessel	Fire/Loss of Electrical Power	\$75,000.00	N 59° 20' 00.00"	W 152° 01' 54.00"
12/15/1998	CURRENT	Fishing Vessel	Capsize	\$0.00	N 59° 38' 00.00"	W 151° 20' 00.00"
01/31/1999	OCEAN LAUREL	General Dry Cargo Ship	Allision	\$60,000.00	N 60° 40' 30.00"	W 151° 23' 00.00"
02/25/1999	HANJIN ISTANBUL	General Dry Cargo Ship	Vessel Maneuverability	\$0.00	N 60° 38' 00.00"	W 151° 23' 48.00"
03/07/1999	ZHENFEN 19	Not Specified	Vessel Maneuverability	\$0.00	N 60° 32' 00.00"	W 151° 34' 30.00"
06/08/1999	SPIT RAT	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 33' 00.00"	W 151° 50' 00.00"
06/09/1999	MACHINATOR	Fishing Vessel	Fire	\$0.00	N 60° 25' 00.00"	W 151° 30' 00.00"
07/01/1999	FOXFIRE	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 35' 00.00"	W 151° 23' 00.00"
07/01/1999	HALIBUT ENDEAVOR	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 07' 42.00"	W 152° 08' 48.00"
07/07/1999	IRENES	Passenger Vessel (uninspected)	Abandonment	\$265,000.00	N 59° 13' 00.00"	W 152° 10' 00.00"
07/08/1999	IKATTOK	Passenger Vessel (uninspected)	Flooding	\$0.00	N 62° 20' 00.00"	W 150° 08' 00.00"
07/16/1999	CHAMPION	Offshore Supply Vessel	Allision	\$5,000.00	N 60° 48' 12.00"	W 151° 37' 30.00"
07/16/1999	BRISK	Passenger Vessel (uninspected)	Collision	\$0.00	N 59° 35' 30.00"	W 151° 26' 12.00"
09/05/1999	SEA STAR	Recreational Vessel	Fire	\$40,000.00	N 59° 26' 00.00"	W 151° 53' 00.00"
09/26/1999	SEALAND ANCHORAGE	General Dry Cargo Ship	Grounding	Not Reported	N 61° 14' 18.00"	W 149° 53' 06.00"
09/28/1999	SEALAND TACOMA	General Dry Cargo Ship	Grounding	Not Reported	N 61° 14' 18.00"	W 149° 53' 06.00"
10/30/1999	T-MIKE	Fishing Vessel	Fire	\$700,000.00	N 59° 29' 00.00"	W 150° 09' 00.00"
11/30/1999	TUSTEMENA	Passenger Vessel	Allision	\$20,000.00	N 59° 36' 00.00"	W 151° 24' 48.00"
12/01/1999	HOME BAR I	Barge	Flooding	\$150,000.00	N 59° 10' 06.00"	W 151° 50' 18.00"
01/14/2000	TORM PACIFIC	General Dry Cargo Ship	Vessel Maneuverability	\$0.00	N 60° 14' 00.00"	W 151° 37' 00.00"
01/19/2000	ENERGIZER	Tank Barge	Breakaway/Allision	Not Reported	N 60° 44' 12.00"	W 151° 23' 06.00"

01/20/2000	TORM PACIFIC	General Dry Cargo Ship	Allision	\$250,000.00	N 60° 44' 12.00"	W 151° 23' 06.00"
01/25/2000	VIGOR	Fishing Vessel	Grounding	\$2,000.00	N 59° 36' 12.00"	W 151° 25' 24.00"
03/30/2000	HANJIN BRISBANE	General Dry Cargo Ship	Allision	\$30,000.00	N 60° 39' 18.00"	W 151° 23' 00.00"
04/26/2000	STELLAR WIND	Towing Vessel	Allision	Not Reported	N 61° 14' 18.00"	W 149° 53' 06.00"
05/14/2000	FLYING BEAR III	Passenger Vessel (uninspected)	Flooding	\$0.00	N 59° 53' 54.00"	W 152° 04' 48.00"
05/23/2000	SILVER FOX 4	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 45' 00.00"	W 151° 58' 00.00"
06/16/2000	HALIBUT ENDEAVOR	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 24' 30.00"	W 152° 12' 00.00"
07/02/2000	PORIFERA	Fishing Vessel	Grounding	\$75,000.00	N 61° 33' 06.00"	W 151° 19' 30.00"
07/03/2000	TALKEETNA	Not Specified	Collision	Not Reported	N 62° 19' 18.00"	W 150° 07' 06.00"
07/03/2000	NAUTI LADY	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 30' 00.00"	W 151° 35' 00.00"
07/07/2000	AK8545M	Not Specified	Collision	Not Reported	N 61° 42' 00.00"	W 150° 19' 00.00"
07/17/2000	SHADY LADY	Fishing Vessel	Grounding	\$0.00	N 60° 23' 00.00"	W 151° 20' 00.00"
07/30/2000	POTOMAC TRADER	Tank Ship	Allision	\$0.00	N 60° 23' 12.00"	W 152° 08' 00.00"
08/06/2000	GUARDIAN	Towing Vessel	Vessel Maneuverability	Not Reported	N 61° 03' 00.00"	W 150° 57' 42.00"
09/29/2000	GUARDIAN	Towing Vessel	Vessel Maneuverability	Not Reported	N 61° 16' 18.00"	W 149° 53' 00.00"
11/15/2000	CISPRI RESPONDER	Barge	Collision	\$10,000.00	N 60° 45' 30.00"	W 151° 22' 30.00"
11/29/2000	FOX RIVER	Landing Craft	Fire	\$400,000.00	N 58° 48' 00.00"	W 152° 25' 00.00"
12/12/2000	SEABULK MONTANA	Offshore Supply Vessel	Allision	\$0.00	N 59° 25' 36.00"	W 151° 43' 48.00"
12/16/2000	CAPE LOOKOUT SHOALS	Tank Vessel	Loss of Electrical Power	\$0.00	N 59° 35' 12.00"	W 151° 31' 30.00"
01/20/2001	LADY L	Fishing Vessel	Flooding	\$300,000.00	N 59° 04' 24.00"	W 150° 59' 00.00"
01/30/2001	SEABULK MONTANA	Offshore Supply Vessel	Vessel Maneuverability	\$20,872.00	N 60° 41' 00.00"	W 151° 25' 00.00"
02/04/2001	PETROBULK CHALLENGER	Tank Ship	Loss of Electrical Power	\$0.00	N 59° 35' 00.00"	W 151° 40' 00.00"
02/06/2001	WESTWARD VENTURE	General Dry Cargo Ship	Fire/Loss of Electrical Power	Not Reported	N 61° 11' 30.00"	W 150° 12' 00.00"
03/23/2001	CAPE HUDSON	General Dry Cargo Ship	Vessel Maneuverability	Not Reported	N 61° 11' 00.00"	W 150° 15' 00.00"
06/28/2001	RAIN DANCER	Fishing Vessel	Fire	\$120,000.00	N 59° 59' 36.00"	W 152° 25' 30.00"
06/29/2001	MISS MINMAR	Fishing Vessel	Vessel Maneuverability	\$25,000.00	N 59° 24' 00.00"	W 152° 04' 00.00"
07/05/2001	HOURI	Fishing Vessel	Fire/Sinking	\$75,000.00	N 60° 06' 42.00"	W 151° 58' 30.00"
07/17/2001	Reel Deel	Fishing Vessel	Fire	Not Reported	00° 00' 00.00"	000° 00' 00.00"
07/26/2001	CHILKAT WARRIOR	Barge	Allision	\$12,000.00	N 60° 41' 00.00"	W 151° 24' 00.00"
08/02/2001	SPLIT RAT	Passenger Vessel (uninspected)	Vessel Maneuverability	\$0.00	N 59° 04' 12.00"	W 151° 51' 12.00"
10/11/2001	PIONEER SERVICE	Towing Vessel	Grounding	Not Reported	N 60° 38' 00.00"	W 151° 44' 54.00"
11/21/2001	ENGINEER	Not Specified	Abandonment	\$0.00	N 60° 07' 18.00"	W 151° 40' 06.00"
12/30/2001	SEABULK PRIDE	Tank Ship	Material Failure	Not Reported	N 61° 14' 18.00"	W 149° 53' 18.00"
01/04/2002	Harris Sand and Gravel	Towing Vessel	Collision	\$0.00	N 58° 36' 20.00"	W 151° 25' 30.00"
01/24/2002	LYDIA C	Fishing Vessel	Fire	Not Reported	00° 00' 00.00"	000° 00' 00.00"
03/16/2002	HIGHTIDE	Not Specified	Vessel Maneuverability	\$0.00	N 60° 54' 06.00"	W 151° 12' 00.00"

05/11/2002	BIRD SONG	Not Specified	Vessel Maneuverability	\$1,600.00	00° 00' 00.00"	000° 00' 00.00"
05/19/2002	GREAT LAND	General Dry Cargo Ship	Fire	Not Reported	N 61° 14' 18.00"	W 149° 53' 06.00"
05/19/2002	FishBuster	Fishing Vessel	Material Failure	\$40.00	00° 00' 00.00"	000° 00' 00.00"
06/30/2002	Marcy J.	Not Specified	Vessel Maneuverability	Not Reported	00° 00' 00.00"	000° 00' 00.00"
07/19/2002	Numerous vessels in Kasilof	Fishing Vessel	Set Adrift	\$9,000.00	N 60° 00' 00.00"	W 154° 41' 00.00"
07/27/2002	Comanche	Fishing Vessel	Flooding	\$0.00	N 60° 31' 14.00"	W 151° 17' 43.00"
07/30/2002	Russian River Ferry	Passenger Vessel	Collision	\$0.00	N 60° 29' 00.00"	W 150° 00' 00.00"
08/02/2002	Aurora & Alpine Cove	Fishing Vessel	Collision	\$0.00	N 59° 30' 00.00"	W 151° 45' 00.00"
08/03/2002	Barren Islands	Fishing Vessel	Flooding	\$0.00	N 59° 36' 00.00"	W 152° 06' 00.00"
08/09/2002	Dream Catcher	Fishing Vessel	Flooding	\$0.00	00° 00' 00.00"	000° 00' 00.00"
10/08/2002	SHELLFISHER	Fishing Vessel	Flooding	\$0.00	N 59° 31' 19.00"	W 151° 28' 55.00"
11/23/2002	Salmon Express	Fishing Vessel	Set Adrift	\$145,000.00	N 59° 21' 00.00"	W 151° 49' 06.00"
11/24/2002	Seabulk Montana	Offshore Supply Vessel	Material Failure	\$0.00	N 60° 46' 00.00"	W 151° 21' 00.00"
12/01/2002	KONRAD I	Fishing Vessel	Fire	\$0.00	N 59° 36' 12.00"	W 151° 25' 18.00"
12/13/2002	Hanjin Calcutta	General Dry Cargo Ship	Vessel Maneuverability	\$0.00	N 60° 40' 00.00"	W 151° 20' 00.00"
12/21/2002	Anmaj	Tank Ship	Material Failure	\$0.00	N 60° 50' 00.00"	W 151° 20' 00.00"
01/10/2003	HAVKONG	Tank Ship	Material Failure	\$0.00	N 60° 40' 05.00"	W 151° 23' 27.00"
05/09/2003	MIDNIGHT SUN	General Dry Cargo Ship	Loss of Electrical Power	Not Reported	N 61° 14' 16.00"	W 149° 53' 42.00"
05/12/2003	KRS 250-1	Barge	Allision	Not Reported	N 61° 13' 05.00"	W 149° 53' 03.00"
05/19/2003	Keta	Fishing Vessel	Explosion	\$0.00	N 59° 27' 00.00"	W 151° 24' 00.00"
05/30/2003	SOCKEYE	Passenger Vessel (uninspected)	Fire	\$0.00	N 59° 36' 15.00"	W 151° 25' 27.00"
06/07/2003	AK5514F	Recreational Vessel	Flooding	\$0.00	N 59° 18' 00.00"	W 152° 00' 00.00"
06/25/2003	AMERICAN EAGLE	Not Specified	Grounding	\$0.00	N 59° 21' 33.00"	W 151° 54' 27.00"
07/22/2003	Spit Rat	Passenger Vessel (uninspected)	Material Failure	\$0.00	N 59° 36' 00.00"	W 151° 25' 00.00"
07/23/2003	LYKES EAGLE	General Dry Cargo Ship	Allison	Not Reported	N 61° 14' 30.00"	W 149° 52' 15.00"
09/18/2003	Pioneer Service / Barge 141 Collision	Towing Vessel/Barge	Collision	\$150,000.00	N 60° 45' 45.00"	W 151° 18' 18.00"
09/19/2003	Patriot & Lummi Island	Barge	Material Failure	Not Reported	N 61° 13' 59.00"	W 149° 53' 33.00"
02/02/2004	PIONEER SERVICE	Towing Vessel	Grounding	\$0.00	N 60° 47' 02.00"	W 151° 31' 47.00"
04/08/2004	GLACIER WIND	Towing Vessel	Grounding	Not Reported	N 61° 15' 10.00"	W 149° 53' 05.00"
04/13/2004	SEABULK MONTANA	Offshore Supply Vessel	Material Failure	\$0.00	N 59° 37' 57.00"	W 151° 31' 58.00"
04/20/2004	CENTURY HOPE	Not Specified	Allision	\$1,000.00	N 59° 37' 57.00"	W 151° 31' 58.00"
04/24/2004	BLARNEY	Towing Vessel	Material Failure	\$0.00	N 59° 43' 06.00"	W 151° 52' 00.00"
06/28/2004	THE RIGHT ONE/ ROULETTE	Not Specified	Material Failure	\$0.00	N 59° 52' 10.00"	W 152° 13' 00.00"
09/07/2004	MIDNIGHT SUN	General Dry Cargo Ship	Vessel Maneuverability	Not Reported	N 60° 23' 14.00"	W 151° 18' 10.00"
09/25/2004	Barge 141	Barge	Material Failure	\$238,000.00	N 60° 45' 36.00"	W 151° 18' 36.00"
11/03/2004	SEA DUCER	Recreational Vessel	Sinking	Not Reported	N 61° 14' 16.00"	W 149° 53' 42.00"
1/31/2005	RED BARON	Fishing Vessel	Vessel Maneuverability	Not Reported	N 59° 14' 30.00"	W 152° 18' 00.00"

2/21/2005	KITTIWAKE II	Fishing Vessel	Fire	Not Reported	N 59° 36' 12.00"	W 151° 25' 18.00"
5/21/2005	HARD EIGHT	Passenger Vessel (uninspected)	Vessel Maneuverability	Not Reported	N 60° 03' 29.00"	W 151° 39' 47.00"
7/13/2005	BLUE FOX	Passenger Vessel (uninspected)	Material Failure	Not Reported	N 58° 53' 46.00"	W 152° 51' 45.00"
7/19/2005	AK8626K	Fishing Vessel	Capsize	Not Reported	N 59° 20' 11.00"	W 151° 47' 15.00"
8/6/2005	TODAY	Fishing Vessel	Explosion	Not Reported	N 60° 23' 14.00"	W 151° 18' 10.00"
8/22/2005	FOXFIRE	Passenger Vessel (uninspected)	Vessel Maneuverability	Not Reported	N 59° 37' 57.00"	W 151° 31' 58.00"
9/6/2005	TUSTUMENA	Passenger Ship	Vessel Maneuverability	Not Reported	N 59° 26' 12.00"	W 151° 43' 04.00"
10/18/2005	PEONY	Bulk Carrier	Allision	Not Reported	N 60° 47' 02.00"	W 151° 31' 47.00"
12/27/2005	HORIZON TACOMA	General Dry Cargo Ship	Material Failure	Not Reported	N 61° 14' 30.00"	W 149° 53' 18.00"
1/21/2006	344	Barge	Collision	Not Reported	N 60° 57' 36.00"	W 151° 04' 05.00"
1/21/2006	PARAGON	Towing Vessel	Collision	Not Reported	N 60° 57' 36.00"	W 151° 04' 05.00"
2/2/2006	SEABULK PRIDE	Tank Ship	Breakaway/ Grounding	Not Reported	N 60° 41' 00.00"	W 151° 23' 29.00"
3/22/2006	PACIFIC CHALLENGER	Towing Vessel	Collision	Not Reported	N 59° 36' 56.00"	W 151° 24' 07.00"
3/22/2006	SCT 282	Barge	Collision	Not Reported	N 59° 36' 56.00"	W 151° 24' 07.00"
6/6/2006	NO NAME	Passenger Vessel (uninspected)	Flooding	Not Reported	N 60° 03' 00.00"	W 151° 46' 00.00"
6/12/2006	SILVER FOX I	Passenger Vessel (uninspected)	Flooding	Not Reported	N 59° 37' 57.00"	W 151° 31' 58.00"
7/18/2006	BEAR FORCE II	Recreational	Material Failure	Not Reported	N 59° 37' 57.00"	W 151° 31' 58.00"
7/20/2006	BOB WHITE	Fishing Vessel	Grounding	Not Reported	N 60° 32' 52.00"	W 151° 15' 52.00"
7/24/2006	BEAVER	Passenger Vessel (uninspected)	Material Failure	Not Reported	N 59° 37' 57.00"	W 151° 31' 58.00"

