
PUGET SOUND VESSEL OPERATIONS

Captain Craig Lee

BP Shipping

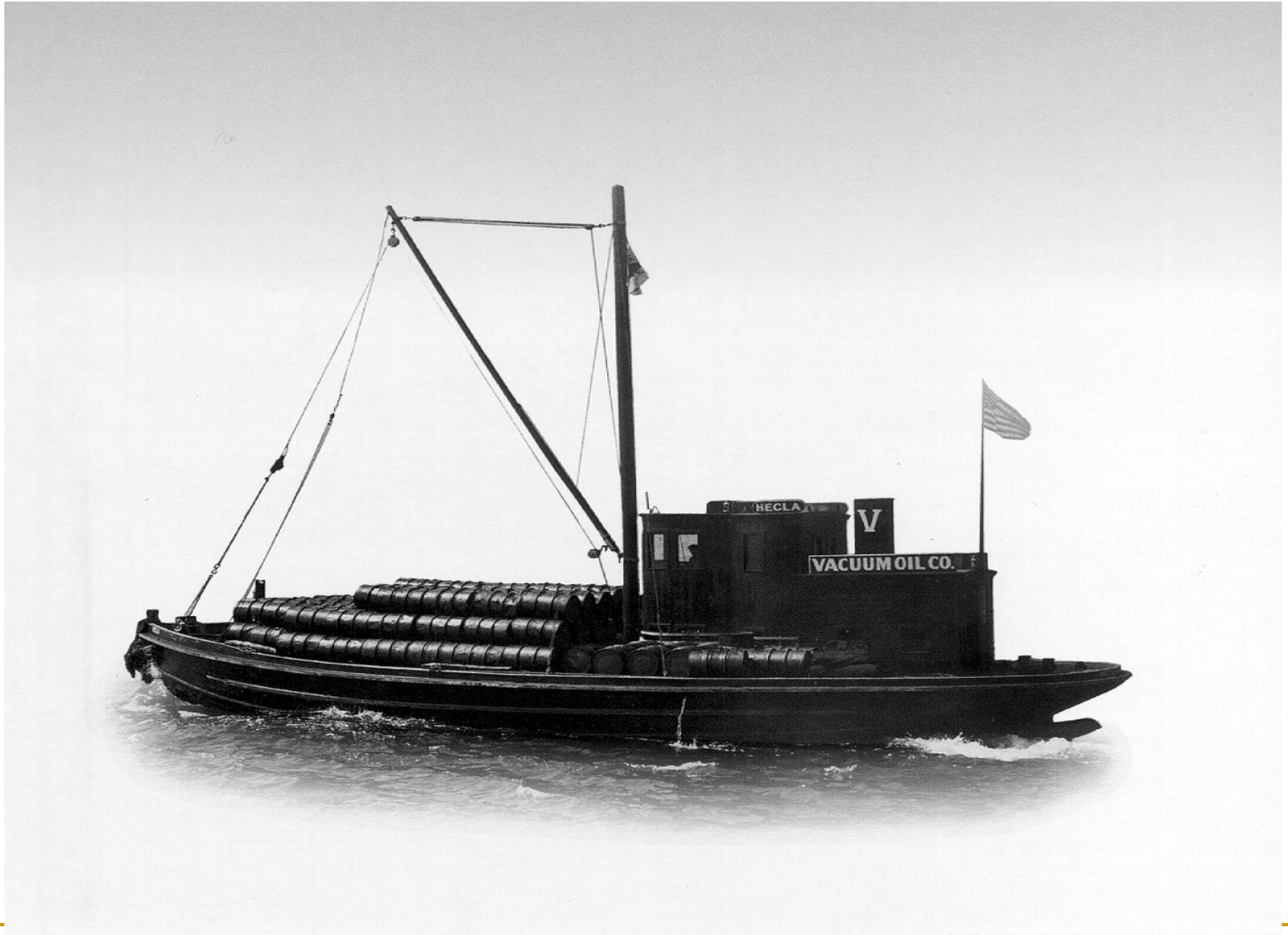
Port Superintendent, Pacific Northwest

TOPICS

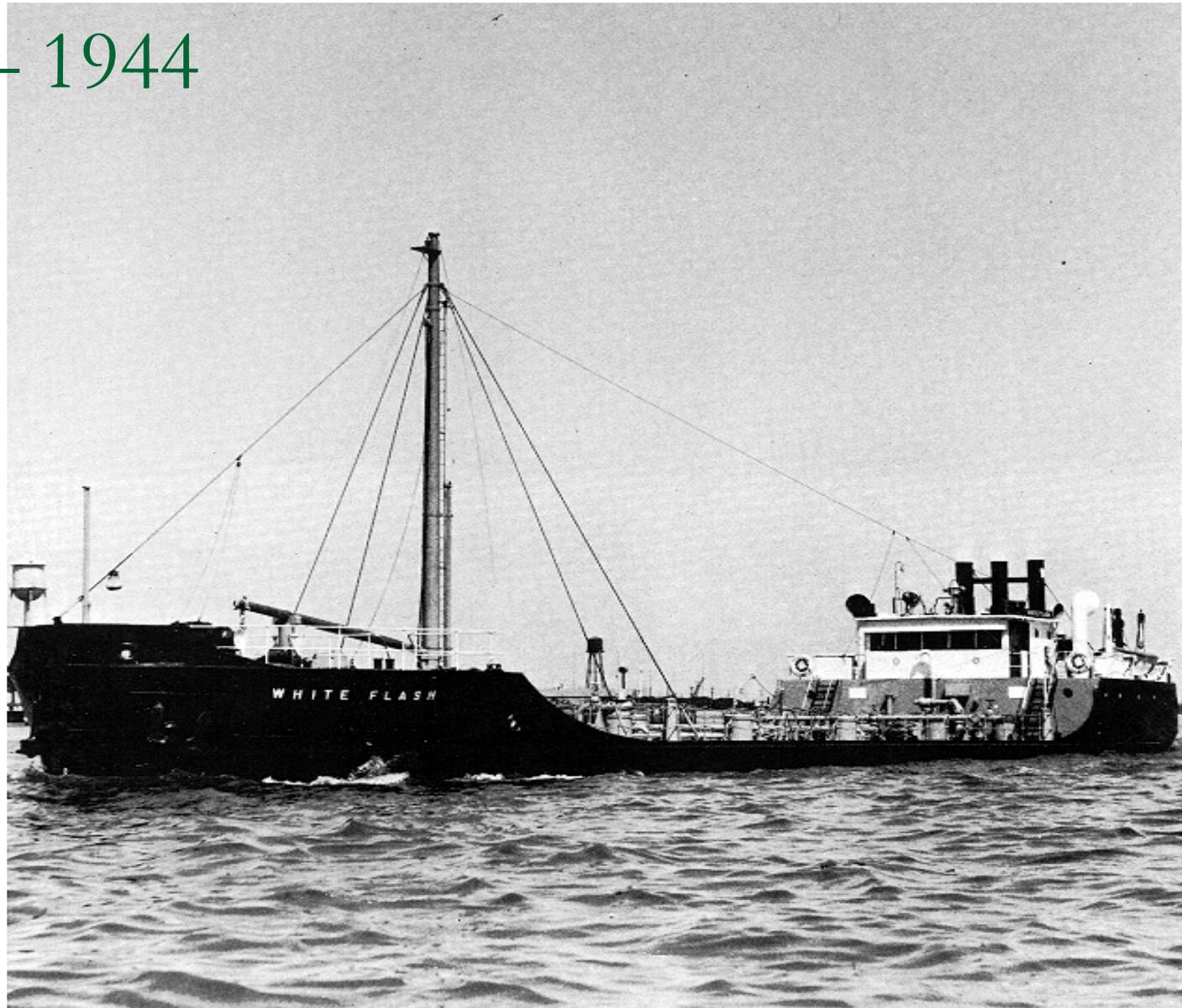
- TANKER HISTORY
 - BRIDGE TEAM MANAGEMNT
 - INLAND NAVIGATION
 - ROUTING
 - PILOT, ESCORTS, AND ASSIST TUGS
 - CP DOCKING PROCEDURES
-

1895





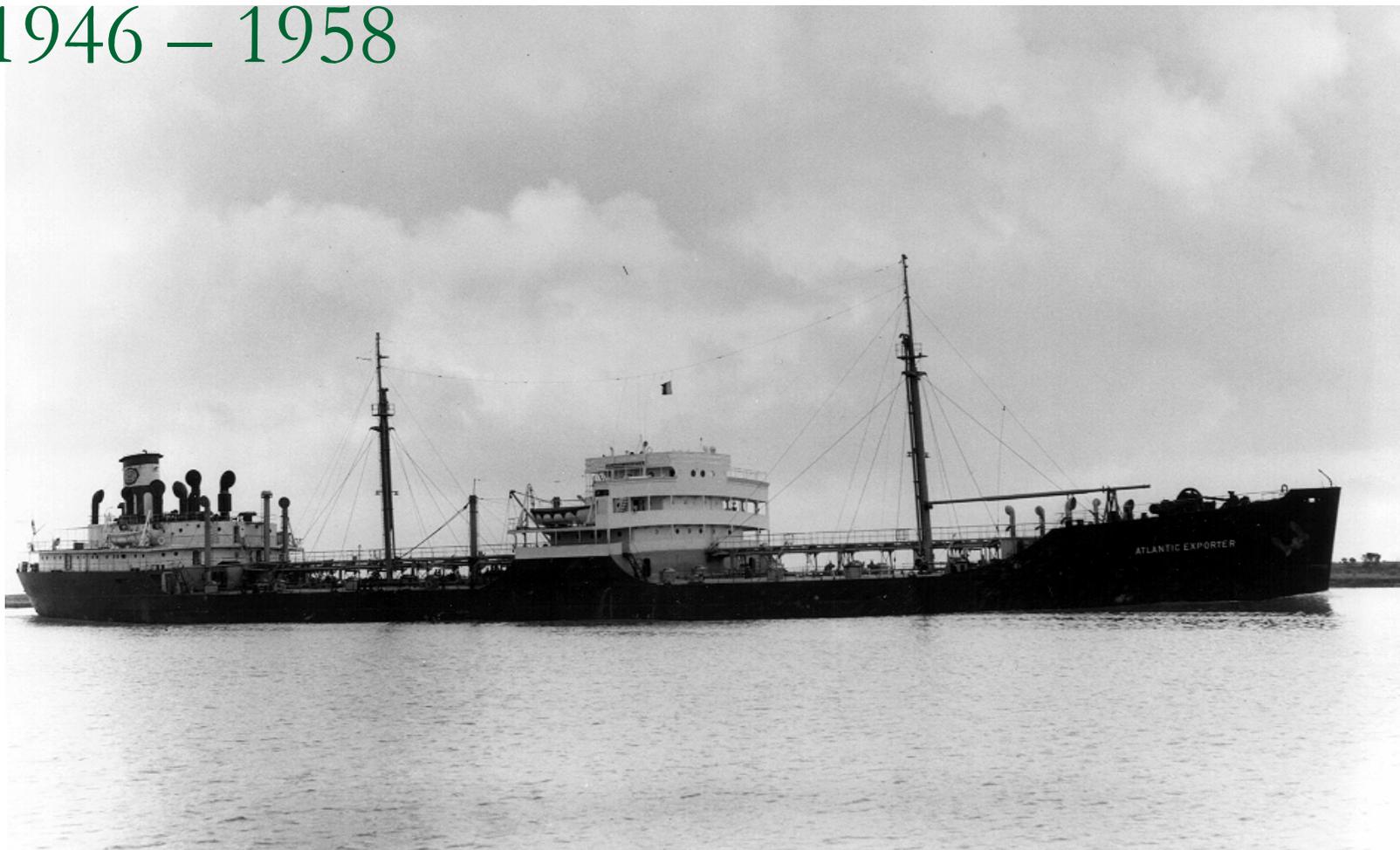
1931 – 1944



1925 – 1938



1946 – 1958



1958 – 1982



1974 – 1999



1980 – 2005



2004

ALASKA CLASS TANKER



Bridge Team Management

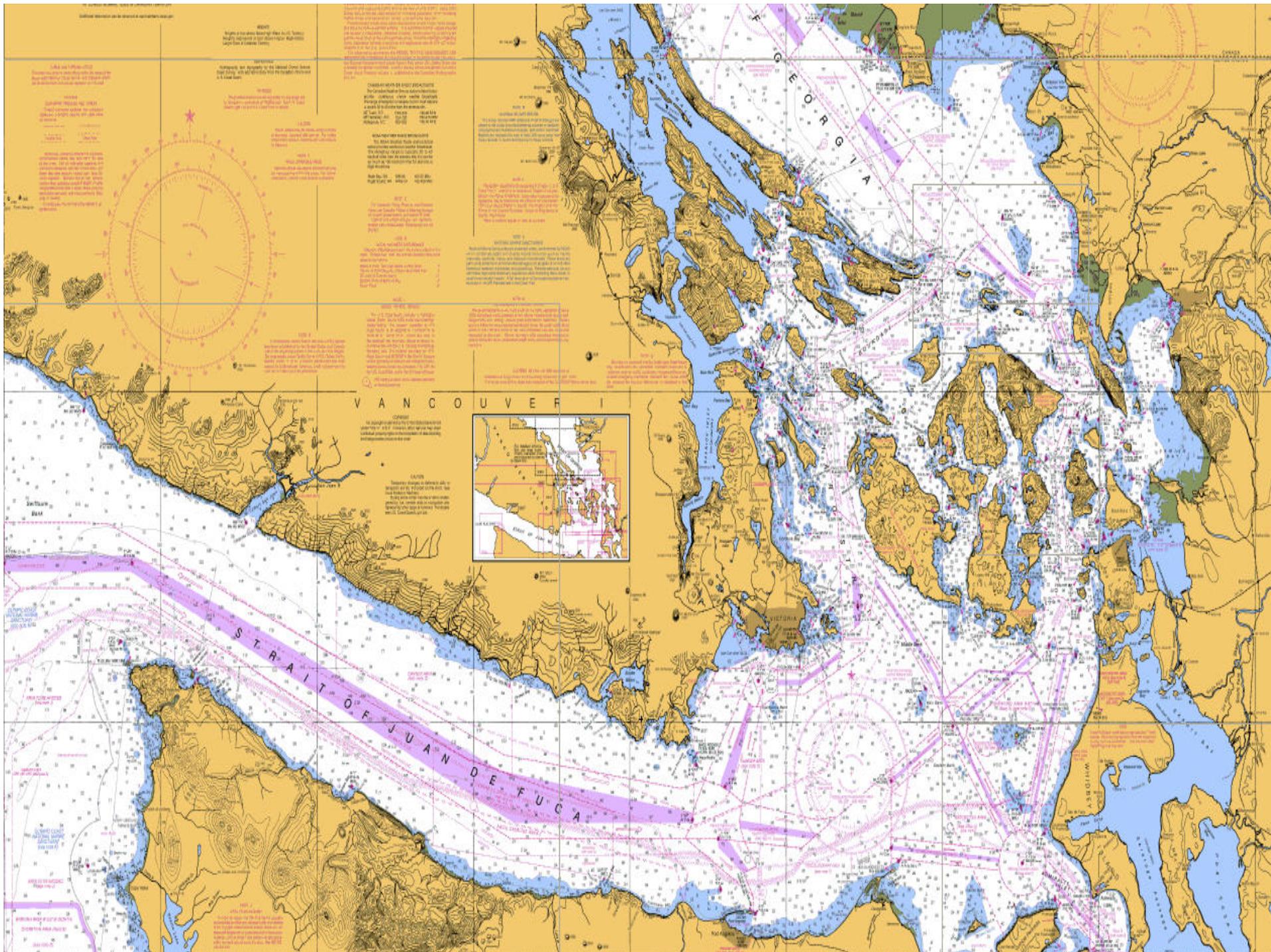
- Breaking the “error chain”
 - Watch keeping
 - Passage planning
 - Team work
 - Navigating with a pilot
-

Inland Navigation

- VTS – Vessel Traffic Service
 - ECDIS – Electronic Chart Display Information
 - AIS – Automatic Identification System
 - VHF
 - Radar
-

Routing

- Rosario Straits or Haro Straits
 - Rosario Straits – normal route
 - Haro Straits
 - Route determined during pilot / master conference
 - Traffic
 - Visibility
 - Current
-



Piloting, Escort and Assist Tugs

- All tank vessels to / from Cherry Point except barges take pilots.
 - Tug escort required for loaded/partial loaded tankers between Buoy “R” and dock.
 - All tank vessels required to use assist tugs when docking and undocking.
-

Dock Procedures

- Weather Restrictions:
 - Sustained Wind > 35 mph
 - Seas > 5 feet

 - Tug Requirements
 - One docking tug for ATB's and Barges
 - Two docking tugs for tankers

 - SSSCL – Ship / Shore Safety Check Lists
-

- 2 Dock Wings
 - South – Crude and Product
 - North – Product loading only
- BP Requires 2 assist tugs
- Only 1 vessel arriving/departing at a time
- Vapor Recovery System





- BP provides 6-man line handling crew
- Takes 1-2 hours to complete mooring
- “All fast” – tug is released and gangway placed aboard
- Loading Area Boomed – ships fully boomed in the future
- Typical transfer – 12 to 36 hours







Lummi Fishing Operations Near Cherry Point – An Overview



Merle Jefferson, Sr.
Executive Director
Lummi Natural Resources Department
The Lummi Fishing Gear Loss Forum
January 30, 2008
Silver Reef Casino



Purpose Statement

- The purpose of this presentation is to:
 - Provide background information on the Lummi Nation;
 - Describe Treaty-protected fishing rights;
 - Describe Lummi fishing practices and the economic value of fishing to the Lummi Nation
 - Describe gear loss problems and identify potential solutions
 - Value of losses
 - Perceived causes
 - Spatial and temporal issues



Presentation Outline

- Introduction
 - Background on the Lummi Nation
 - Usual and Accustomed fishing grounds and stations
 - Lummi people and government
 - Economic importance of fishing
 - Fisheries Management
 - Gear Loss Issues
 - Summary and Conclusions
-

Background



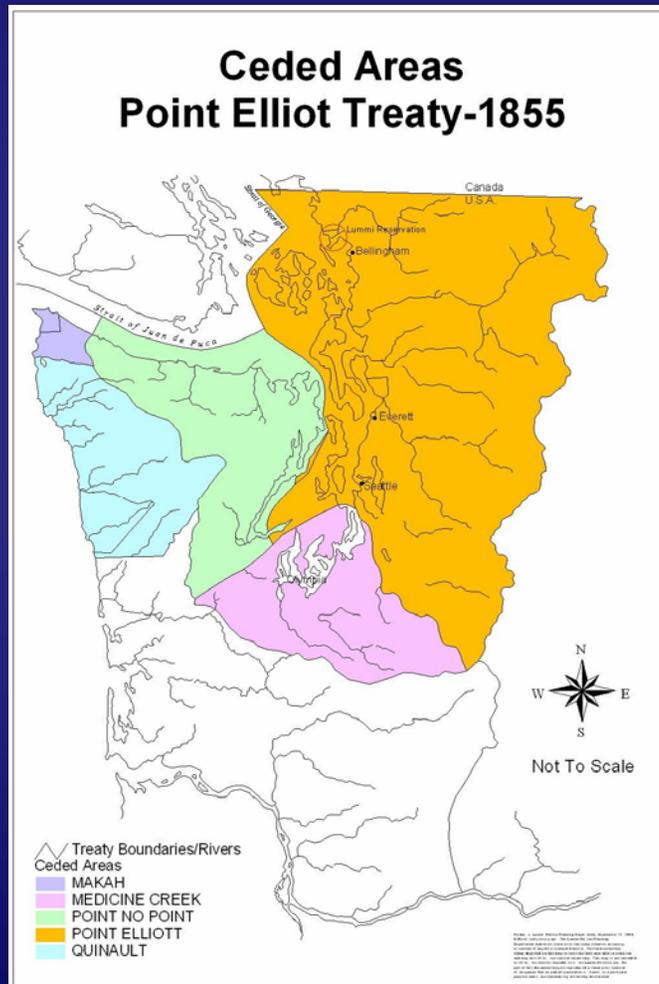


In a Nutshell

- The Lummi Nation signed the 1855 Treaty of Point Elliot.
- Like most northwestern Indian tribes, the Lummi have a relatively small Reservation and a large Usual and Accustomed (U&A) area.
- The Lummi are a fishing tribe – Lummi fish for salmon, other finfish, and shellfish (e.g. crab, clams, oysters).
- Lummi rights to harvest fish throughout the U&A is guaranteed by the Treaty. These rights have been re-affirmed by various federal court cases including the 1974 Boldt decision.
- Treaty Tribes are ensured 50 percent of the Total Allowable Catch and are fishery co-managers.



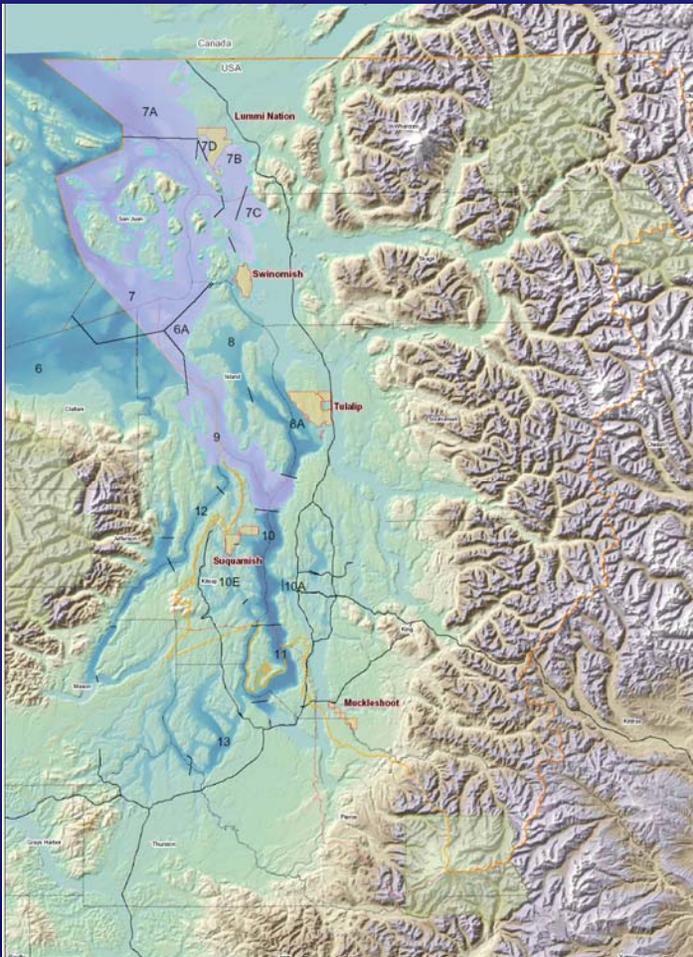
Brief History – the Reservation



- Lummi is a Coastal Salish tribe
- As part of the Point Elliot Treaty of 1855, vast areas of land were ceded to the United States
- The Treaty created a trust responsibility for the United States with respect to the Lummi Nation
- U.S. government agencies can not permit activities unless tribal interests are protected.



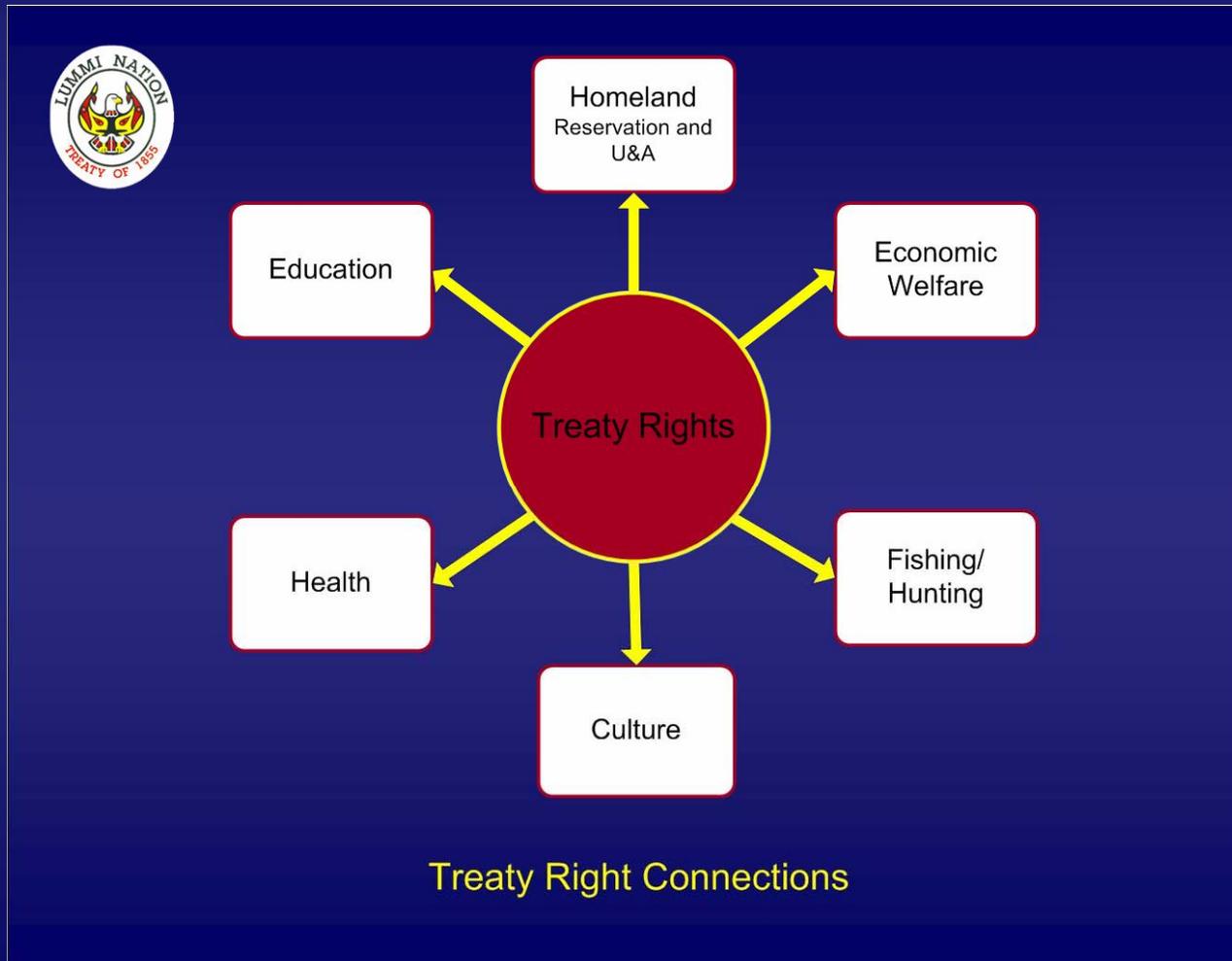
Brief History – the U&A



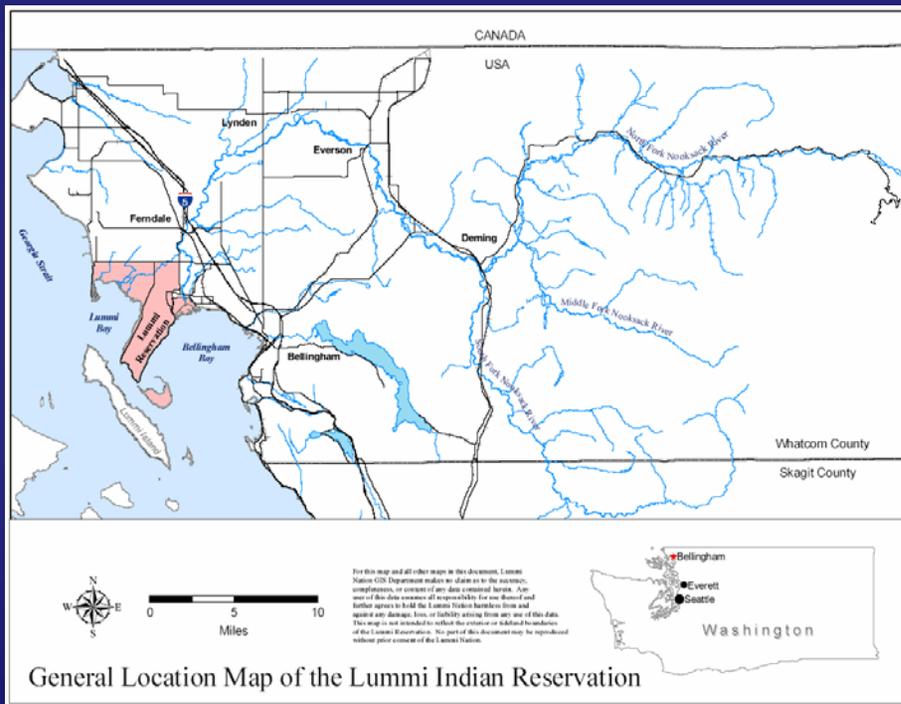
- Lummi fishing, hunting, and gathering rights were reserved by the Treaty at all Usual and Accustomed (U&A) grounds and stations.
- Lummi Nation U&A grounds and stations include:
 - Nooksack River Basin,
 - Coastal rivers/streams from Fraser River to environs of Seattle,
 - San Juan Islands.
- The Strait of Georgia and the Cherry Point shoreline is in the Lummi backyard.



Treaty Right is Very Broad



Brief History – the Reservation

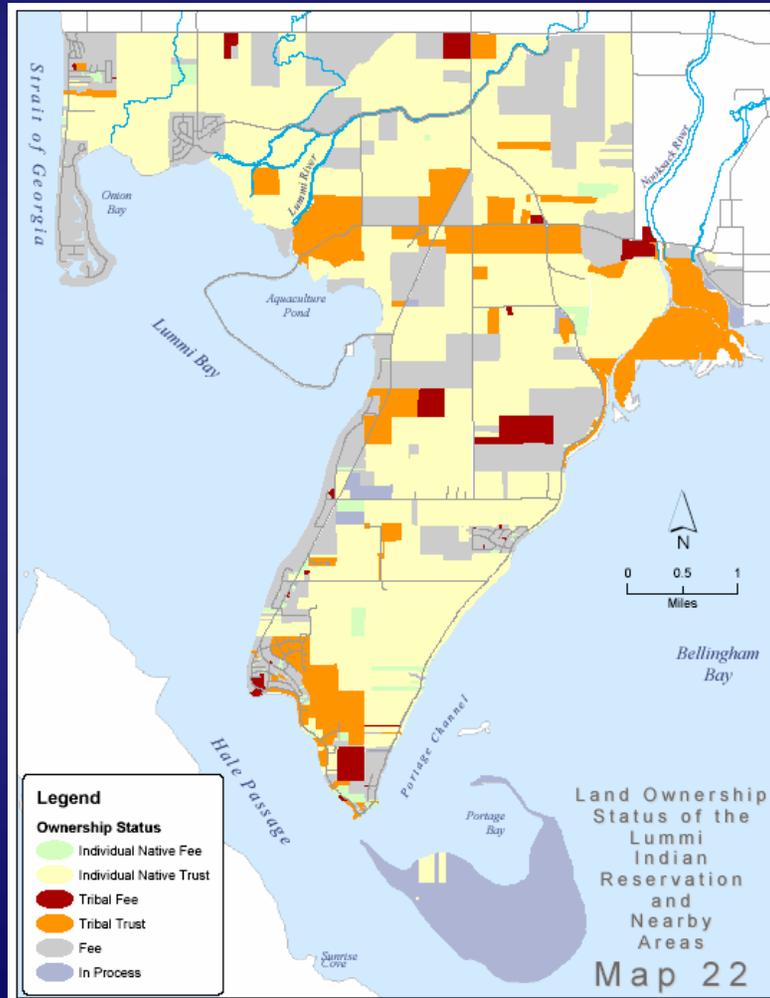


General Location Map of the Lummi Indian Reservation

- The Lummi Indian Reservation was created and reserved for the exclusive use of the Lummi people by the Point Elliot Treaty
- The Reservation is intended to be a permanent homeland for the Lummi people



The Lummi Reservation Today



- The Lummi Reservation is comprised of about 12,500 acres of upland and about 7,000 acres of tidelands
- The Lummi Nation and/or enrolled members own about 75 percent of uplands
- The Lummi Nation owns 100 percent of tidelands

The Lummi People



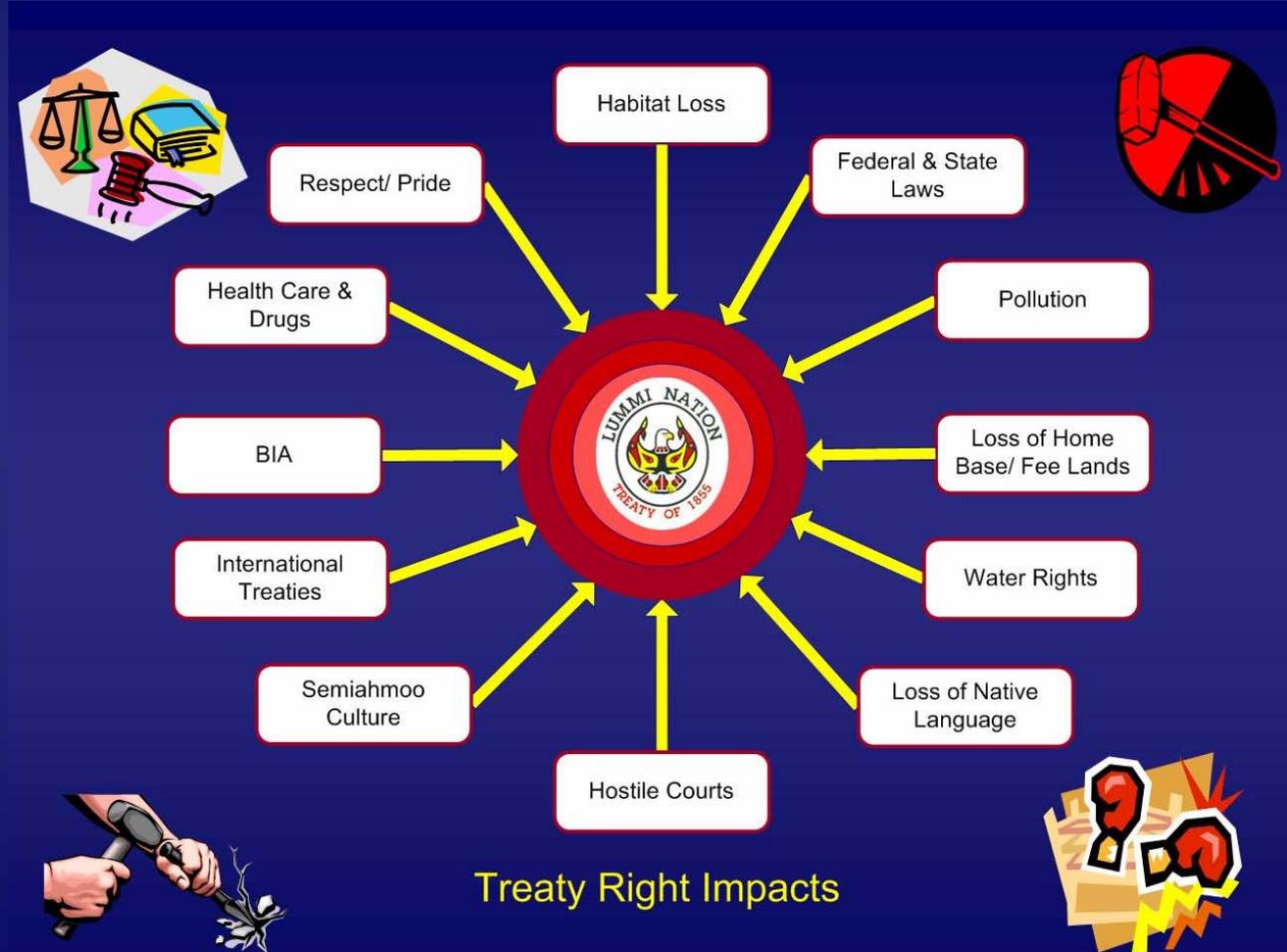
- Approximately 4,200 enrolled Lummi tribal members.
- Approximately 2,400 tribal members live on Reservation – the remainder live in the region or elsewhere.



The Lummi Government

- The Lummi Nation is a sovereign government and has been since time immemorial.
- The Lummi Nation was one of ten tribes nationally that initiated the Self-Government Demonstration Project (1988)
- The Lummi Nation is governed by an elected 11 member Lummi Indian Business Council and the General Council (all voting enrolled members).
- Numerous departments (e.g., Cultural, Economic Development, Law and Justice, Education, Health, Planning, Natural Resources)
- Independent Tribal Court system.

Treaty Rights Are Being Impacted



Treaty Right Impacts



Governmental Actions



- Create family wage jobs
 - Lummi Government (9th largest employer in Whatcom County area)
 - Tribal enterprises (e.g., Silver Reef Casino, gas stations, mini-marts, Northwest Indian College, K-12 School)
- Train dislocated workers
 - Construction trades
 - Natural Resources restoration
- Seek new business opportunities to continue economic diversification and increase self-reliance and economic independence

Governmental Actions



- Promote education and opportunities for tribal youth.
- Construction of a new \$24 million K-12 school completed during 2004.

Significance of Fishing



Lummi is a Fishing Tribe



Lummi is a Fishing Tribe



Lummi is a Fishing Tribe



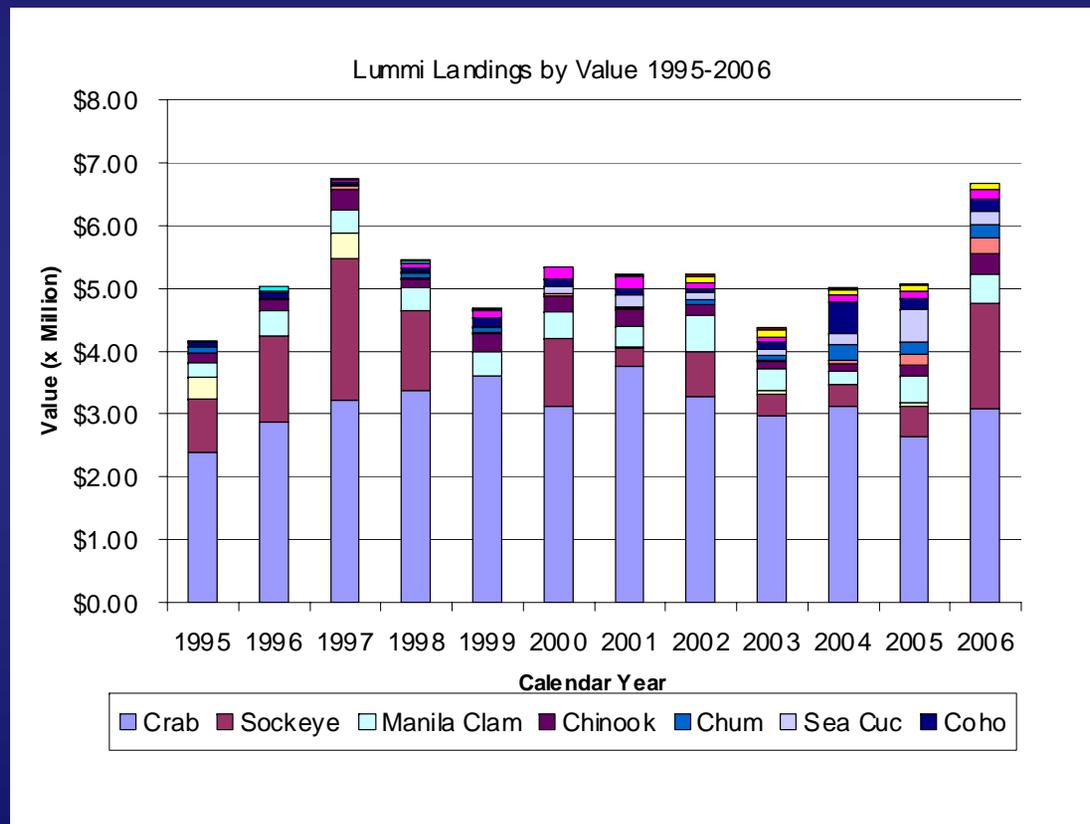


Lummi is a Fishing Tribe

- Lummi has largest fishing fleet of all northwest tribes.
- At its peak in the mid-1980s, the Lummi fishing industry employed approximately 2,000 Lummi members.
- In the 10-year period between 1995 and 2005, on average there were 592 fishing registrations and 126 crabbing registrations each year.
- There are currently over 250 vessels registered with the Lummi Nation.



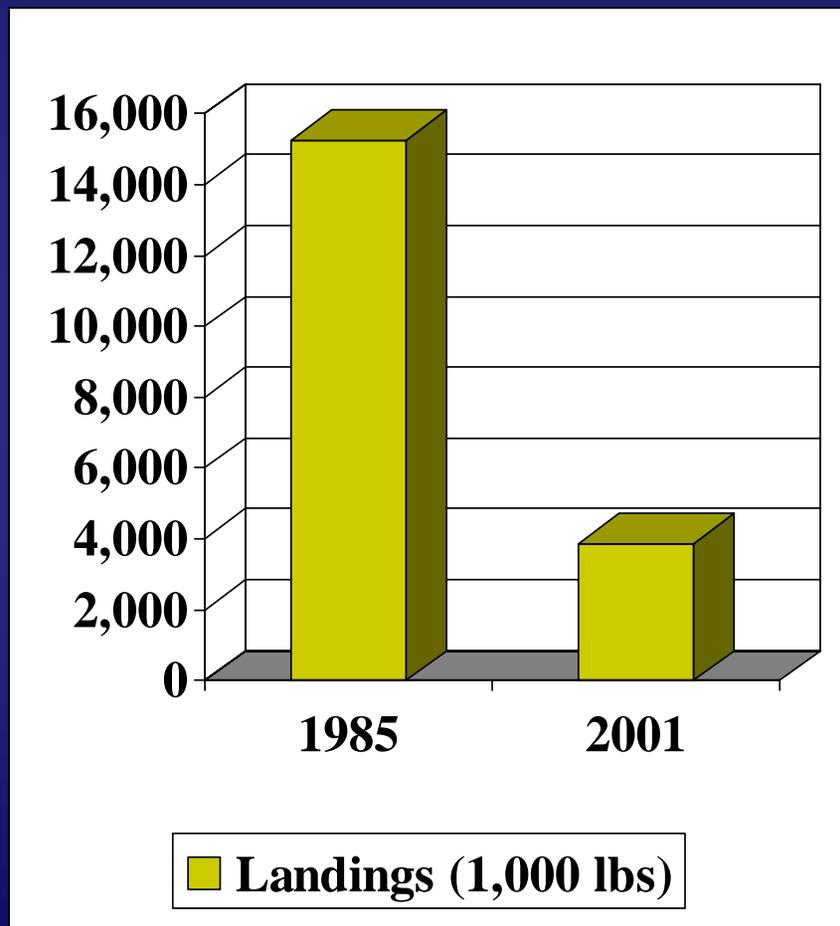
Lummi is a Fishing Tribe



- Over the last 10-years, the crab fishery provided the largest percentage of the yearly fishery revenue
- Sockeye salmon and manila clams were next.
- There was no Sockeye fishery during 1999 and 2007!!!
- The loss or reduction of a fishery increases the importance of the other fisheries to the Lummi economy.
- Although there are annual variations, 2001 is representative of the most recent 10 years.



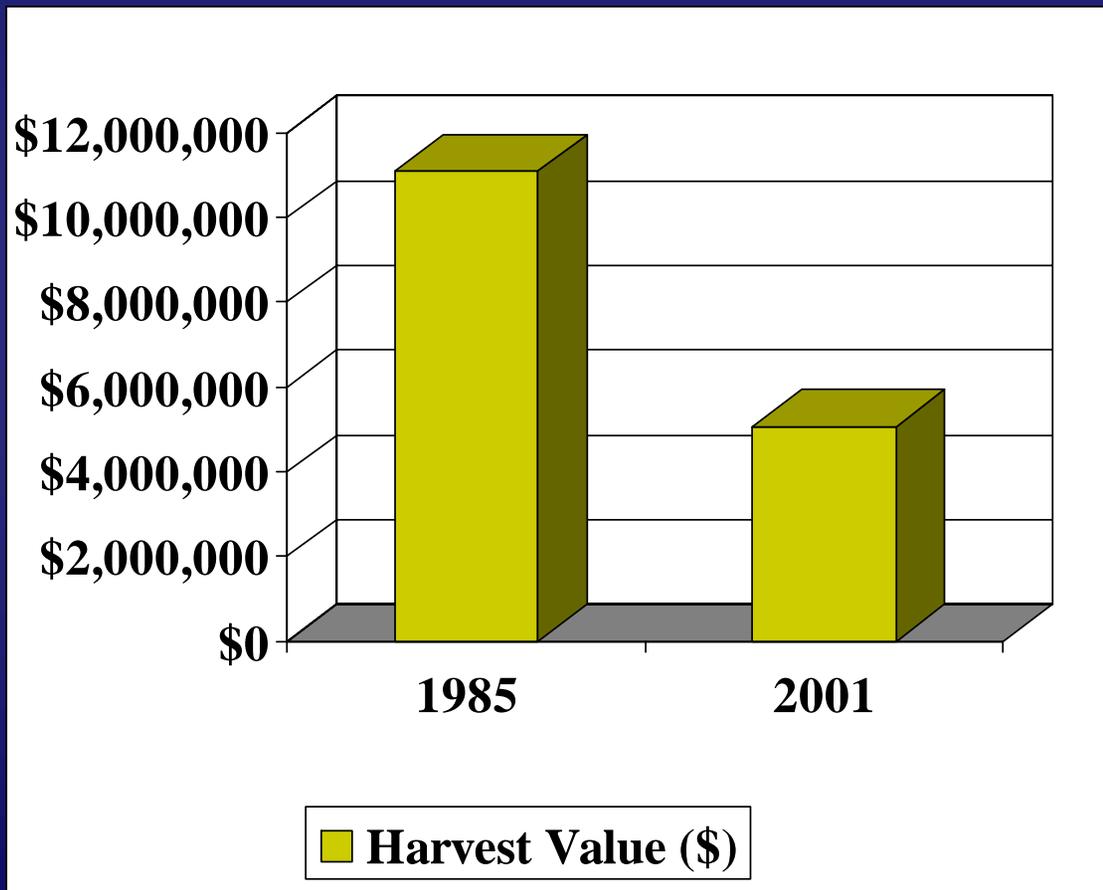
Lummi is a Fishing Tribe



- In 1985, the Lummi Fishing Fleet landed about 15.3 million pounds of fin- and shellfish.
- In 2001, the combined harvest was about 3.9 million pounds of fin- and shellfish.



Lummi is a Fishing Tribe



- In 1985, the value of the Lummi Fishing Fleet harvest was over \$11 million.
- In 2001, the value of the harvest was a little over \$5 million

Fisheries Management





Fisheries Management

- Lummi co-manages the fishery (fin-fish and shellfish) with other tribal governments and Washington State (WDFW).
- The Fishery is also managed pursuant to international treaties.
- Substantial coordination is required to establish harvest levels, the timing and duration of openings for each species, and to adapt to changing conditions.



Fisheries Management

- Preseason Planning Activities: Identify harvestable surplus, model impacts of harvest, estimate allocation of shares (tribal/non-tribal), negotiate fishing schedules, project harvest.
- During Season Activities: Monitor and evaluate production and harvest data (fish ticket database), ensure catch does not exceed allocations.
- Post Season Activities: Evaluate production estimates and actual harvests.

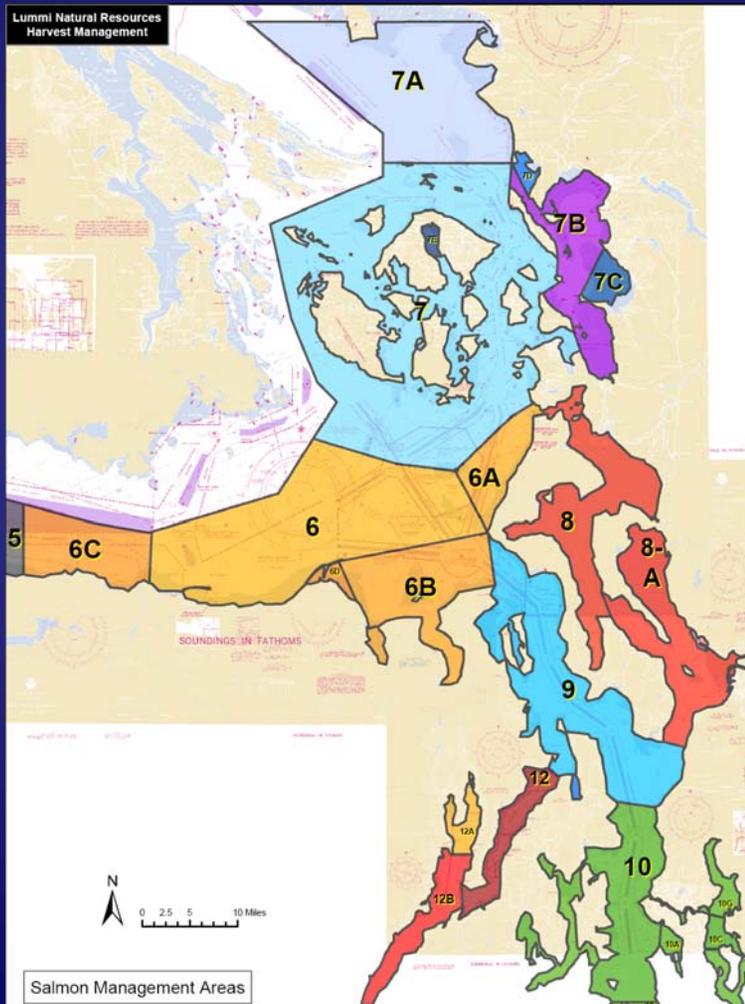


Fisheries Management

- Fisheries are managed by “Management and Catch Reporting Areas”.
- There are Management Areas for Salmon, Management Areas for Shellfish (e.g., crab, clams, oysters, geoduck), and Management Areas for shrimp.
- The Georgia Strait area along Cherry Point is in the 7A Salmon Management Area and the 20A Shellfish Management Area.



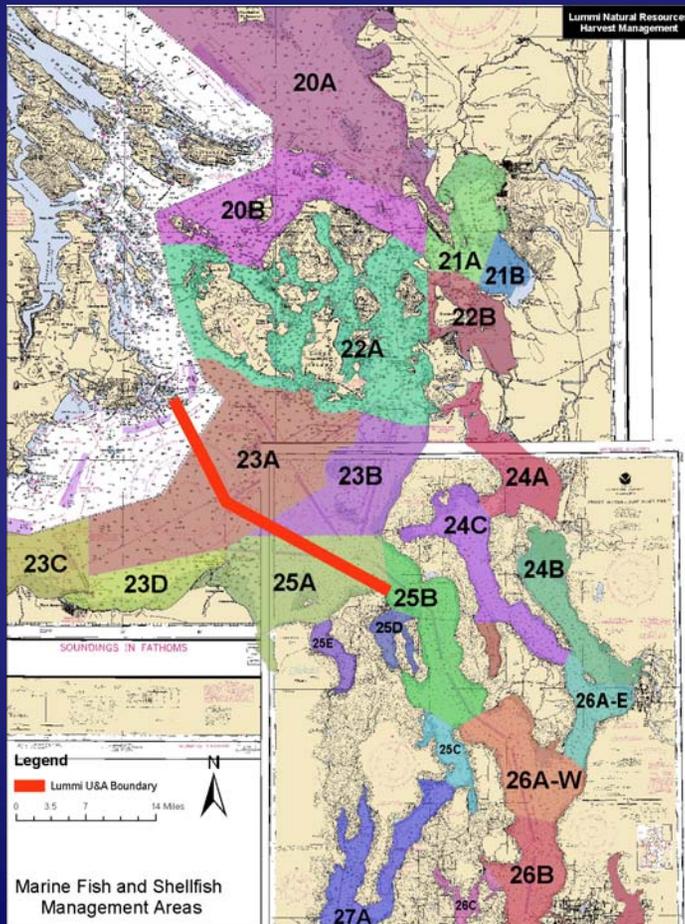
Fisheries Management



- Salmon Management Areas



Fisheries Management



- Shellfish Management Areas
- Areas 20A, 20B, 21A, 21B, 22A, and 22B are referred to as Crab Management Region 1



Fisheries Management

- Crab Management Region 1 Fishery (Overview):
 - During a typical year the fishery is open a few times during the summer months and then continuously from the beginning of October through at least April 15.
 - Regulations state that crab pots can only be pulled during daylight hours.
 - Pots are required to have numbered buoy tags assigned by the Lummi Natural Resources Department – buoy tags are required any time the number of pots authorized for an opening are limited to 40 or less.
 - Fishers typically run their gear twice a day when they have 40 pots or less.



Fisheries Management

- Crab Management Region 1 Fishery (Summer Months):
 - 4 to 5 shorter openings (24 hours to 4 days).
 - Cherry Point area generally opened with the rest of the San Juan Islands for short periods (12 to 48 hours – 24 hours is typical) beginning at the end of August.
 - Fishers are allowed 30 pots during this time and participation is high.
-



Fisheries Management

- Crab Management Region 1 Fishery (October - November):
 - Beginning around October 1, the fishery is open continuously.
 - The majority of crab is caught during the short summer openings and during October.
 - The catch is often still high in November, but slowly drops off.
 - Highest participation in the fishery is during the summer openings, October, and November.
 - In October, fishers are allowed 40 pots (tags required) and that is often increased to 75 or 100 pots in November (no tags required).



Fisheries Management

- Crab Management Region 1 Fishery (December - April):
 - Crab numbers drop off.
 - Participation in the fishery drops off.
 - Fishers typically will have around 100 pots in the water.
 - Fishers run their gear only once a day.
-

Gear Loss





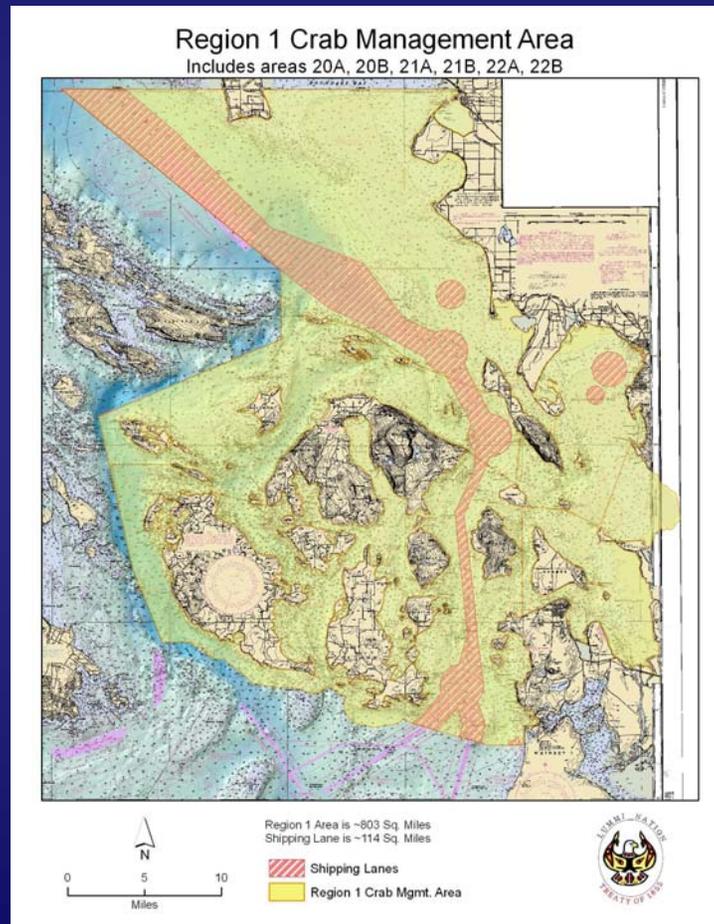
Gear Loss Information

- Crab fishery
 - 40-50 pots lost annually per fisher in Cherry Point area
 - Loss value about \$750 per pot
 - \$150 for pot and line
 - \$100/day lost opportunity cost
 - 6 days to deploy replacement gear
 - Not including gas, labor, and bait
- Salmon fishery
 - Exclusion zones preclude or limit fishing
 - Lost opportunity costs





Gear Loss/Lost Areas



- Designated Shipping Lanes and Moorage Areas occupy about 14 percent of the Region 1 Crab Management Area.
- A much larger area is impacted since ship, tug, and barge traffic access piers along Cherry Point outside of the designated shipping and moorage areas.



Causes of Gear Loss

- Tug and Barge traffic
 - Approximately 460 barges at ConocoPhillips Pier each year
 - Greatest Cause
 - Circling
 - Multiple vessels on stations
 - Not staying in shipping lanes and moorage areas
- Tanker traffic
 - Approximately 125 tankers at ConocoPhillips Pier and approx. 320 tankers at BP Pier each year
 - Approach and departure routes from piers





Where and When

- Geographic locations of Fishing and Gear Losses
 - Industrial piers – physically preclude fishing in areas
 - Shipping Lanes/Moorage Areas – interference with fishing rights
 - Spread throughout fishing areas – particularly Point Migley, Point Whitehorn, Alden Banks
 - Areas nearby industrial piers – cable winding operations as barges approach docks
- Time of losses
 - During openings whenever ships, barges, and tugs are present
- Greatest Impact
 - During shorter fishery openings during summer months and during October and November
 - 24-hour openings – no replacement opportunity



Loss Reduction - Fishers

- Actions taken by Fishers
 - Avoid shipping lanes and Moorage Areas as possible – however, this forgoes fishing opportunities protected by Treaty, need to go where the crab are.
 - Improve Communication
 - Spread gear (pots) out to increase chances that they can be avoided
 - Set gear parallel to barge traffic
 - Improve reporting of offending tugs/ships
 - Communicate fishery openings to tugs and ships
 - Avoid barge and ship traffic
-



Loss Reduction - Industry

- Suggested Actions for Industry
 - Improve scheduling
 - Reduce the number of barges/tugs in one area at one time
 - Stay within shipping lanes and designated moorage areas
 - Avoid pots in the water – more than one report where it appeared tugs purposely going over pots.
 - Raise tow bridles
 - Don't use tow bridles as anchors
 - Shorten tow length between tug and barge
 - Improve communication
-

Summary and Conclusion





Summary and Conclusion

- Lummi is a Fishing Tribe.
- Lummi has Treaty Rights to hunt, fish, and gather throughout the Usual and Accustomed (U&A) grounds and stations.
- The Lummi U&A extends from the Fraser River to the environs of Seattle.
- Georgia Strait and Cherry Point area are in Lummi's back yard.
- Lummi co-manages the fishery with other tribes, Washington State, and pursuant to international treaties.



Summary and Conclusion

- The industrial piers along Cherry Point and the associated ship, barge, and tug traffic interfere with the ability of Lummi fishers to exercise the Lummi Nation Treaty Right.
-



Summary and Conclusion

- Regulations govern fishery openings.
- The most lucrative openings, and therefore the openings with the highest participation, occur:
 - For short periods during the summer months
 - Continuous period from October through November
- Ship, barge, and tug traffic contribute to gear losses.
- A lost crab pot has a value of approximately \$750, approximately 40 to 50 pots are lost per fisher along Cherry Point per year.



Summary and Conclusion

- Opportunities exist to reduce gear loss.
 - A key is improved communication.
 - This Gear Loss Forum is an important step to improve communication.
 - Need to convert the action plan developed during this forum to actions on the water.
-

Thank you



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Derelict Fishing Gear in Puget Sound



The majority of derelict gear in Puget Sound is:

- Gill nets - tribal and non-tribal
(small number of purse seine nets)
- Crab Pots - tribal and non-tribal
(small number of shrimp pots)

Hazards of Derelict Fishing Gear

Human Safety

Marine life

Marine habitats

Property damage



Long-term impacts



Long-lasting synthetic materials

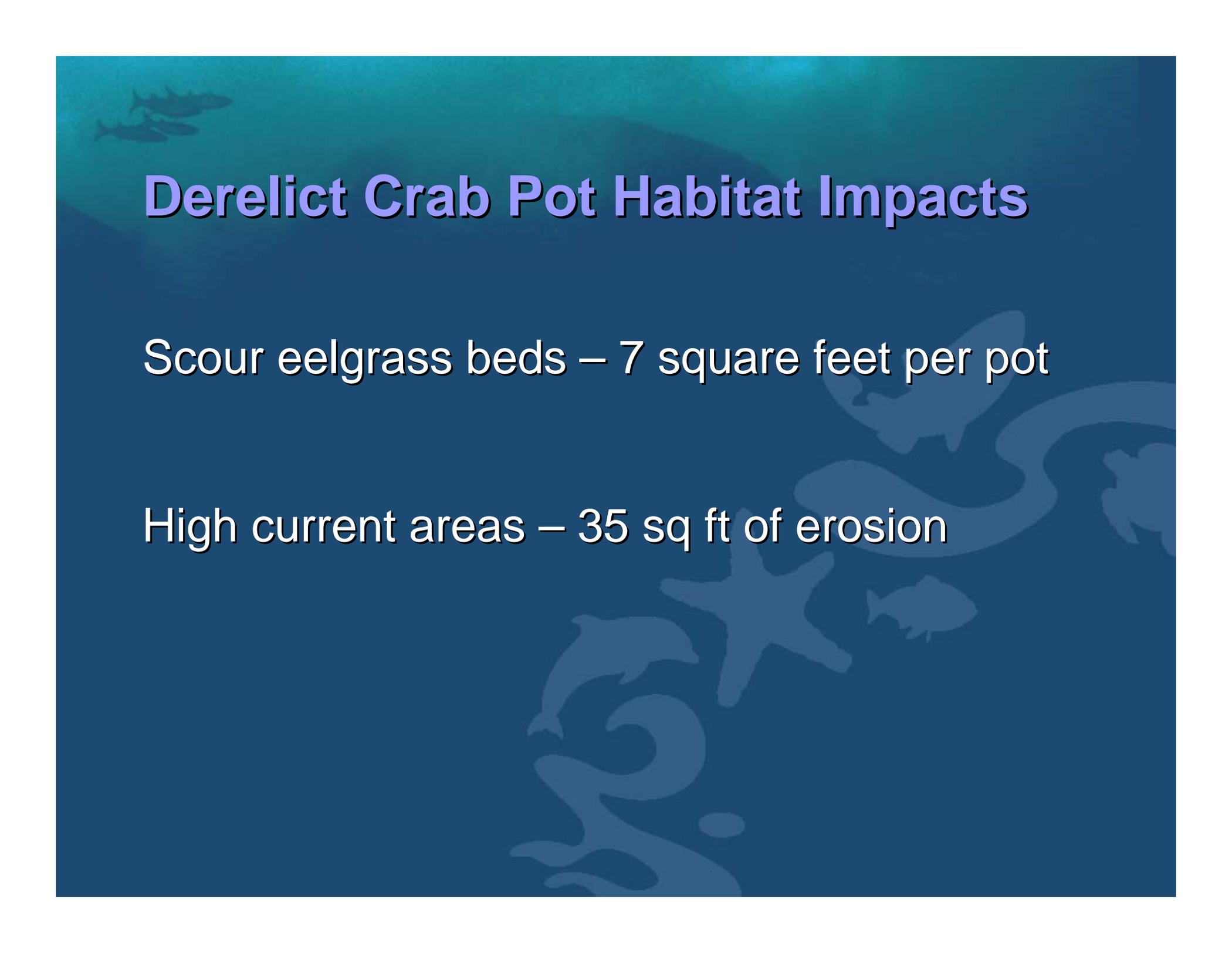
- Used since the 1940s
- Virtually no decomposition occurs
- Nearly invisible in water

Derelict Pot Impacts

37% of pots recovered were still fishing

Average 6.2 crabs per pot or over 74 crabs per pot per year
(about 150 lbs of crab)



The background of the slide is a deep blue underwater scene. In the upper left, three fish are swimming. In the lower right, a crab is visible. The overall lighting is dim, suggesting an underwater environment.

Derelict Crab Pot Habitat Impacts

Scour eelgrass beds – 7 square feet per pot

High current areas – 35 sq ft of erosion

Net Impacts



Nets catch marine life indiscriminately

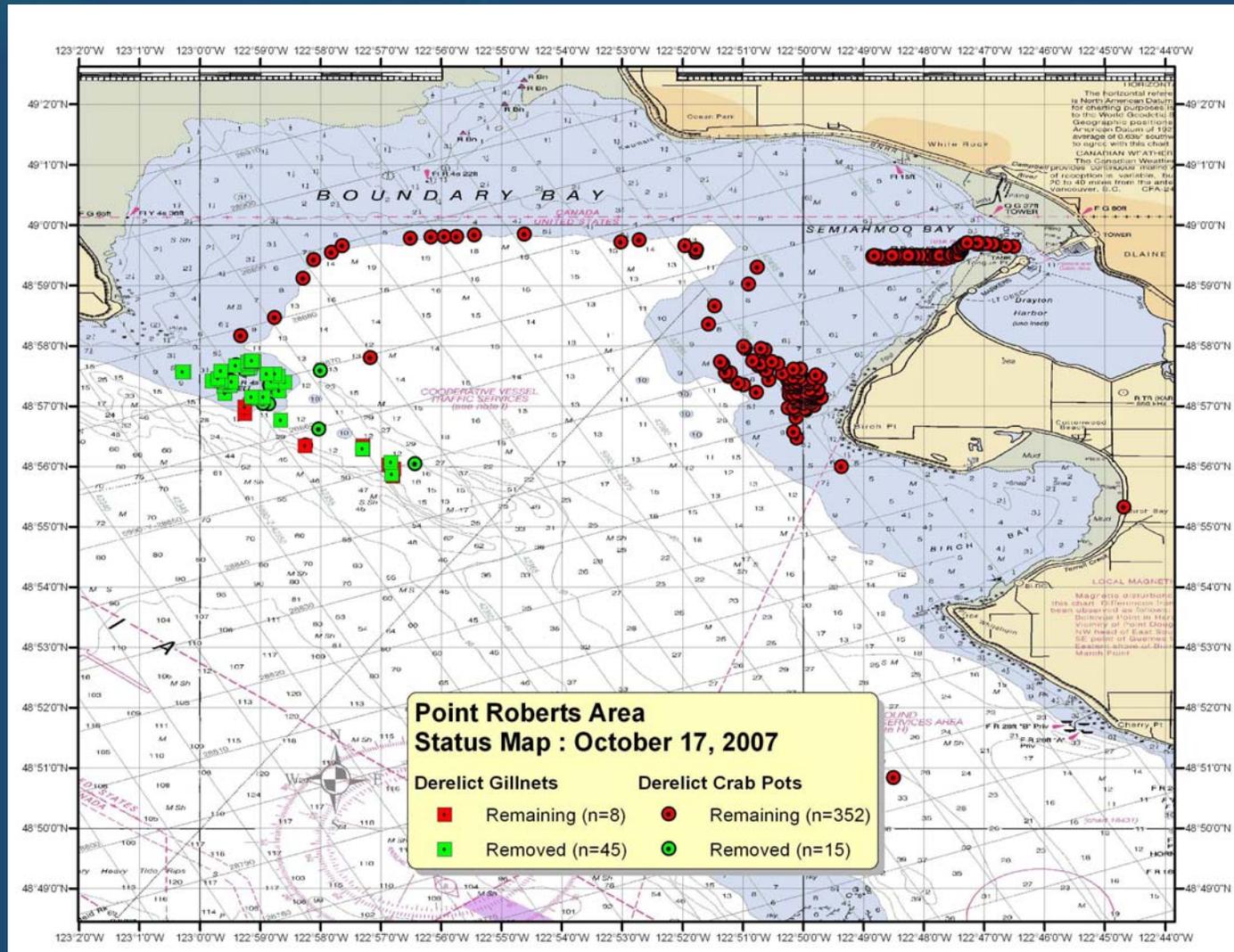
Nets damage marine habitats through scouring and smothering

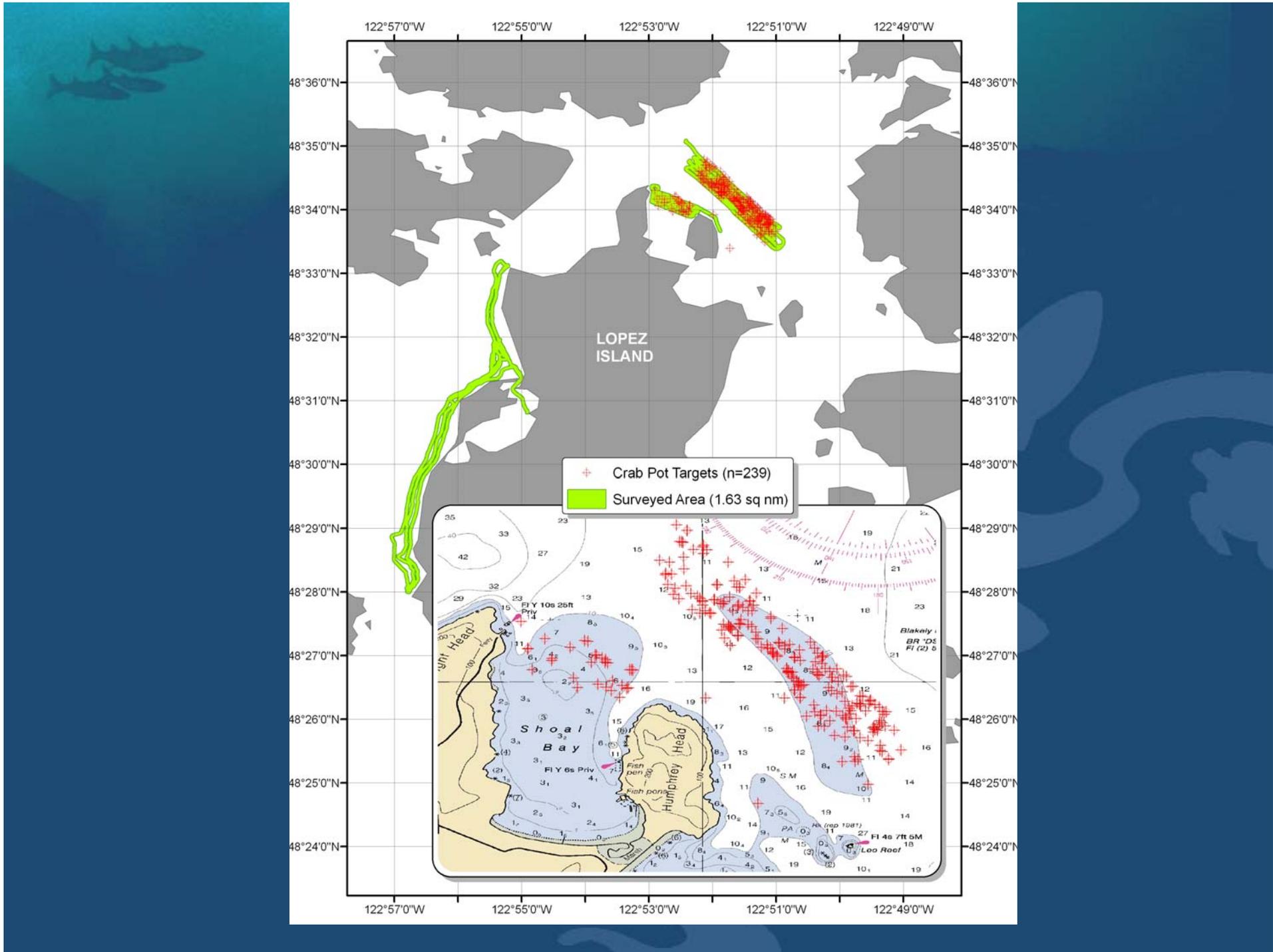
Even nets that are on the seabed capture and kill a variety of marine life

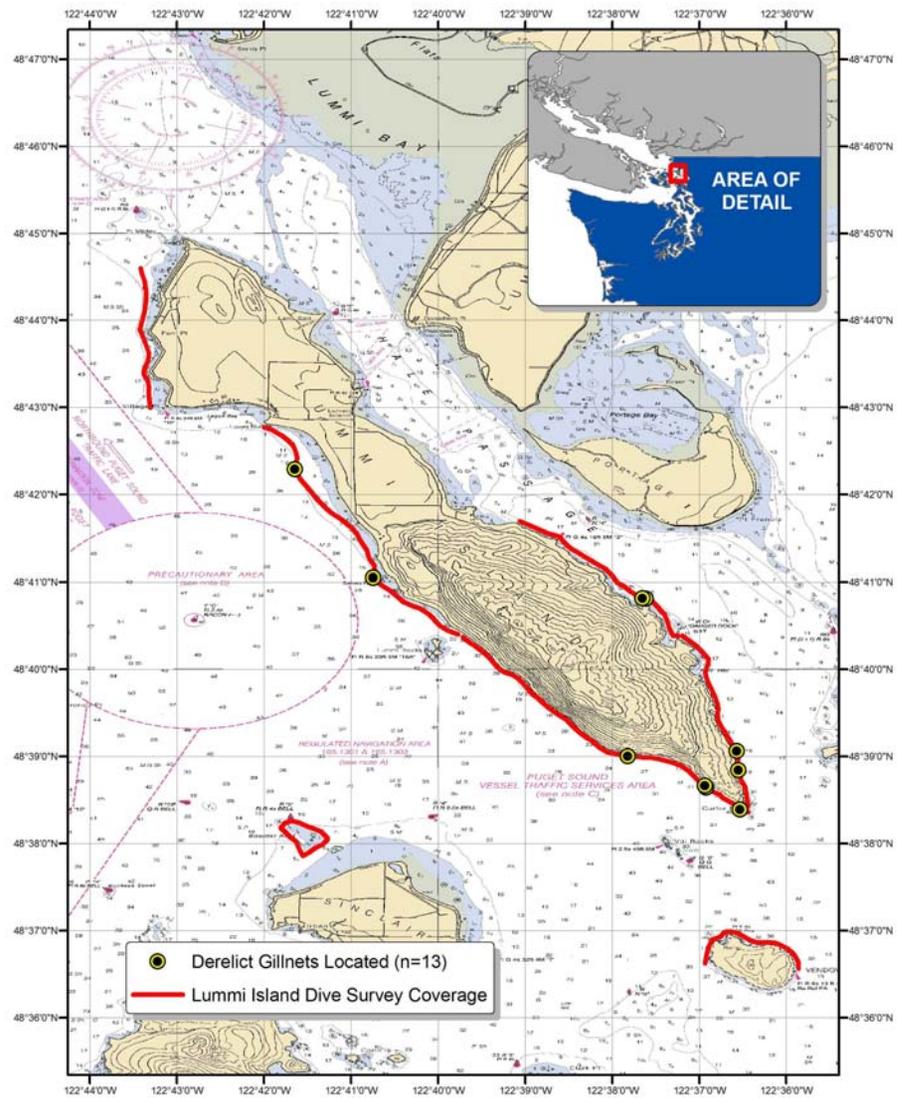
One Gillnet, One Week August '06

<u>Common Name</u>	<u>Alive</u>	<u>Dead</u>
Red Rock Crab	10	30
Kelp Crab	12	38
Spiny Dogfish Shark	0	30
Sockeye Salmon	0	25
Chinook Salmon	0	5
Rockfish Unid.	0	30
Kelp Greenling	0	40
Harbor Seal	0	1
Flatfish Unid.	0	90
Spotted Ratfish	0	110
Lingcod	0	30

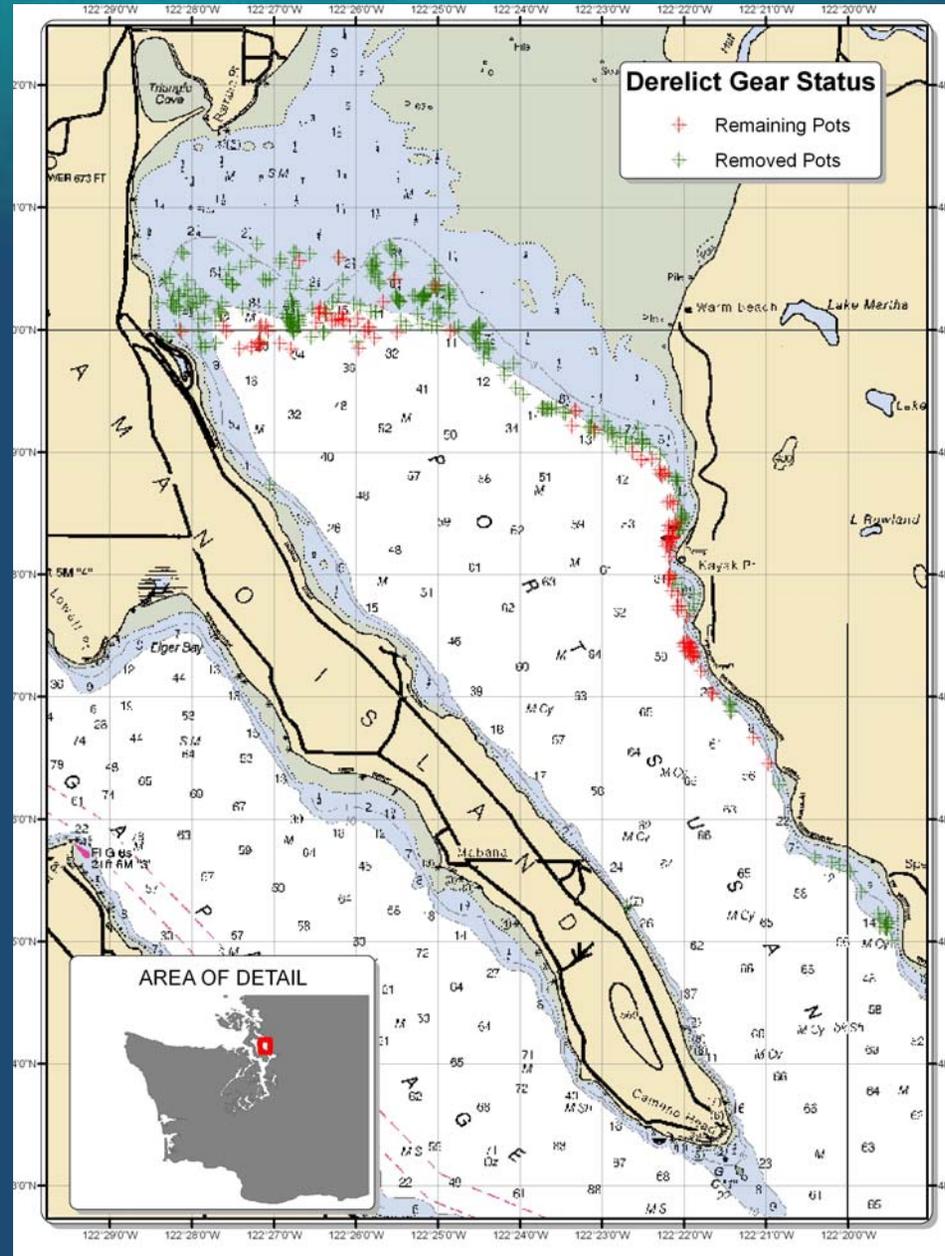
How big of a problem is it?





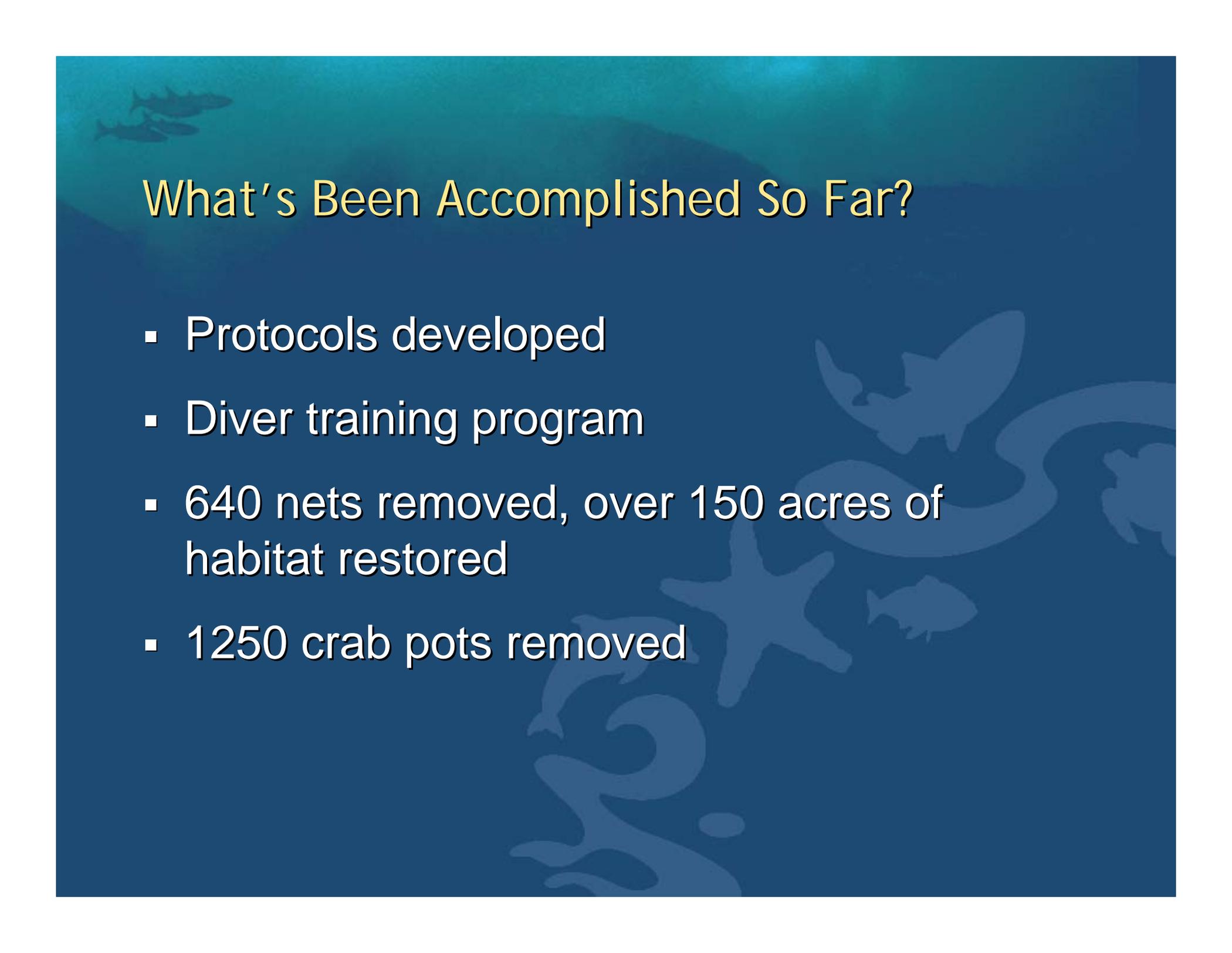


Gear is more difficult and expensive to remove in deep water



Documenting the Impacts of Derelict Fishing Gear



The background of the slide is a deep blue underwater scene. In the upper left, a school of fish swims. In the lower right, there are faint, stylized silhouettes of coral and a crab. The overall lighting is dim, suggesting an underwater environment.

What's Been Accomplished So Far?

- Protocols developed
- Diver training program
- 640 nets removed, over 150 acres of habitat restored
- 1250 crab pots removed

Where we go from here

- Derelict fishing gear is a reversible human impact
- The Northwest Straits Initiative is working throughout Puget Sound to survey and remove derelict nets and pots
- Our funding is largely grant dependent
- We welcome new ideas for projects

For More Information

www.nwstraits.org

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