

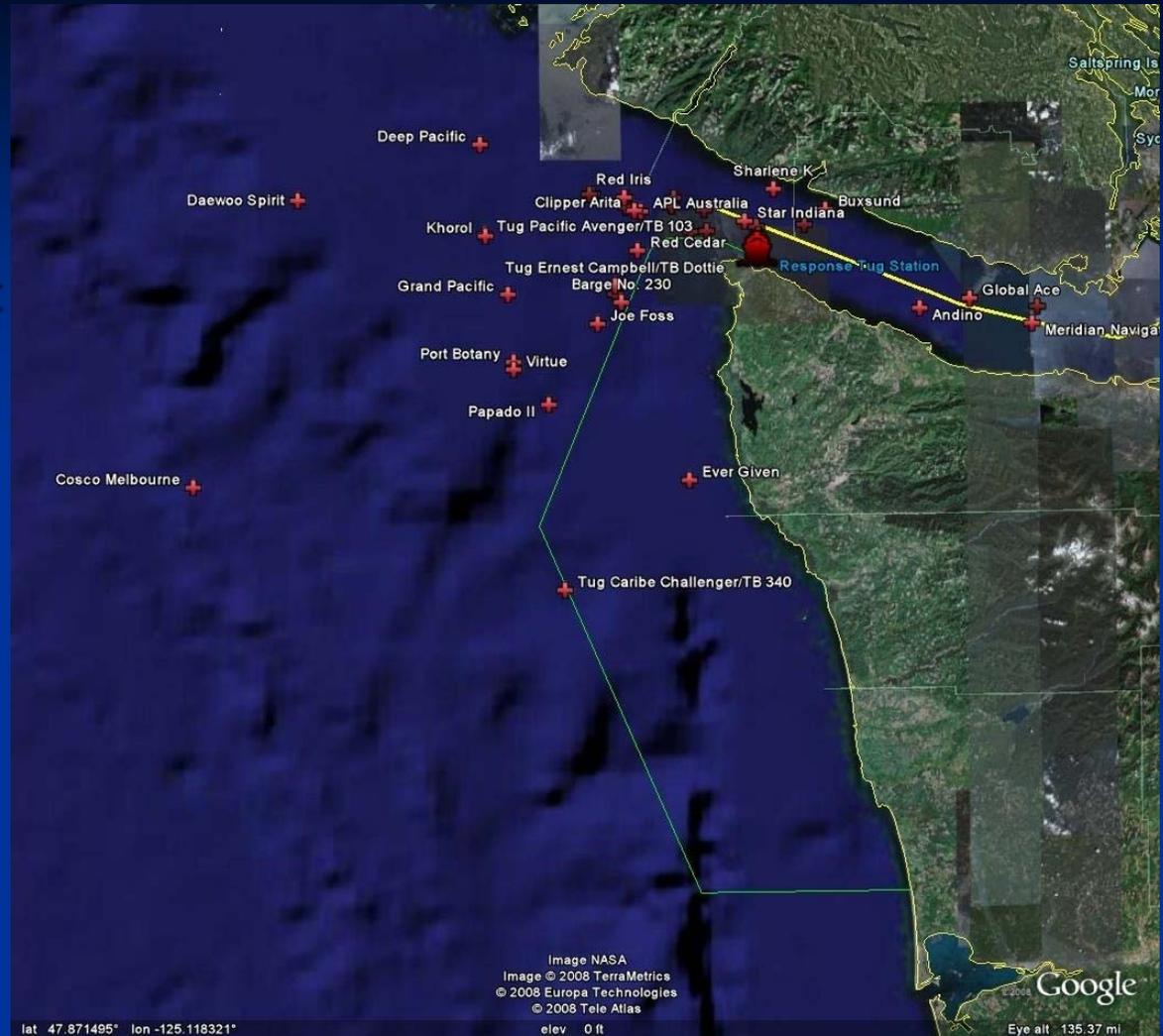
# Emergency Response Tug at Neah Bay



## Protecting Washington's Resources

# Vessel Traffic

- 4,500+ Transits *entering* the Strait annually.
- 14 billion gallons of oil being *transferred*.
- 8 Major ports.
- 5 Refineries.



Locations of some vessels to which the Neah Bay emergency tug has responded.

# Susceptibility of the Washington Coast

- Environment of Washington outer coast & Strait of Juan de Fuca poses significant maritime challenges.
- If a vessel is disabled, challenges multiply and help may be unavailable / slow in arriving.
- Strait of Juan de Fuca entrance often nearest safe exit for vessels coming to assist a disabled vessel.
- Port Angeles is about 70 miles east of the Strait entrance. A towing vessel located at Port Angeles is 5-6 hours away from a disabled vessel off the coast.



In 1999, the *New Carissa* succumbed to the hazards of the Pacific Northwest coast. The last remains of the wreck were finally removed during the summer 2008.

# Resources at Risk

- Port operations
- Refinery imports & exports
- Commercial fishing
- Shellfish beds
- Marine fish and wildlife
- Makah, Quileute, Hoh and Quinault tribal lands / cultural values
- Local communities and tourism
- Olympic Coast National Marine Sanctuary
- Olympic National Park coastline



Washing rescued sea birds oiled by 2007 Cosco Busan spill in San Francisco Bay.

# Emergency Response Tug Functions

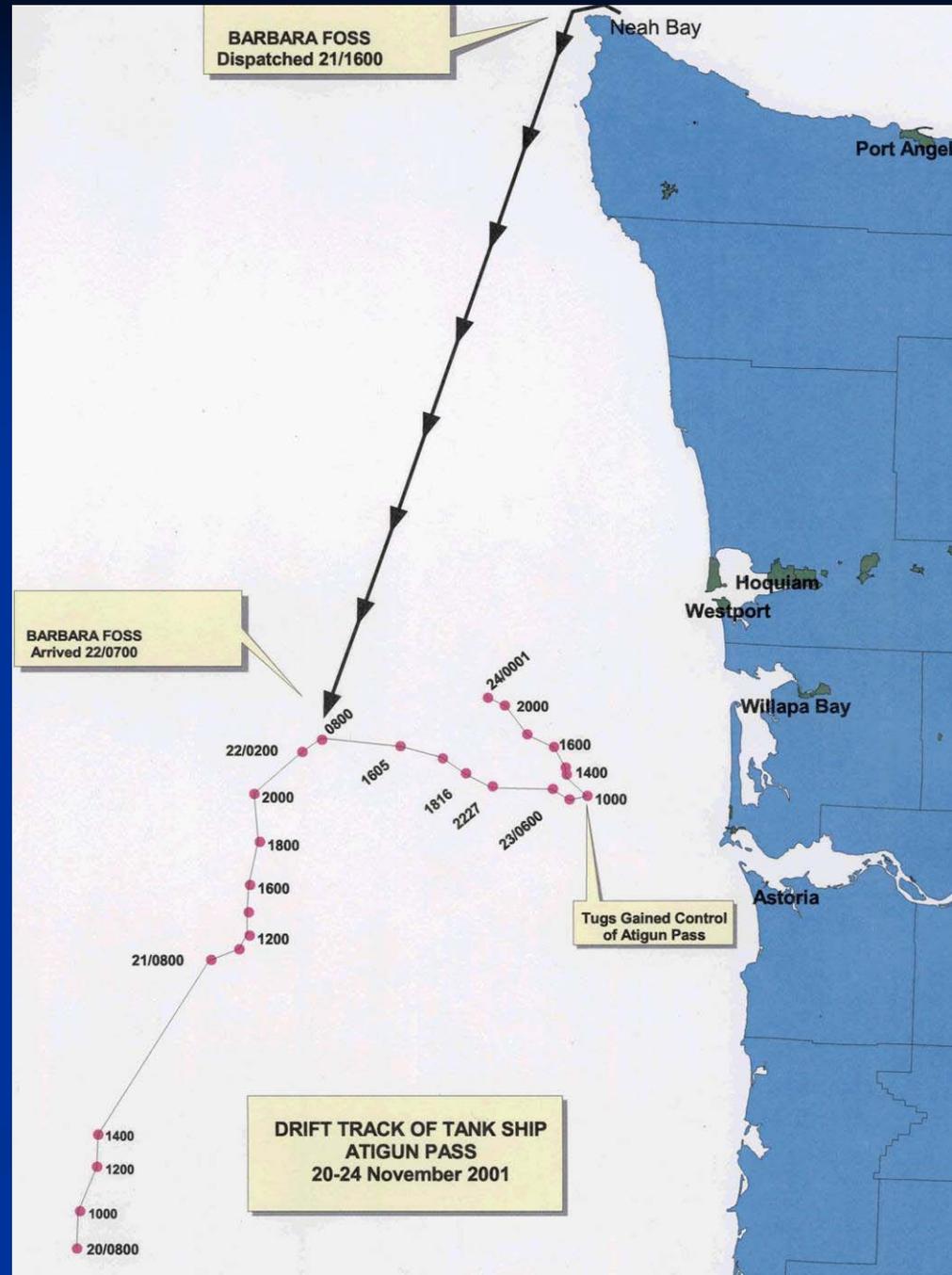
- Stand by to assist / escort vessels with mechanical problems
- Take disabled, drifting vessels under tow when necessary
- Act as ‘eyes and ears’ for incident command
- When possible, deploy oil spill response equipment



Neah Bay tug towing partially disabled tug Altair & tank barge Rigel, loaded with 3.4 million gallons of diesel in 2002.

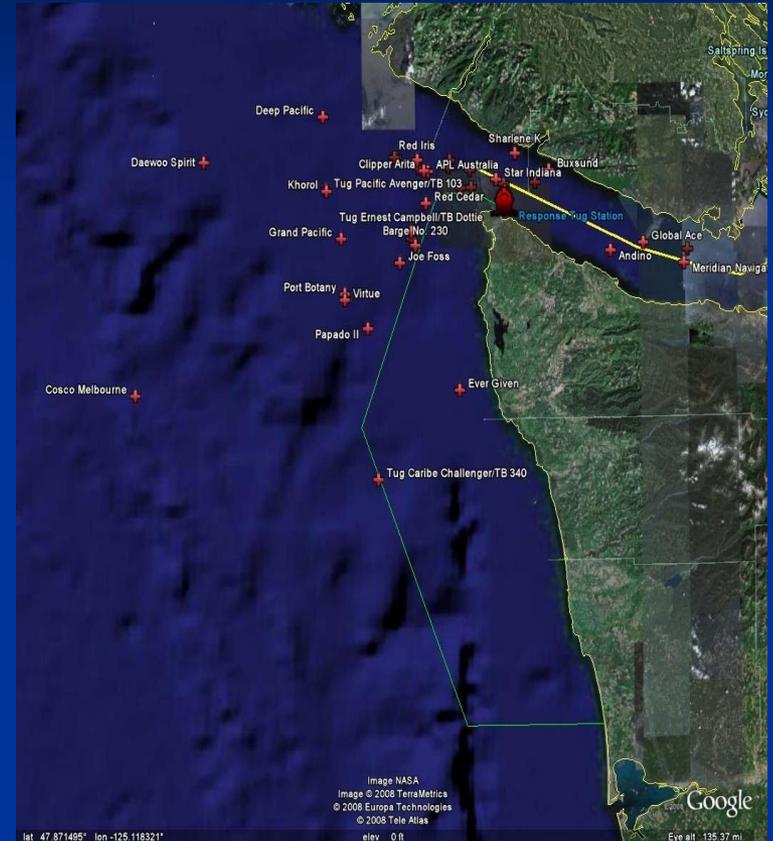
# Atigun Pass

- In November 2001, Chinese tug De Da lost its tow of decommissioned oil tanker Atigun Pass off Oregon coast. Tanker still had 25,000 gallons of oil on board. Neah Bay emergency response tug Barbara Foss was able to remake tow connection.



# Emergency Response Tug

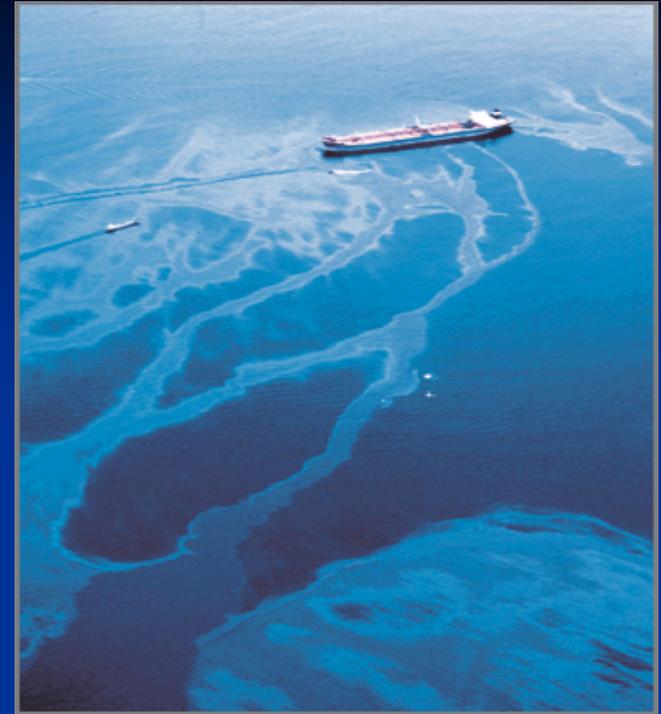
- Strategically stationed at Neah Bay to respond along our outer coast & western Strait of Juan de Fuca.
- Critical prevention & response measure.
- 44 vessel assists since 1999.
- Prevented 11 disabled ships and barges from grounding offshore or in Strait.
- Publicly funded since 1999; on July 1, 2010, maritime industry will pay for tug.



# Historic Incidents

# 1989 - Exxon Valdez

- Powered grounding on Bligh Reef
- 11 million gallons crude oil spilled
- Some of the outcomes
  - OPA-90 Measures
    - Double-hulls
    - Tanker escorts in Prince William Sound (PWS)
  - PWS ship escort & response vessel system
    - Capital Costs: > \$120 million
    - Operating Costs: >\$60 million per year



# 1993 - Braer

- Shetland Islands, United Kingdom
- Disable laden tank ship drifted for about 19 hours during severe storm conditions
- About 22 million gallons of crude oil spilled
- Water contaminated the ship's main engine fuel



# 2004 – Seledang Ayu

- Unalaska Island, Alaska
- 340,000 gallons of fuel oil spilled
- Malaysian bulk carrier departed from Tacoma
- Main engine failure
- Two-day drift
- Delayed reporting of problem by ship's Master
- Six crew died during rescue
- USCG helicopter crash



**SELENDANG AYU** was the worst oil spill in Alaskan waters since the **EXXON VALDEZ**.

# 2006 – Courage Ace

- Aleutian Islands, Alaska, bound for Vancouver, B.C.
- Loaded car-carrier
- 175,000 gallons of fuel aboard
- Ship rolled to one side at a large angle
- Ballast issue
- Multi-day drift
- A Seattle man died during the salvage operation



Cougar Ace adrift in fog off Aleutian Islands.

# European Experience

- 1993 - Braer
- 1996 - Sea Empress
- 1999 - Erika
- 2000 - Castor
- 2002 - Prestige
- 2007 - MSC Napoli



MSC Napoli nearly broke in two in a storm. It was intentionally grounded off the south English coast. About 53,000 gallons of fuel oil spilled. Containers littered the beaches.



The Prestige broke in two in a storm spilling about 20 million gallons of oil.

# European Emergency Towing Vessels

- United Kingdom – 4 large tugs
- France - 4+ large tugs
- Spain - 2 large tugs
- Germany - 8 tugs (3 in North Sea, 5 in Baltic Sea)
- Netherlands - 1 tug (plus cooperative agreement with Germany)



European “emergency towing vessels.”

# European Emergency Towing Vessels (ETV)



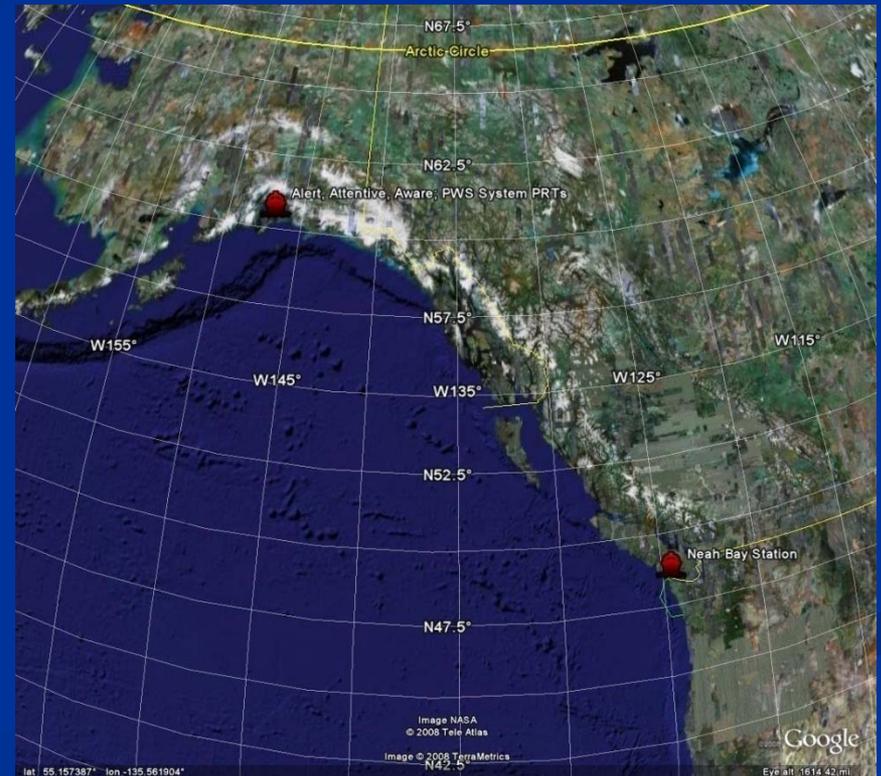
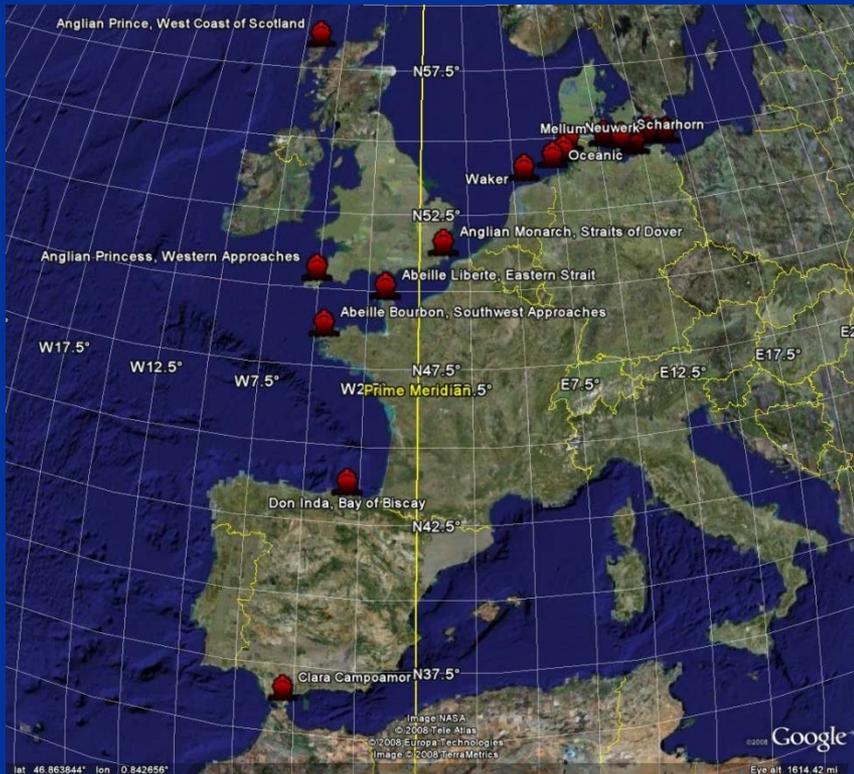
Spanish ETV  $\approx$  \$13.5 million

# What do ETVs cost?

| <b>Country</b>        | <b># of Tugs</b> | <b>Capital Cost</b><br>(US \$ in millions) | <b>Operating Cost</b><br>(US \$ per year) |
|-----------------------|------------------|--|---|
| <b>United Kingdom</b> | <b>4</b>         | <b>19-34M (each)</b>                       | <b>18M</b>                                |
| <b>Spain</b>          | <b>2</b>         | <b>13.5M (each)</b>                        | <b>?</b>                                  |
| <b>Australia</b>      | <b>1</b>         | <b>?</b>                                   | <b>9-12M</b>                              |
| <b>France</b>         | <b>4+</b>        | <b>?</b>                                   | <b>?</b>                                  |

# A View From Above

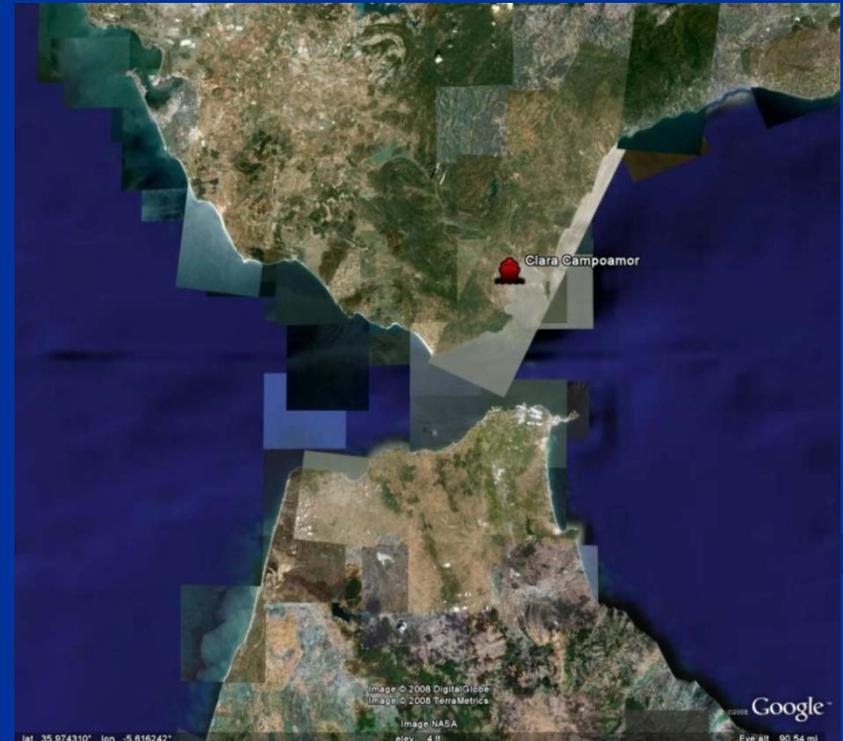
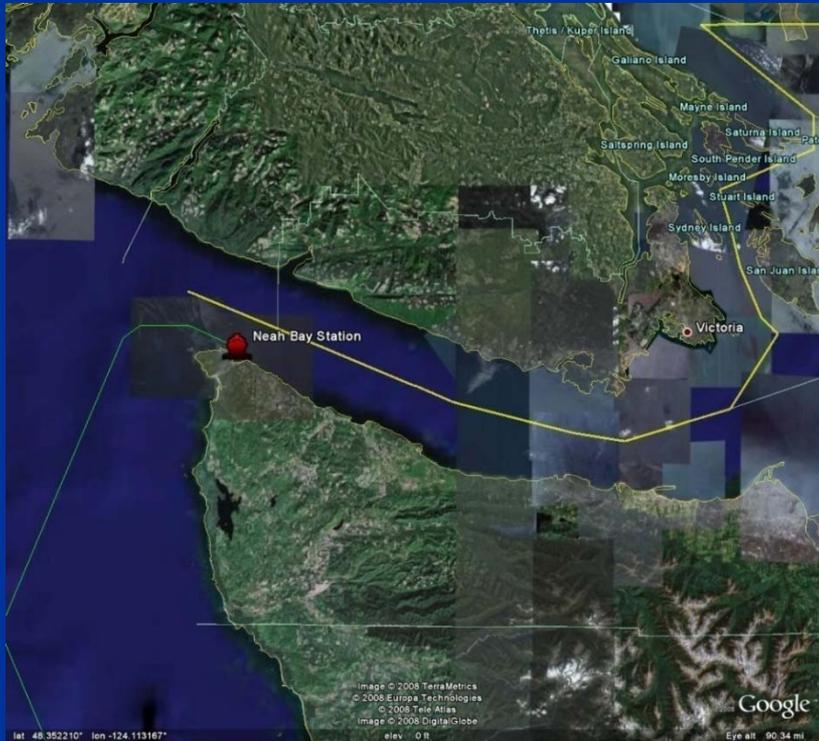
- Both eastern ocean margins
- Similar weather
- Similar latitude
- Similar ships
- Dissimilar protection



# Strait of Juan de Fuca vs. Strait of Gibraltar

(satellite photos from about 90 miles up)

- 11.5 Nautical miles across vs. 8.8 nautical miles across
- 55 Nautical miles in length vs. 15 nautical miles long
- 55 Transits per day vs. 250 transits per day
- Both have traffic lanes and vessel traffic service.
- Both subject to ocean storms moving in from the west.



# French ETV Experience

## 1980 - 2005

“Over the past 25 years Abeille Flandre has been involved in over 800 operations, saving 214 vessels and rescuing over 7,000 seafarers. In 16 cases this tug successfully intervened in circumstances which might otherwise have ended in catastrophic pollution.” – Salvage World, 2005



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