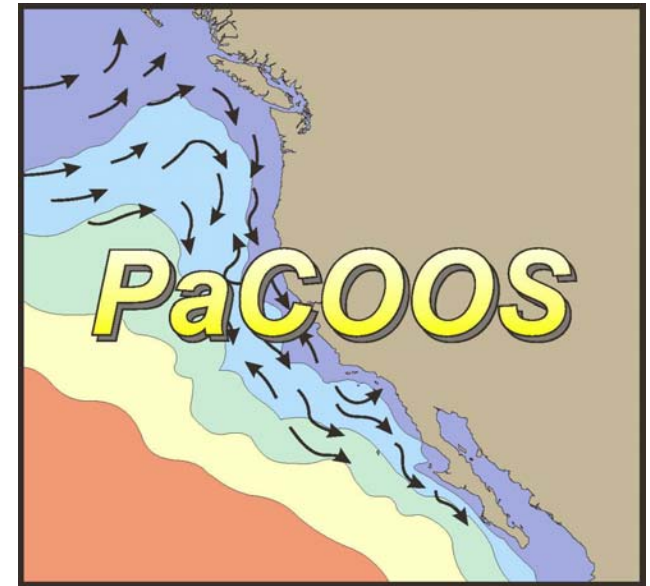


# Washington Department of Fish Wildlife Marine Fish Data Collection and Research Projects



# Fisheries Monitoring

- Commercial and Recreational
  - Coastal and Puget Sound
  - Partners include PacFIN, RecFIN, PSMFC, NMFS-NWFSC
- Data Collection Includes
  - Catch and Effort
    - Fish Tickets
    - Logbooks
    - Catch Record Cards
    - Intercept and Telephone surveys
  - Biological Data collection
    - Support stock assessment

## Marine Fish Research Focus

- Black Rockfish
- Development of a Rockfish Setline Survey
- Yelloweye

# BLACK ROCKFISH TAGGING PROGRAM NORTH OF CAPE FALCON, OREGON TO THE U.S.-CANADIAN



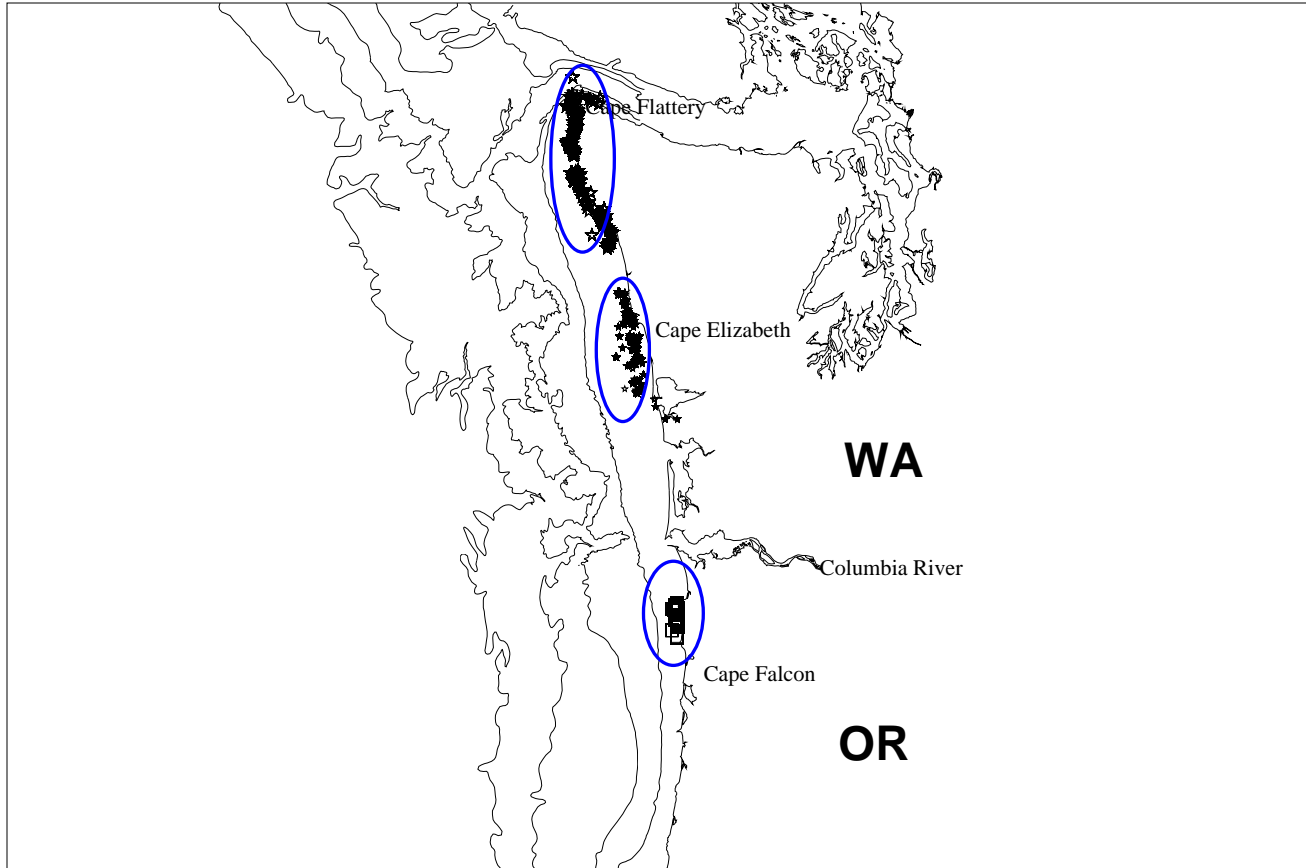
# Historical Tagging Data

- Spaghetti Tags
- Central Coast 1981-1985
  - Movement and Stock Integrity
  - Age Validation
- Cape Falcon to Cape Flattery 1986-1990
  - Movement and Stock Integrity
  - Tag Loss
  - Non-Reporting Rate
  - Release and Recovery by Time and Area
  - Population Index

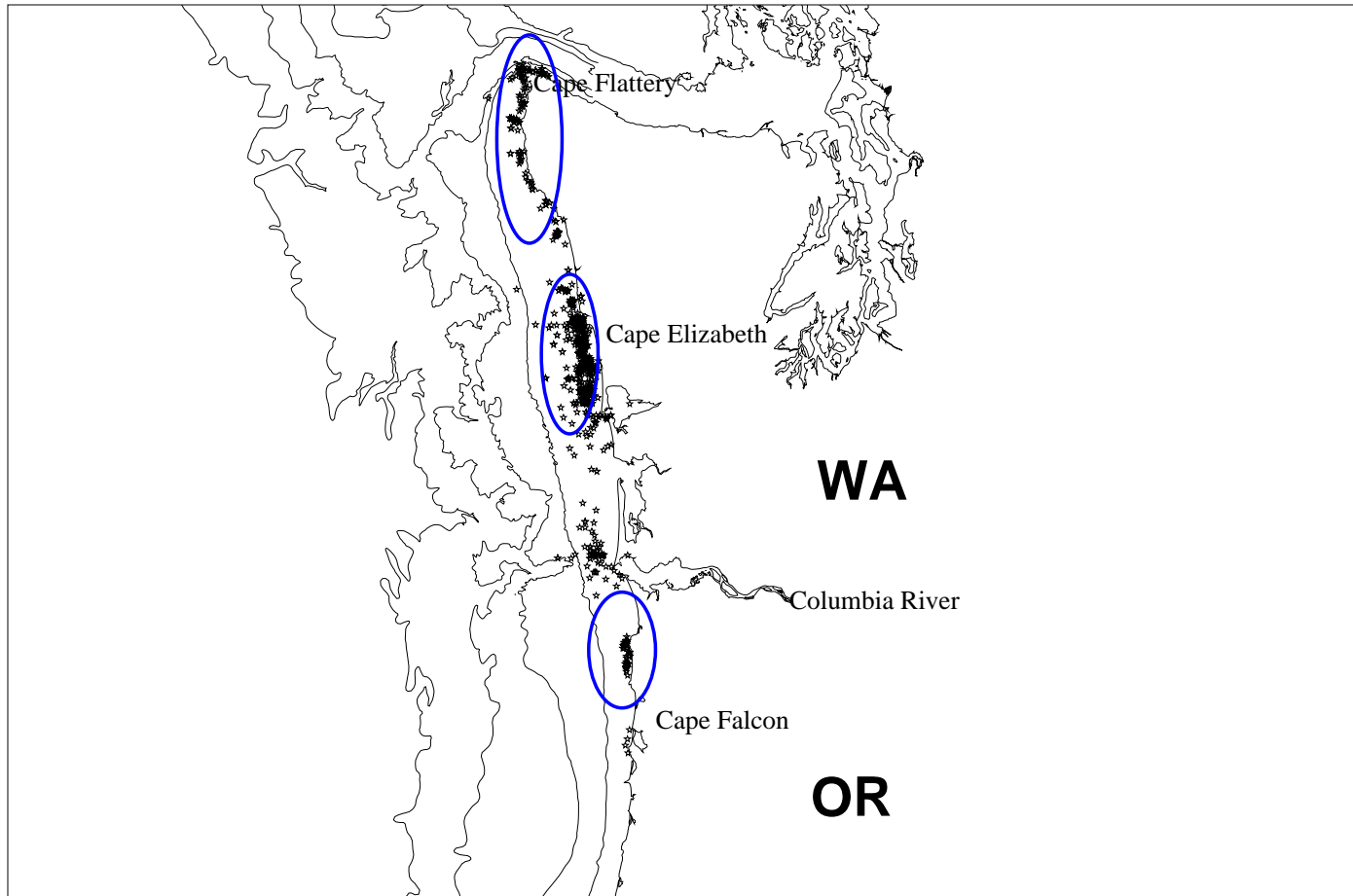
# Tagging Data

- 1998 - 2009 Tagging Study
  - CWT (Coded Wire Tag)
  - Release Effort Proportional to Habitat on the Central Washington Coast
  - Tag Loss
  - Release and Recovery over time
  - Produce Estimates of Abundance, Growth and Fishing Mortality
  - Tagging CPUE

# Tag Release Areas

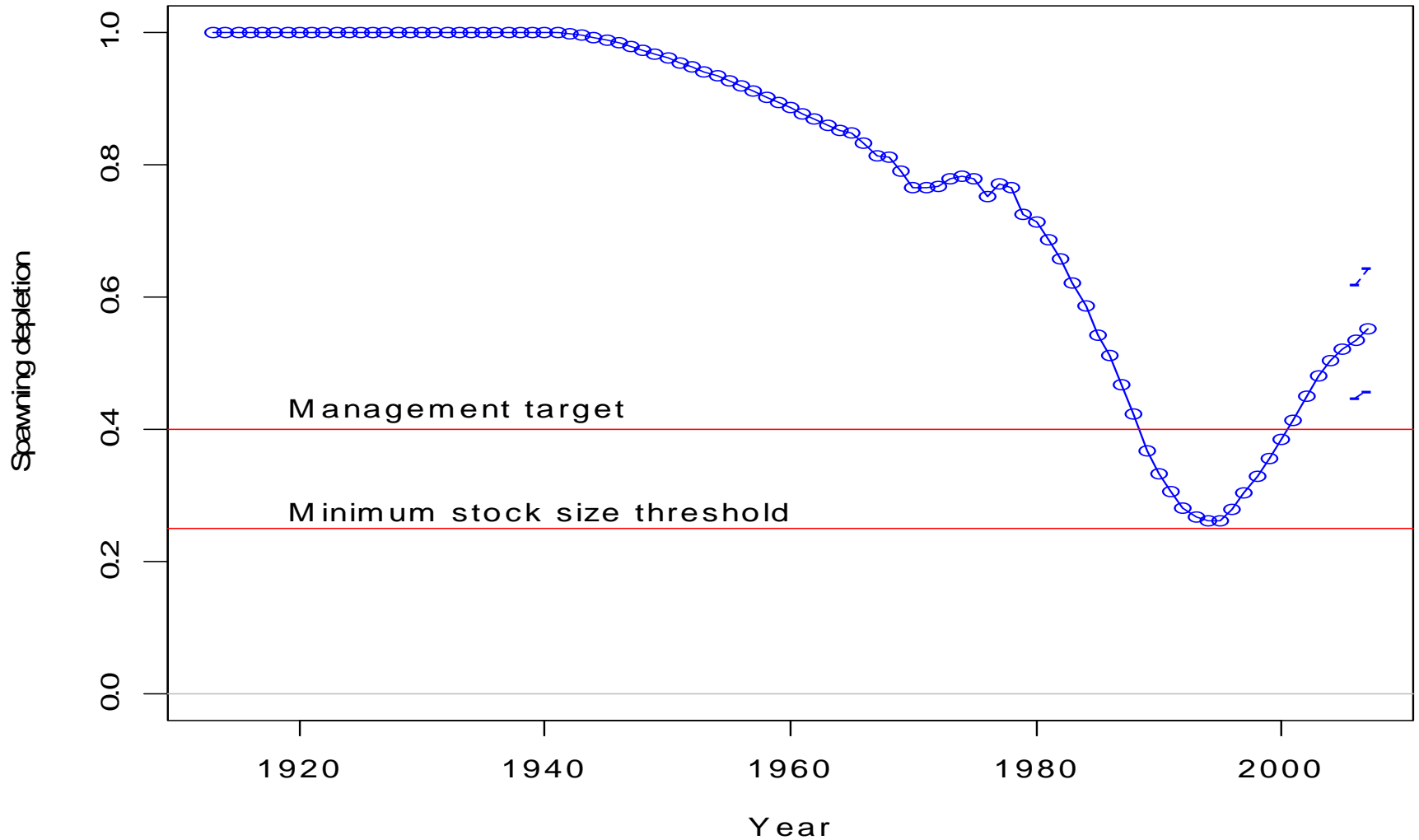


# Tag Recoveries





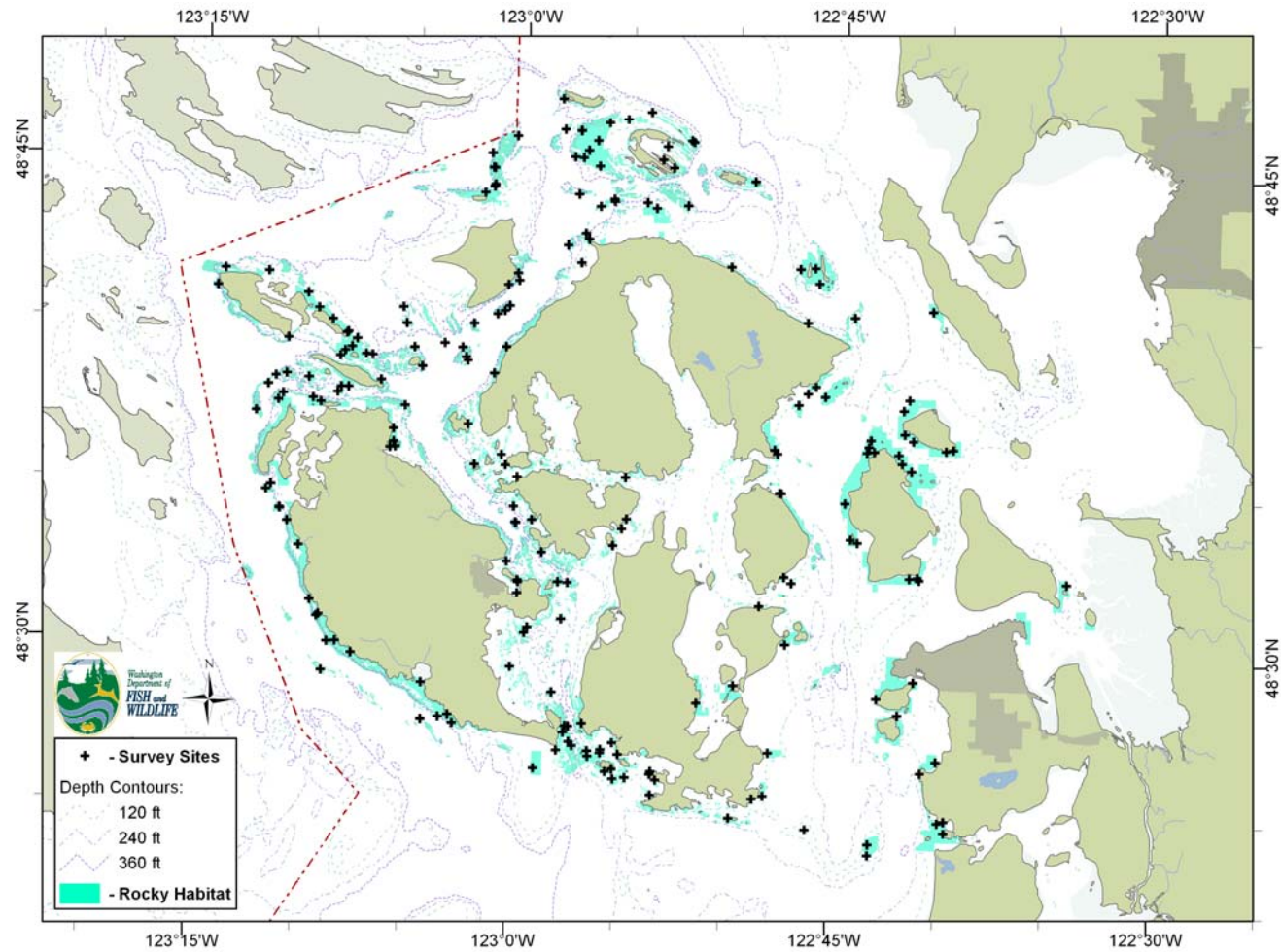
# Spawning Biomass



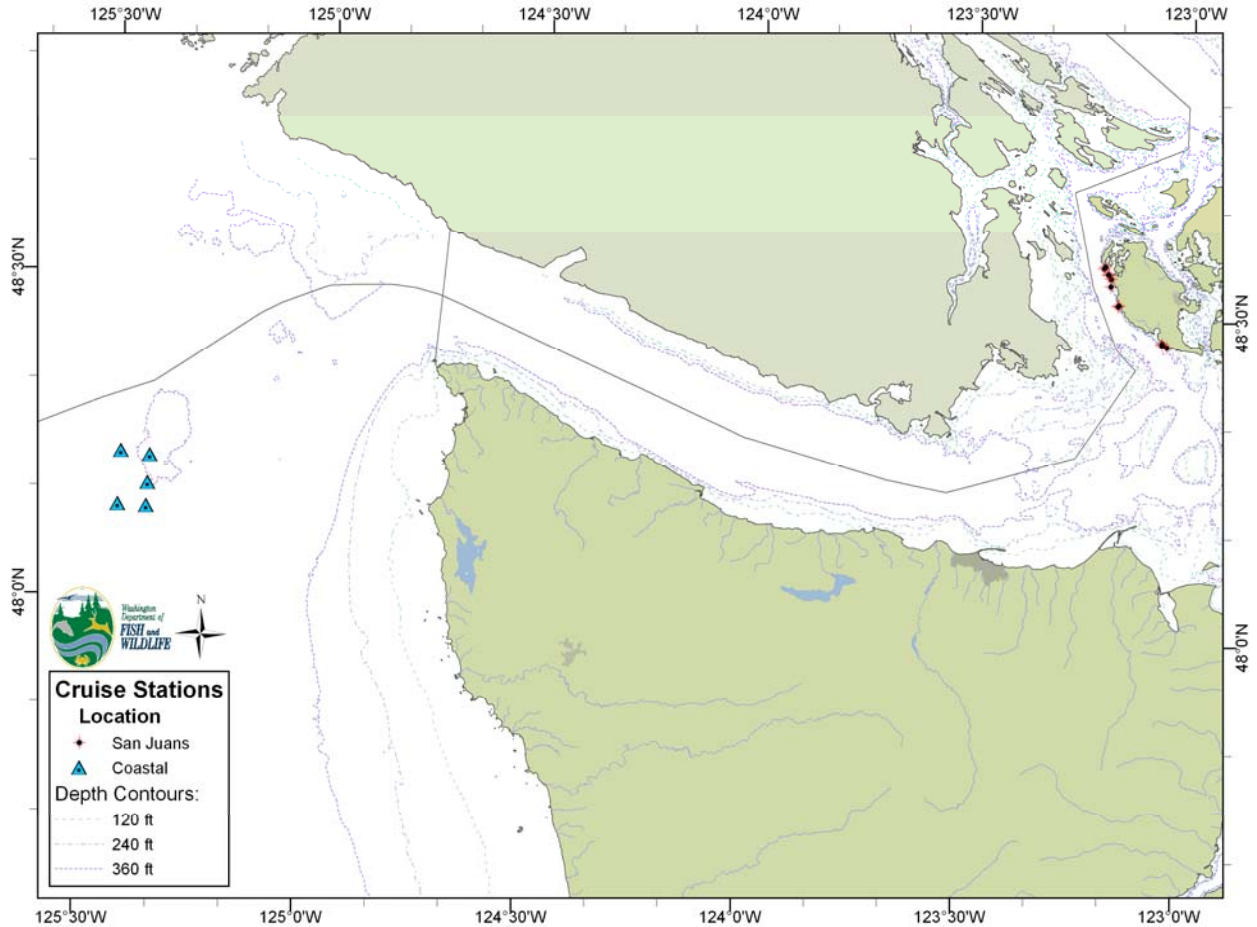
# 2008 Rockfish Research

- ROV based survey was used to collect information for developing a long-term fisheries-independent monitoring programs for rockfishes in Puget Sound and off the coast
- To understand the variability in the IPHC observations, the ROV transects repeated the 2008 IPHC transects in the area to gather habitat and other species information.
- A 24-hour observation was conducted at one of the stations to examine the effect of diurnal distribution, therefore, to improve future survey design.

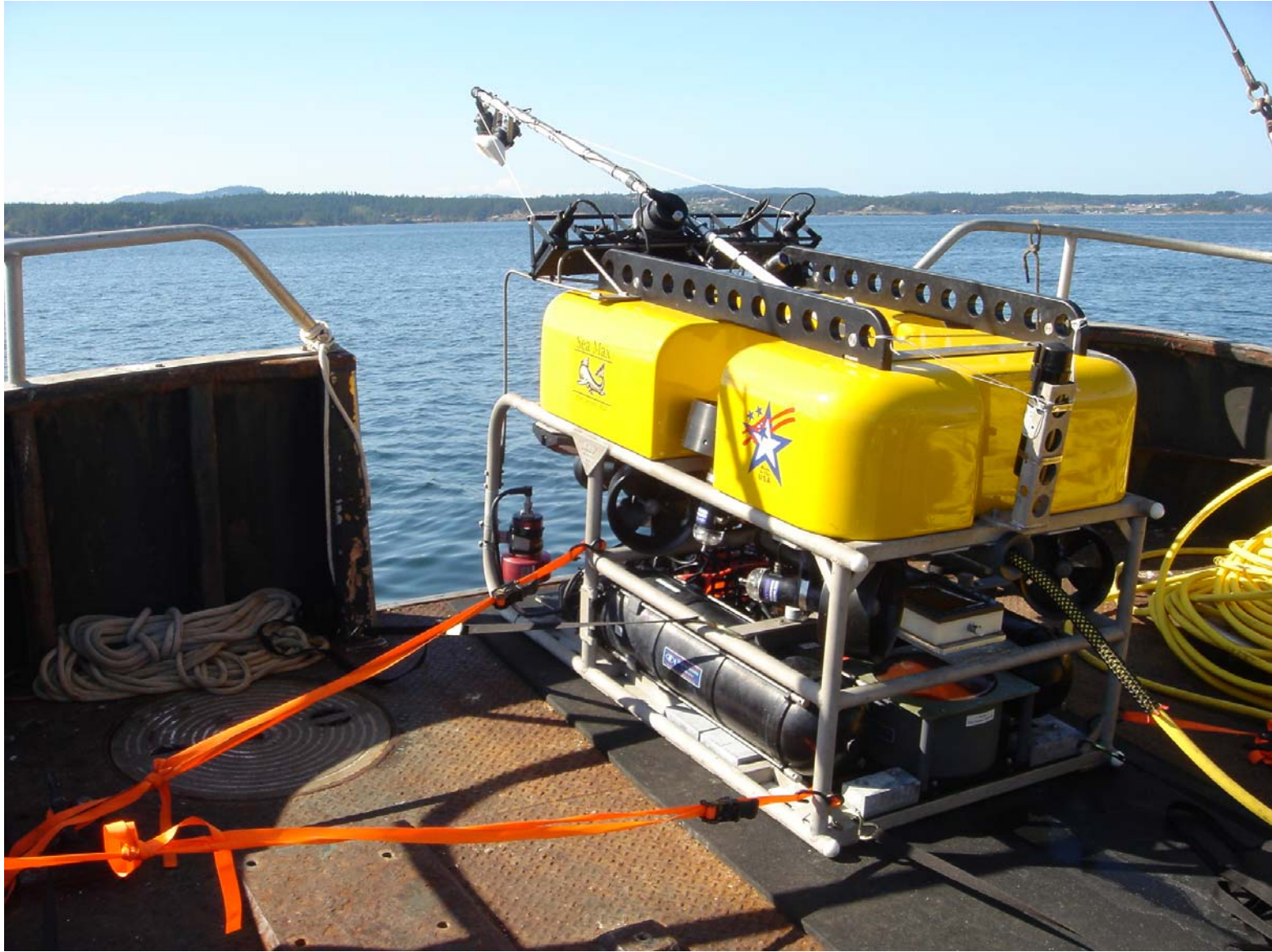
# Puget Sound Survey Sites



# Coastal Areas







# Yelloweye Rockfish Research Projects





# Yelloweye Research

- Submersible Survey (2002)
- Mortality
  - Can bycatch mortality be reduced with improved handling and release techniques?
  - How is bycatch mortality influenced by depth?
- Movement
  - Presence, absence and diurnal movement patterns