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FISHERIES

West
Coast
Region

Lynne Barre

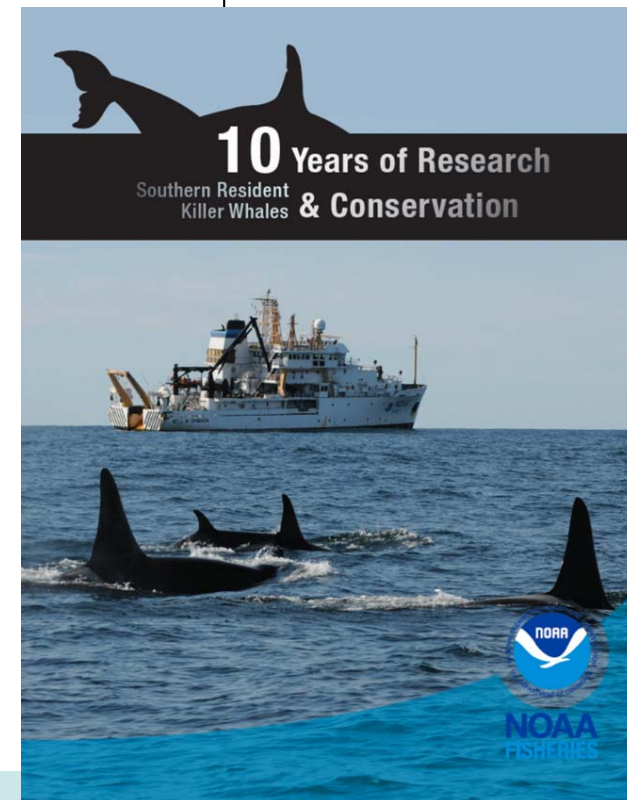
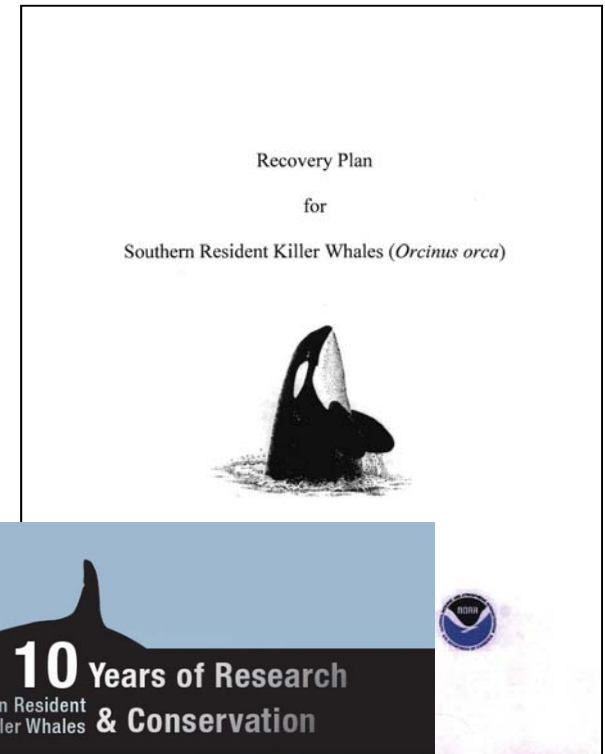
Southern Resident Killer Whale Recovery

Emerging and Ongoing Actions



Recovery Plan

- Started implementing actions in 2003 with specific funding
- Recovery Plan complete 2008
- Broad approach to address all threats
- Adaptive process to incorporate research results as available
- 2014 Report on 10 years of research and conservation



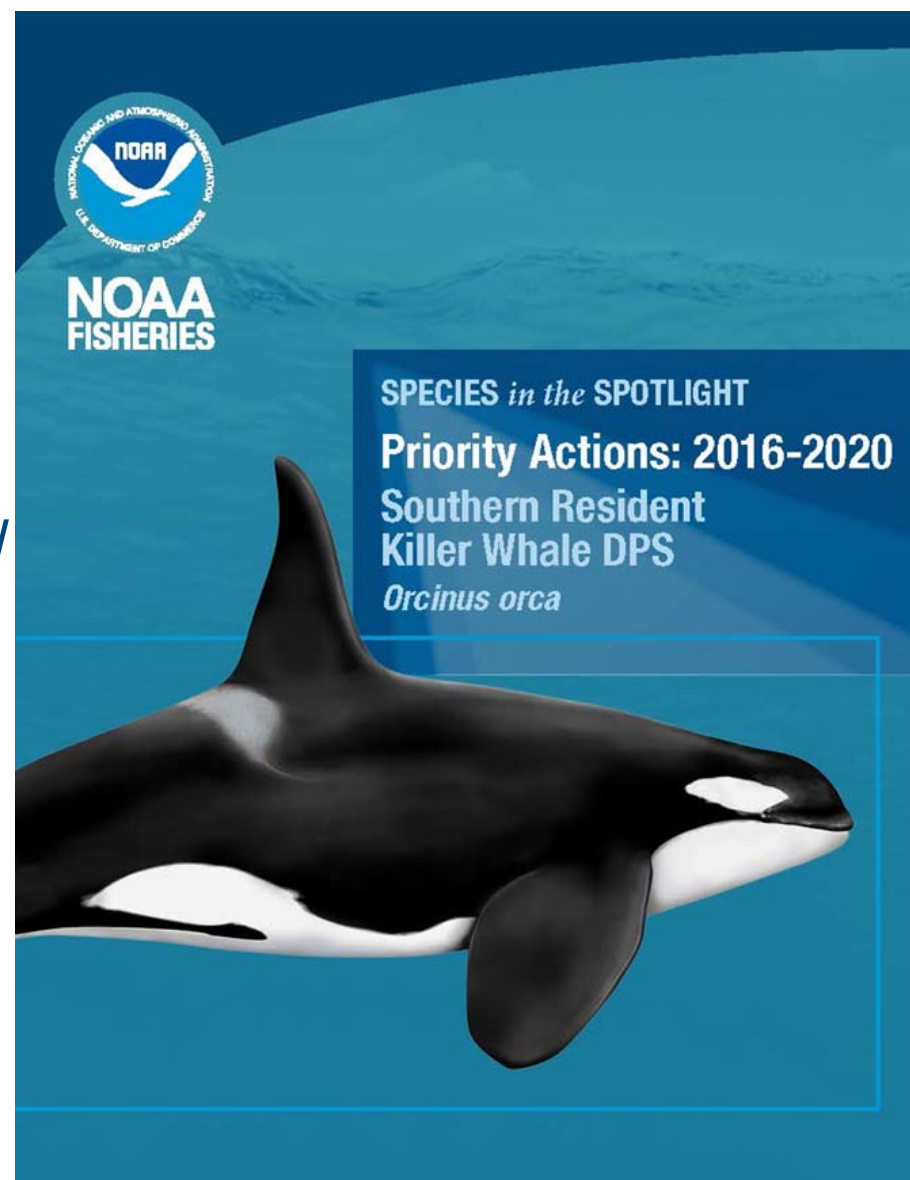
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Action Plan 2016-2020

- Contaminants and health
- Protect whales from harmful vessel impacts
- Target recovery of critical prey
- Protect important habitats
- Raise awareness and inspire stewardship

Other ongoing actions include

- Oil spill response planning
- Transboundary coordination
- ESA consultations



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Contaminants and health



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2015, 2016, 2017 SRKW health workshops

- Discuss needs, strategies and priorities related to:
 - What is causing decreased reproduction?
 - What is causing increased mortality?

http://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/srkw_healthpriority_dec2015.pdf

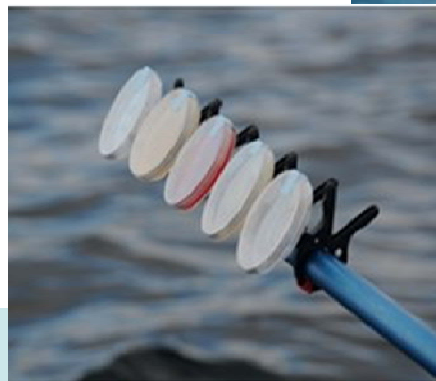
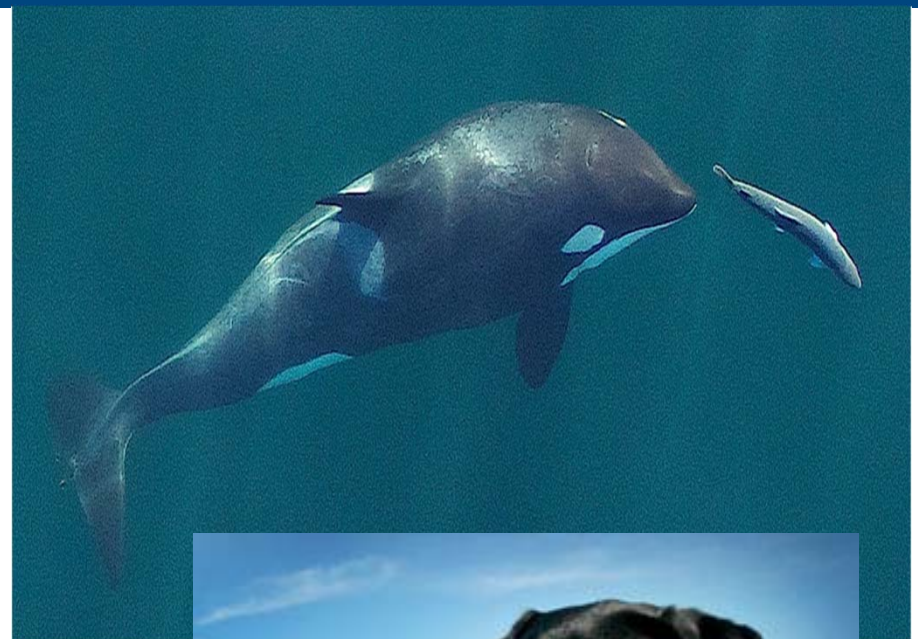
- Update on body condition

<http://www.seadocsociety.org/?s=killer+whale+body+condition>



Ongoing actions

- Health database
- Photogrammetry and links to biomarkers and prey
- Track and sample animals of interest (fecal, breath)
- Body condition and blubber thickness/content
- Stranding investigations- causes of death, disease and pathogens



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Contaminants

- Puget Sound Partnership Action Agenda to restore Puget Sound by 2020
- Report and recommendations from PBDEs working group with EPA and WA state agencies

<https://www.eopugetsound.org/articles/report-potential-effects-pbdes-puget-sound-and-southern-resident-killer-whales>

Potential Effects of PBDEs on Puget Sound and Southern Resident Killer Whales

A Report on the Technical Workgroups and Policy Forum



Catherine K. Gockel, EPA Region 10
Gockel.Catherine@epa.gov

Teresa Mongillo, NMFS Northwest Region
Teresa.Mongillo@noaa.gov

July 24, 2013



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Protect killer whales from harmful vessel impacts through enforcement, education and evaluation

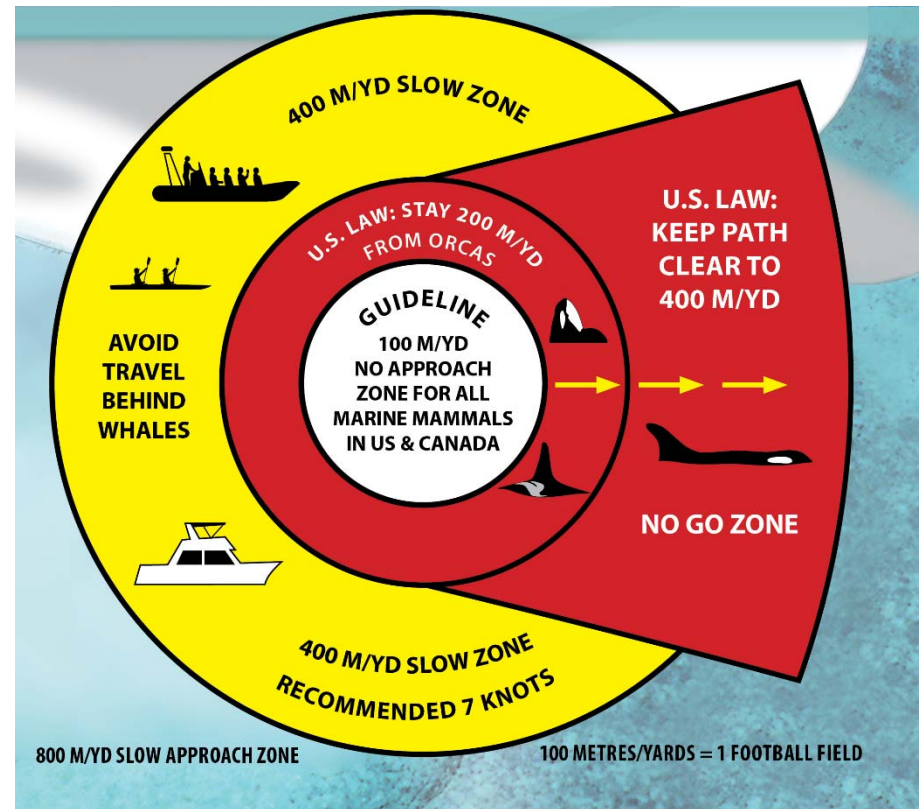


Protective Regulations

Approach Restrictions:
Prohibits vessels from approaching any killer whale in inland waters of WA closer than 200 yards

Parking in the Path
Prohibition: Requires vessels to keep clear of the whales' path within 400 yards of the whales

www.bewhalewise.org



Review of vessel regulations: 5 measures

1. Education and Outreach
2. Enforcement
3. Vessel Compliance
4. Biological Impact
5. Economic Impacts



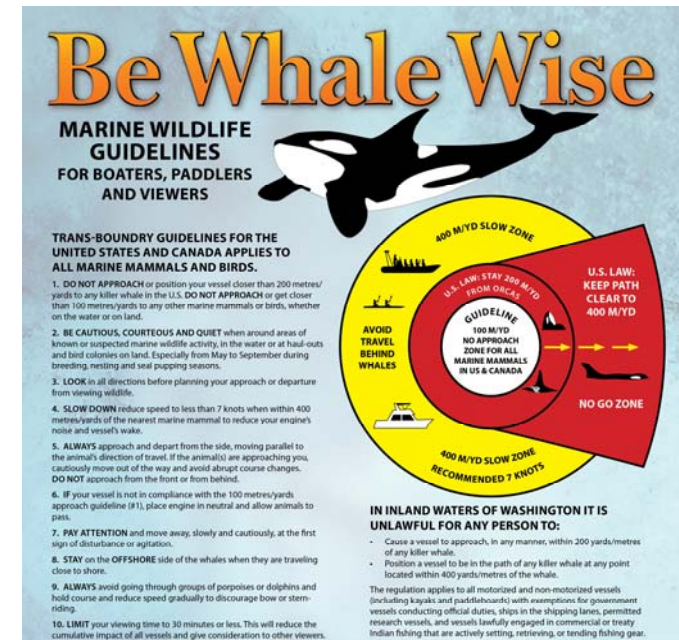
Photo: D. Noren, 2006

For each measure, we focused on 5 years prior (2006-2010) and 5 years post (2011-2015) and compared trends

http://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/noaa_techmemo_nmfsopr-58_dec2017.pdf

Recommendations-ongoing actions

- Continued and expanded enforcement, Soundwatch/Straitwatch monitoring, and education/outreach
- Compare the behavioral and acoustic effects of different boat activity patterns to determine the vessel behaviors with the highest impact
- Improve estimates of the energetic cost of reduced foraging opportunities
- Encourage Canada to establish similar vessel regulations to improve protection and compliance



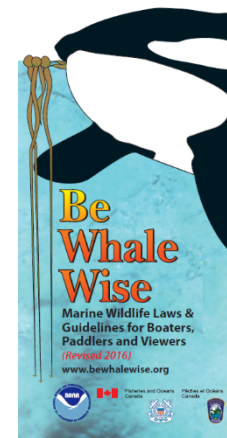
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Whale Warning Boater Safety Flag- SJ County

Boaters hoisting this flag have spotted a whale in the area

Other boaters please:

- Slow to stop, determine where the whales are (to avoid crossing path)
- Proceed with enhanced caution once spotted
- Stay below 7 knots
- Avoid following the whales
- Turn off navigational sonar to reduce noise



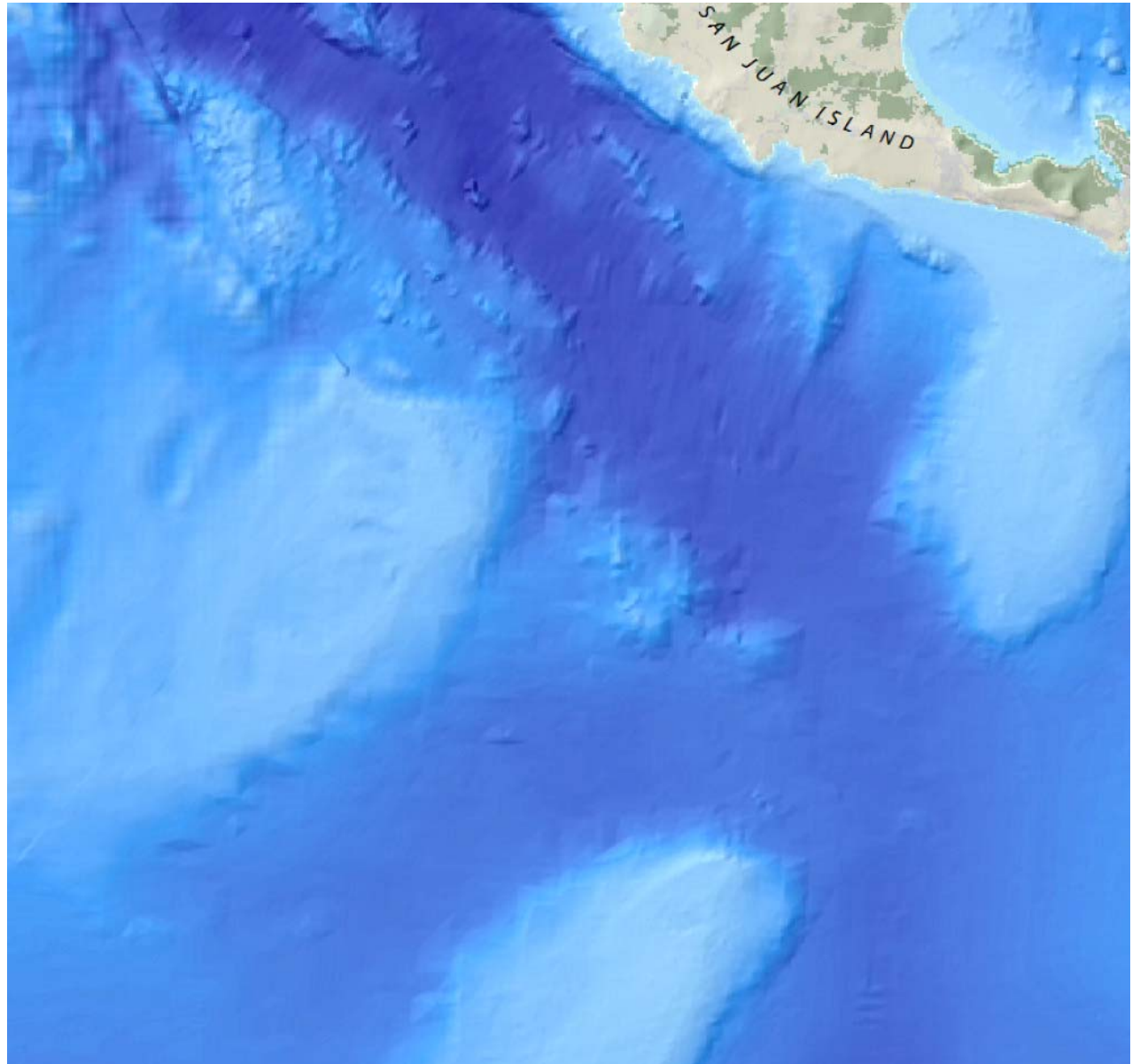
Marine
Education & Research
Society



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Dtag Study

- Sept 22, 2010
- K33 track
- Vessel tracks
 - C- commercial whale watch
 - P- private
 - E- enforcement
 - R-research



Whale Protection Zone petition

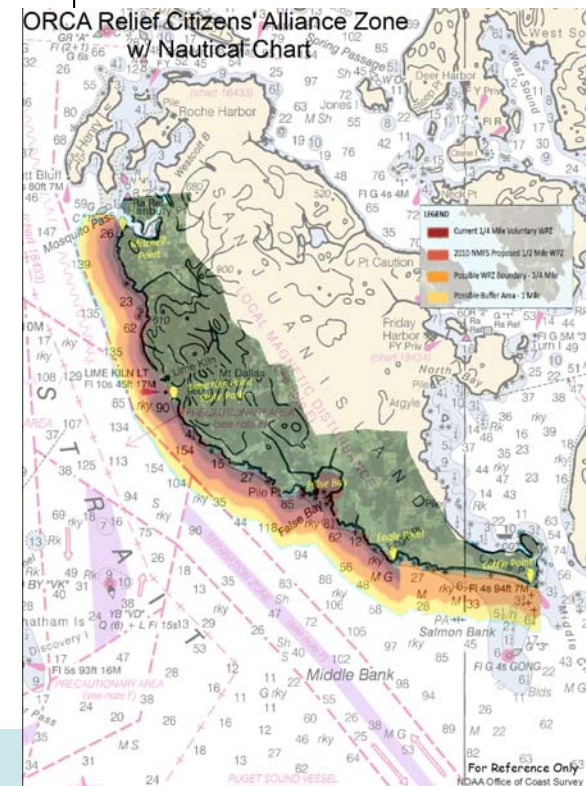
- Petition submitted by three NGOs
November 2016
- Notice of Receipt of petition and request
for public comment through April 13,
2017
- Next Steps
 - Review 1,000+ public comments
 - Consider vessel regulations review
 - Coordinate with State and San Juan
County efforts
 - Additional Dtag results

PETITION TO ESTABLISH A WHALE PROTECTION ZONE FOR THE SOUTHERN
RESIDENT KILLER WHALE (*ORCINUS ORCA*) DISTINCT POPULATION
SEGMENT UNDER THE ENDANGERED SPECIES ACT
AND MARINE MAMMAL PROTECTION ACT



ORCA RELIEF CITIZENS' ALLIANCE
CENTER FOR BIOLOGICAL DIVERSITY
PROJECT SEAWOLF

November 2016



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2018: Whale Watch industry, State and County

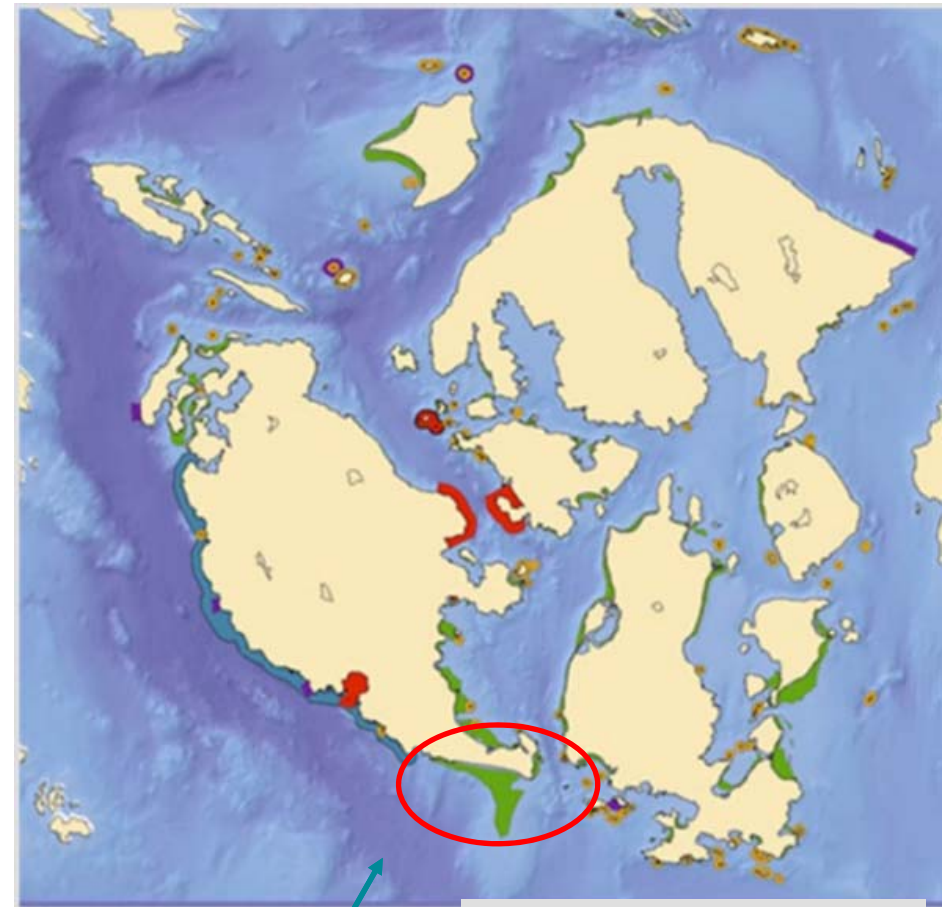
- Expansion of no boat zone down to Cattle Point for ¼ mile no vessel zone
- PWWA keeping under 7 knots within .65 mile / 1 kilometer



**San Juan County
Marine Resources
Committee**



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Salmon and SRKW Sanctuary
Map to be Modified

- Marine Reserve
- National Wildlife Refuge
- Bottomfist Recovery Zone
- Whalewatch Exclusion Zone
- Sensitive Eelgrass Area

Prey



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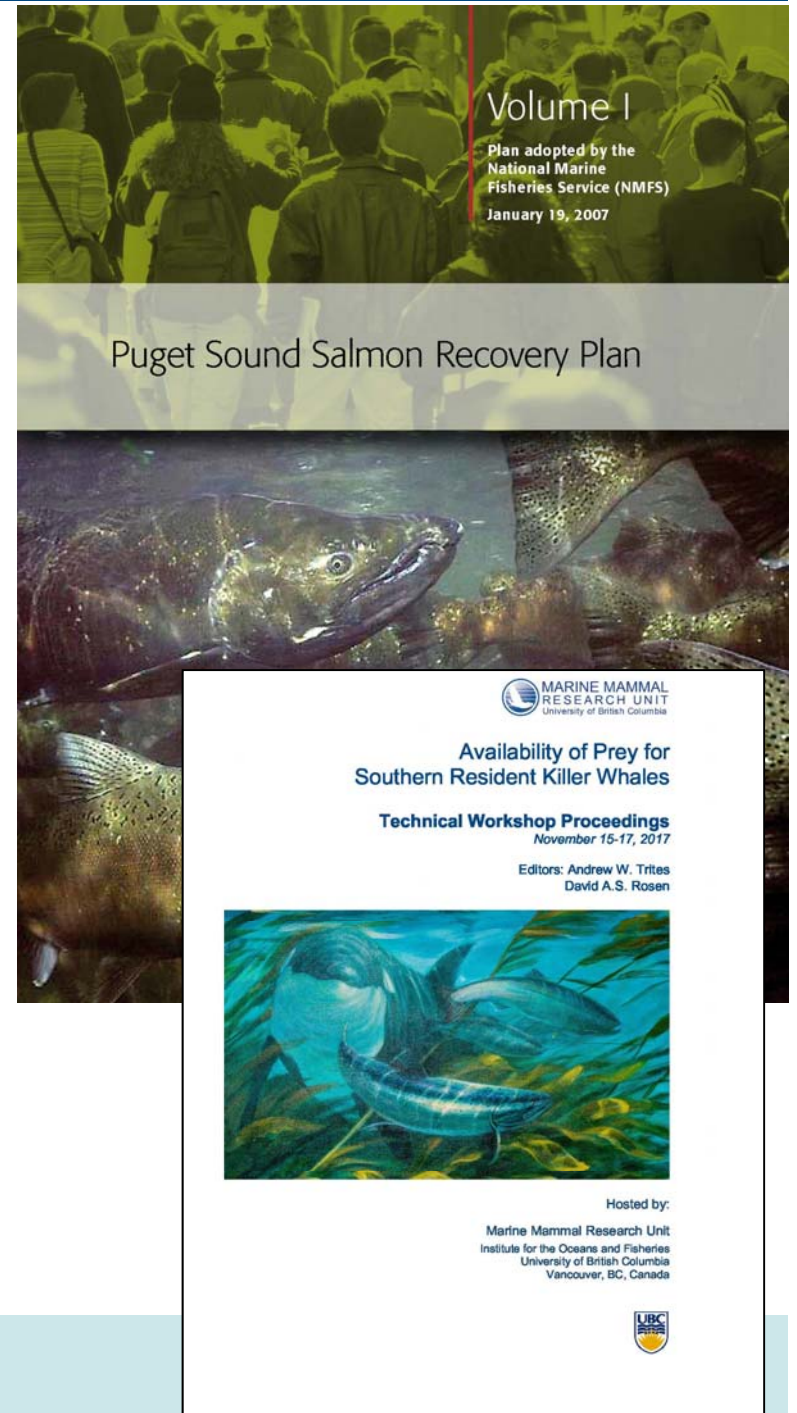
Recovery of critical prey

- Coordinating with ongoing salmon recovery efforts: workshops, events
- Review of salmon fisheries and Southern Resident killer whales
 - Short-term strategies to increase availability of existing prey (i.e., time/area adjustments to protect key foraging areas)
 - 2018 Puget Sound fisheries constrained to protect salmon

http://www.marinemammal.org/wp-content/pdfs/SRKW_Prey_Workshop_Proceedings_2018.pdf



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Recovery of critical prey

- Next steps: long-term strategies
- Identifying priority salmon stocks and actions to increase abundance
- 2018 NFWF workshop with focus on habitat and hatchery actions



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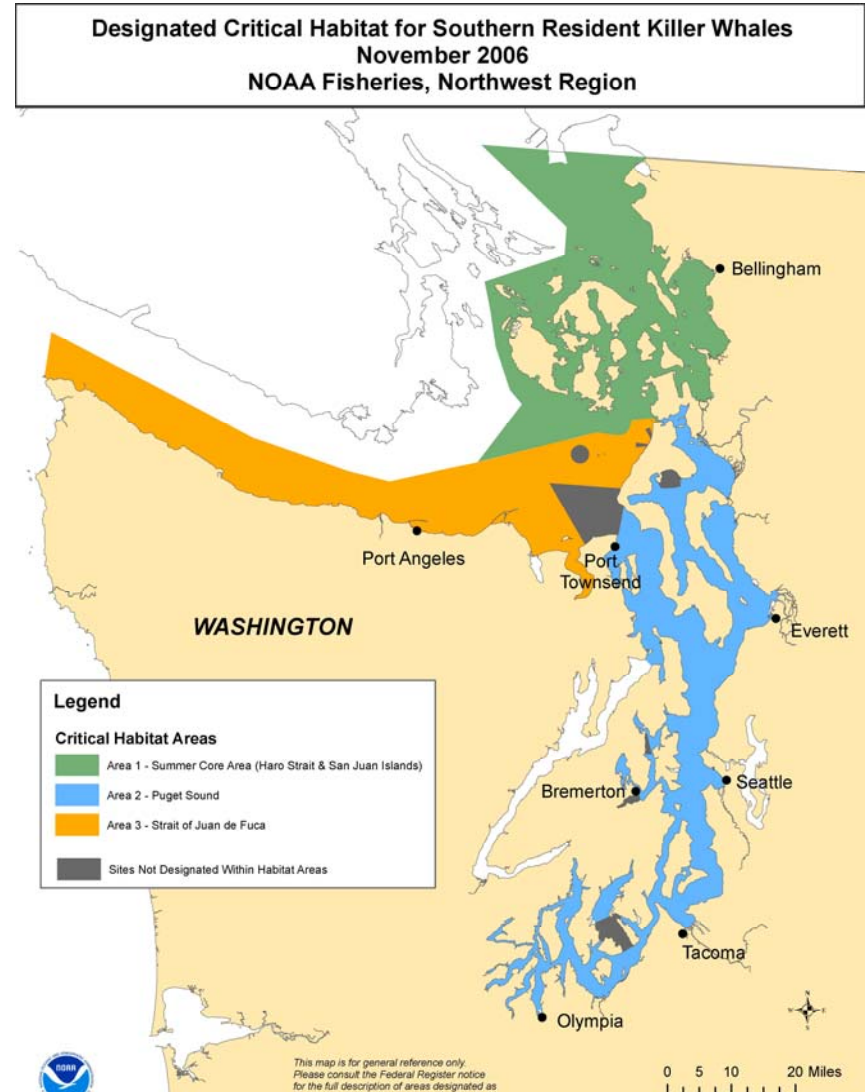
Protect important habitat areas from anthropogenic threats



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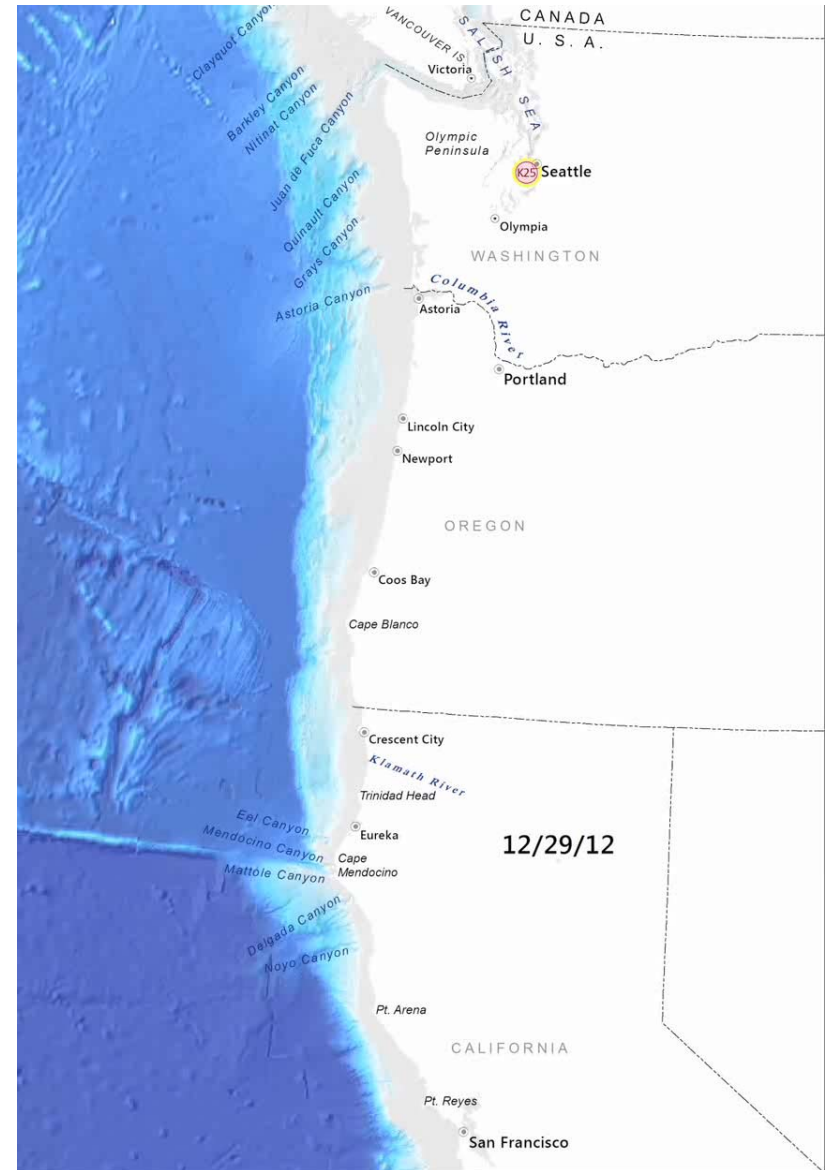
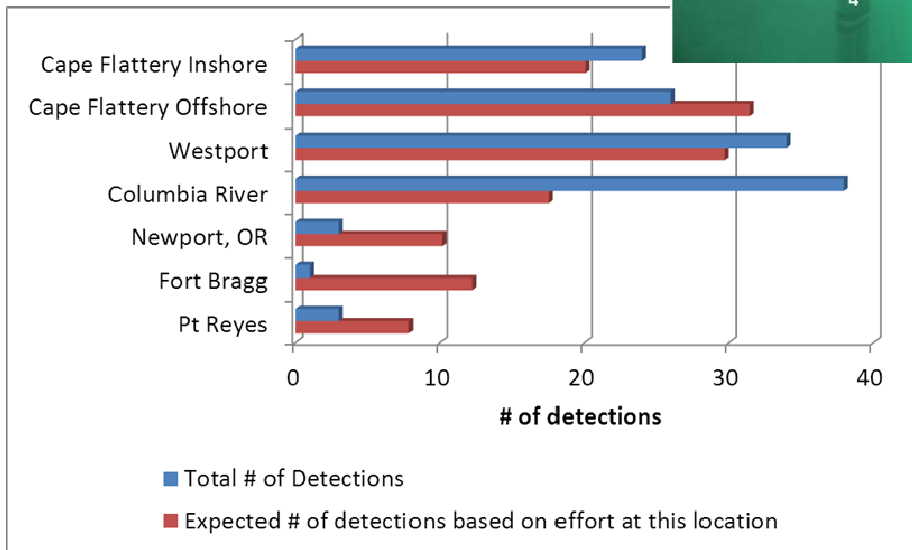
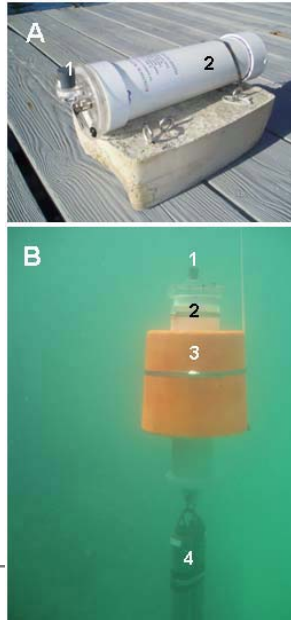
2006 critical habitat

- Approximately 2,560 square miles
- Primary constituent elements/essential features are:
 - (1) Water quality to support growth and development
 - (2) Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development, as well as overall population growth
 - (3) Passage conditions to allow for migration, resting, and foraging.



Coastal habitat use research

- Satellite tagging
- Acoustic recorders
- Sightings



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Revisions to critical habitat

- January 21, 2014: NMFS received a petition to revise critical habitat and consider coastal waters from Cape Flattery, WA to Point Reyes, CA
- Next steps to revise critical habitat
 - Step 1: Complete Data Collection and Analysis (ongoing)
 - Step 2: Identify Areas Meeting the Definition of Critical Habitat
 - Step 3: Section 4(b)(2) Analysis
 - Step 4: Develop Proposed Rule for Public Comment

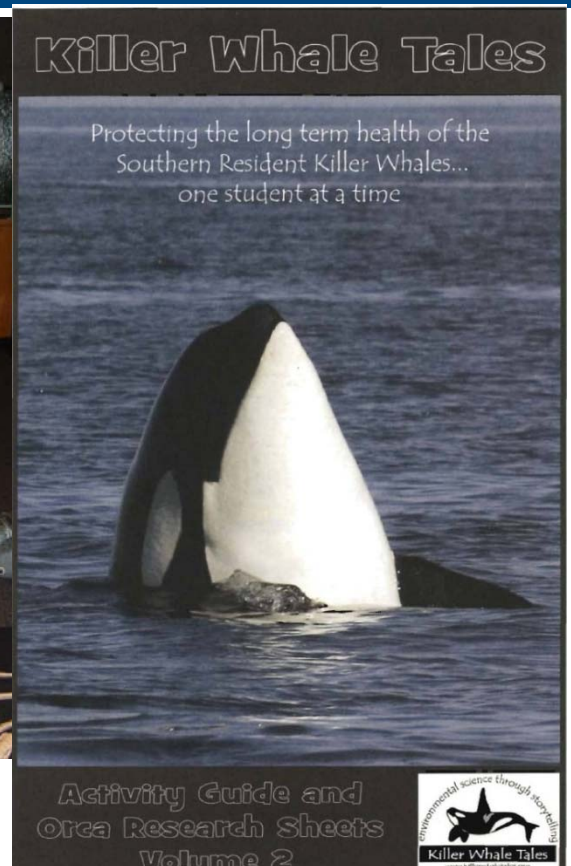
Raise awareness about the recovery needs of Southern Resident killer whales and inspire stewardship through education and outreach



Outreach Partners



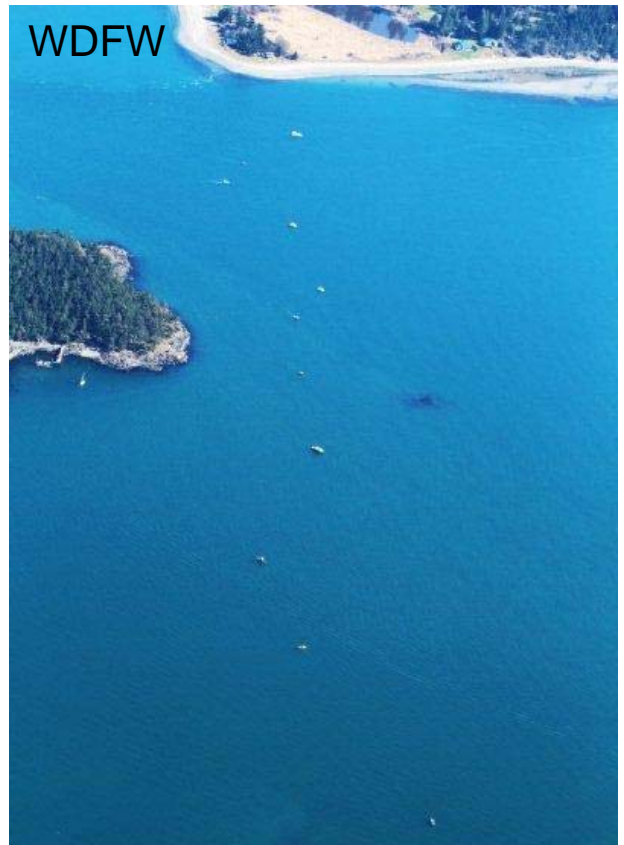
- The Whale Museum
- Soundwatch
- The Whale Trail
- Seattle Aquarium
- Killer Whale Tales
- Sighting Networks
- Naturalists
- Whale Watch Assoc.
- NGOs



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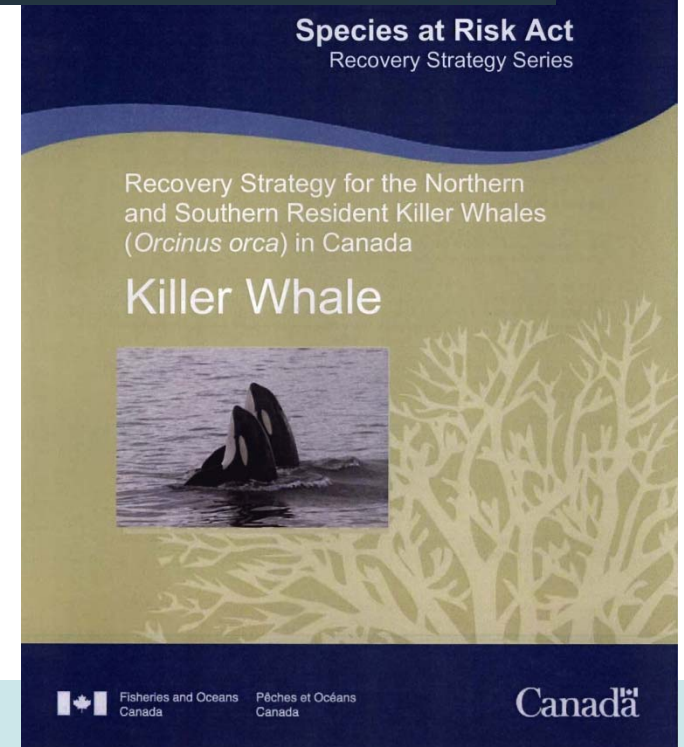
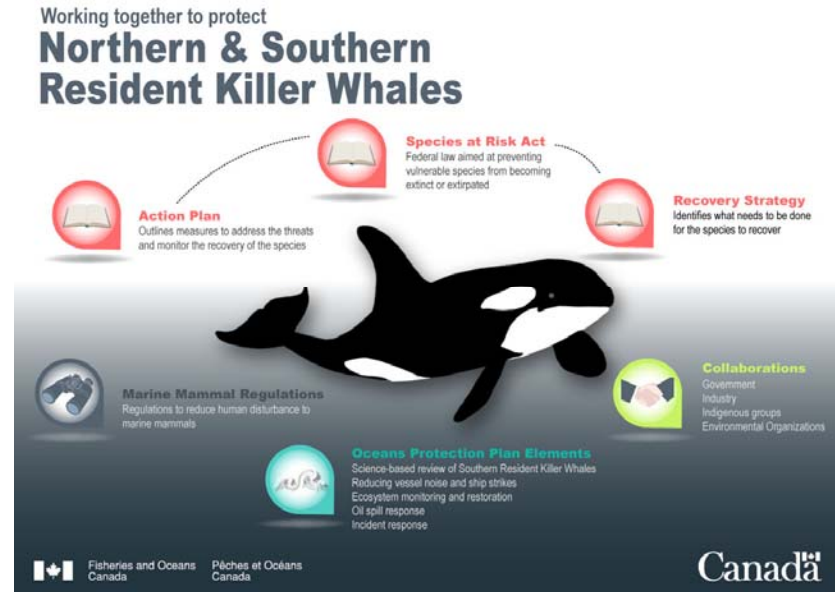
Oil Spill Response Planning

- Action in Recovery Plan and Recovery Criteria
 - Effective response plan in place
- Killer Whale Response Plan: Appendix to the Northwest Area Contingency Plan
- Tools to keep whales away from oil
 - Helicopter
 - Banging pipes
 - “seal bombs” (ensure safety of responders and whales)
- Spill drill March 2013/May 2018, San Juan Islands with IOSA and WDFW, test banging pipes



Coordination

- Local/County
- State
- Trans-boundary species requires coordination with Canada
 - Research and recovery planning
 - Stranding response
 - Enforcement
- Oceans Protection Plan





Thank you