

Science, Service, Stewardship



Southern Resident Killer Whales

Recovery Planning and Implementation

August 31, 2011

**NOAA
FISHERIES
SERVICE**

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Southern Resident Killer Whales

- J,K,L pods ~86 whales
- Inland waters near San Juan Islands May-Sept
- Winter along coast from CA to BC
- Salmon prey (Chinook)
- Use sound to find food and communicate
- Distinct population segment listed as “endangered” in November 2005

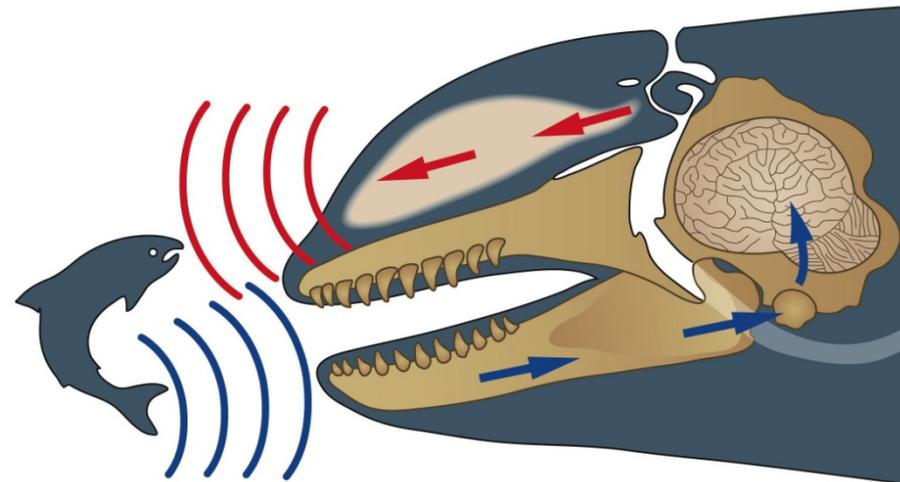


Illustration by Uko Gorter



Listing Factors

- Prey
- Pollution and contaminants
- Vessels and sound

Also

- Oil spills
- Small population size



NOAA



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Timeline of Southern Resident Killer Whale Recovery Planning

May 2003: Final rule designating Southern Residents depleted under MMPA, conservation planning started

2003-2004: Public workshops for each threat

March 2005: Preliminary Draft Conservation Plan available for public comments

October 2005: Proposed MMPA Conservation Plan available for public comments

November 2005: NOAA Fisheries announced endangered listing for Southern Resident killer whales



Timeline of Southern Resident Killer Whale Recovery Planning

November 2006: NOAA Fisheries designates critical habitat for Southern Resident killer whales

November 2006: Proposed ESA Recovery Plan available for public comments

this was the 3rd public comment period, we highlighted the ESA specific modifications to the plan when requesting comments (i.e., recovery criteria)

January 2008: NOAA Fisheries releases final ESA Recovery Plan for Puget Sound killer whales

March 2011: NOAA Fisheries completes 5-year review under ESA- no change to endangered status



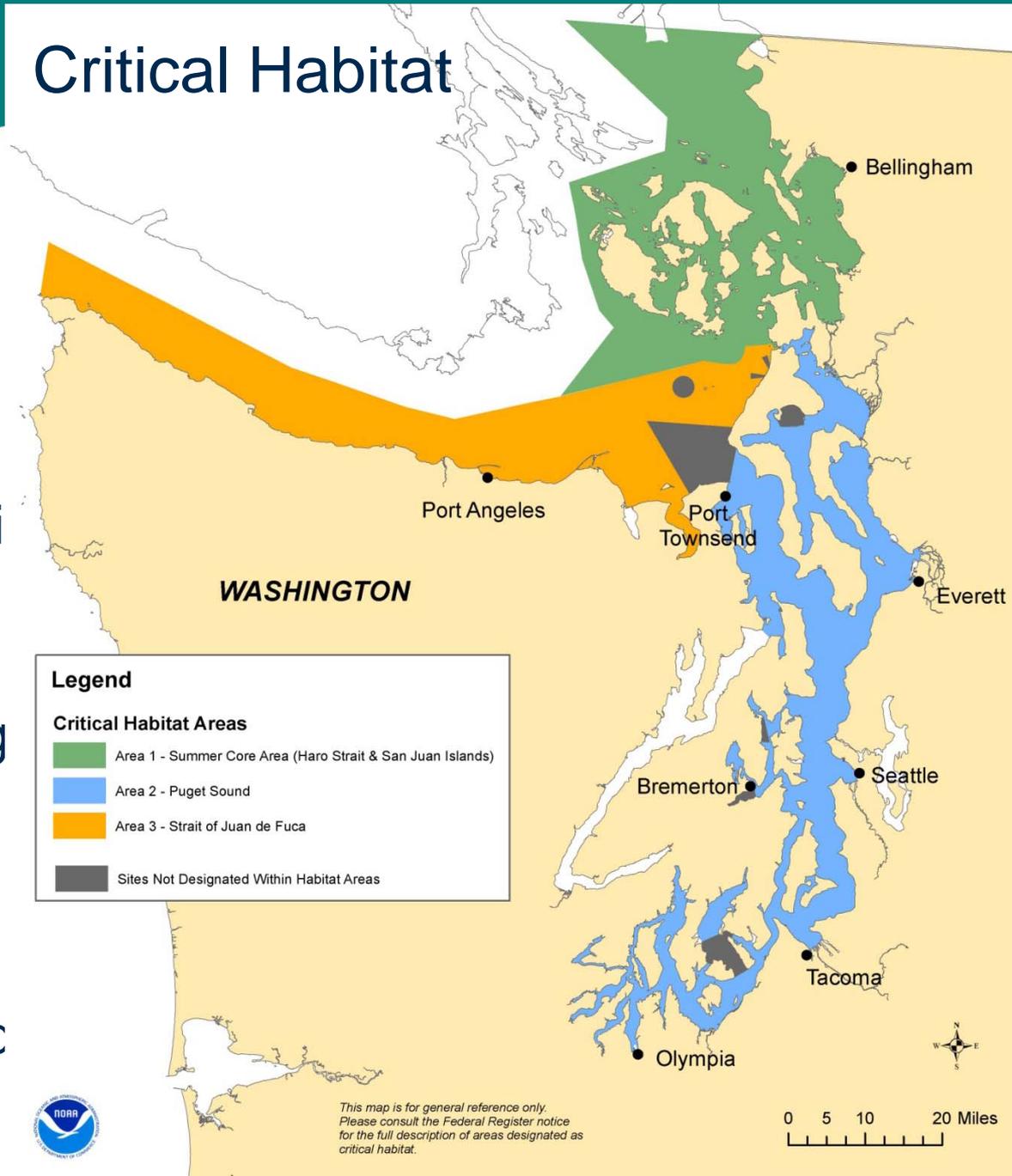
Critical Habitat

Essential Features

- Water quality
- Prey - sufficient quantity and availability
- Passage to support migration and foraging

~ 2,560 square miles
(6,630 sq. km)

112 square miles (291 sq. km) excluded





Recovery Plan Development Challenges

- Broad interest for public participation
 - No recovery team
 - Public workshops on threats
- Uncertainty and data gaps
- Recovery Criteria (Internal and MMC comments)
 - Downlisting vs. Delisting Criteria
 - Threats Criteria
- Cost estimates for actions and total cost of recovery



Photo by John Durban



Topic Specific Workshops

Goal: open transparent process to identify actions

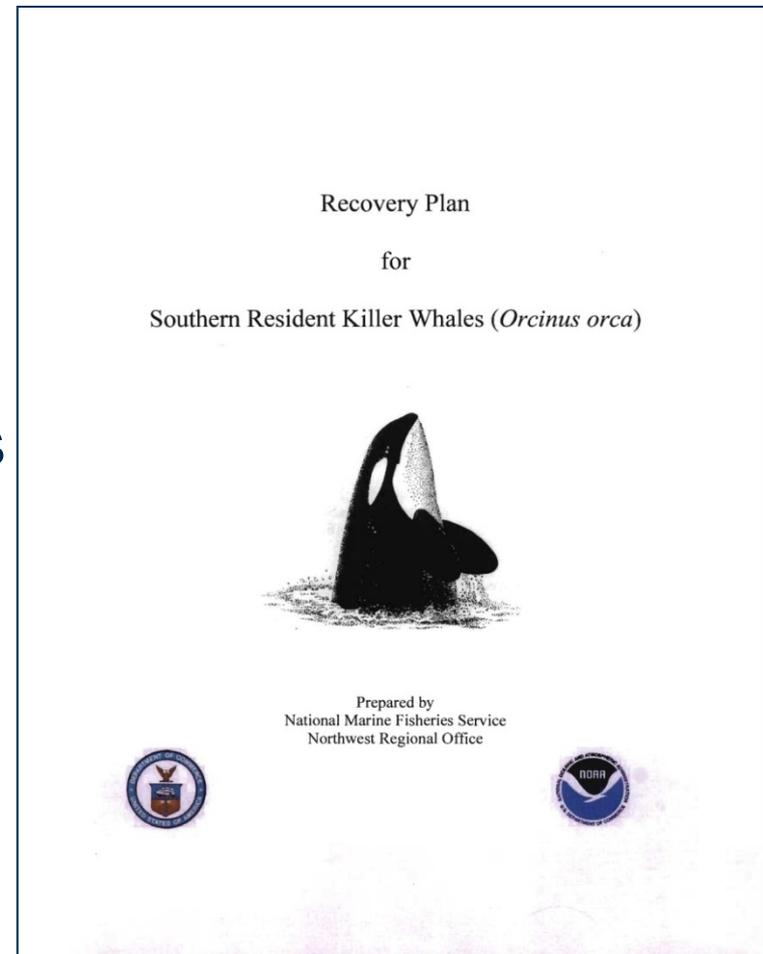
- Invited agency, industry and conservation group participants, open to the public
- Presentations on “State of the Science” describing current knowledge of each threat
- Breakout groups to identify conservation strategies
- Group discussion on strategies- feasibility, implementing agencies, links to ongoing programs, identify actions to implement immediately
- Summary of Workshop Proceedings posted on web

****Internal Workshop to Develop Recovery Criteria**



Recovery Plan Approach

- Broad approach to address all threats
- Adaptive process to incorporate research results as available- link research and management actions
- Specific funding- started implementing actions in 2003 before listing and final plan
 - Research
 - Enforcement support
 - Education



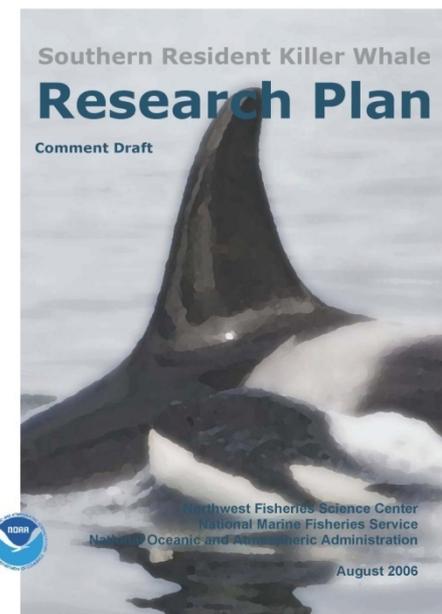
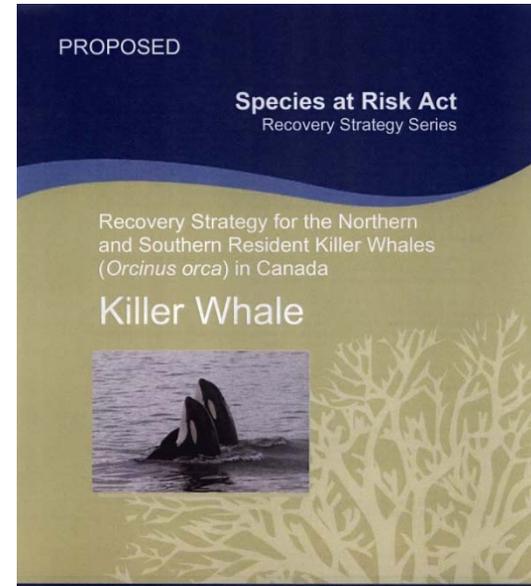


Recovery Program

Management Measures

1. Protection from threats-
Prey availability, pollution/contamination,
vessels and sound
2. Additional potential threats-
(i.e., oil spills, disease)
3. Outreach and education
4. Stranded, sick, injured whales
5. Coordination

Research and Monitoring





SRKW Recovery Criteria

Biological Criteria

- percent growth over time (% growth based on past performance and time frame based on periodic growth patterns)
- demographics (quantitative measures of population parameters)
- Representation, resiliency and redundancy

Threats Criteria

- management actions- response plans, regulations
- indicators/data that threats not limiting recovery
- monitoring



Biological Criteria

- 2.3 % average growth for 14 years (downlisting) or over 28 years (delisting)
- Quantitative measures of population parameters
 - Representation of all three pods
 - Number of males in pods
 - Ratios of juveniles, adults, post-reproductive, males, females
 - Inter-birth intervals
 - No significant increases in mortality rates for age/sex class



Threats Criteria (examples)

- Research is underway to increase knowledge of the foraging ecology and inform fishery management programs that determine harvest limits, hatchery practices and evaluate consistency with recovery of salmon. (downlisting)
- Recovery or management plans for listed salmonids are in place to restore them to the point they are self-sustaining members of the ecosystems. (downlisting)
- Reduction in impacts from commercial and recreational whale watching, or evidence that this activity does not cause population level effects. Reductions may be measured through establishment of regulations or protected areas if needed. (delisting)
- Effective oil spill response plan is in place for killer whales, as part of the wildlife branch section of the NWACP. (delisting)



Recovery Criteria Resources

Recent Recovery Plans

- For SRKW plan we referred to Steller sea lion plan and used similar biological criteria

NOAA publications

- Angliss, R., G. Silber and R. Merrick. 2002. Report of a Workshop on Developing Recovery Criteria for Large Whale Species. NOAA Tech. Memo. NMFS-F/OPR-21.
- McElhany, P., M.H. Ruckelshaus, M.J. Ford, T.C. Wainwright, and E.P. Bjorkstedt. 2000. Viable salmonid populations and the recovery of evolutionarily significant units. NOAA Tech. Memo. NMFS-NWFSC-42.
- <http://www.nwfsc.noaa.gov/trt/index.cfm> Salmon Recovery Planning

Joint Recovery Planning Guidance



Recovery Implementation Challenges

Cost to save orcas starts at \$50 million

A new plan on saving Puget Sound's endangered orcas estimates it will take 14 years for them to reach "threatened" status.



P-1 FILE

That's assuming billions are spent to restore Puget Sound

BY ROBERT McCLURE
P-I reporter

Expressing "considerable uncertainty" about how to rescue Puget Sound's imperiled orcas, federal fisheries officials said Thursday that the job will take more than 20 years and cost about \$50 million.

Even that price tag considers only the extra costs of the National Marine

Fisheries Service. The agency's recovery plan for orcas assumes that billions more will be spent to restore Puget Sound and bring back battered salmon runs – orcas' main food.

Environmentalists attacked the recovery plan, released Thursday, as too vague, while the fisheries service said it lacked enough information

SEE ORCAS, B8



A New Section 7 Program

- Consider specific consultations when describing listing factors and developing critical habitat (PCEs)
 - Think through how projects would change to protect species and habitat to inform economic analysis
 - Brainstorm on indirect effects, interrelated and interdependent actions
- Set criteria/thresholds for impacts where possible
- Recovery criteria helpful in jeopardy analysis
- Learn from other species programs
- Update as new information is available



Section 7 Consultations

Fisheries regulations

Hydropower actions (including hatchery production)

Water treatment plants, sewer outfalls

In-water construction

—Pile driving sound, increase in vessels (docks, marinas), dredging (contaminated sediments)

Upland projects (Flood Insurance Program)

Habitat restoration (creosote pile removal)

Research on Southern Resident killer whales

Navy and Coast Guard operations

Tidal and wave energy projects, LNG terminals



Coordination

- Trans-boundary species requires coordination with DFO, Canada
- Killer whales listed in WA
 - State vessel regulation
 - WDFW participation in developing Recovery Plan
- Coordination with research community and NWFSC
- Coordination with Salmon and Puget Sound Recovery Programs

GET OFF MY TAIL!
IT'S THE LAW!

400 m/yr
SLOW ZONE
NO-GO ZONE
100 m/yr
NO-GO ZONE
100 m/yr
SLOW ZONE
400 m/yr

In Washington State, it is unlawful to*:

PROPOSED
Species at Risk Act
Recovery Strategy Series

Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada
Killer Whale

Presented by the Shared Strategic Development Committee

Canada
Fisheries and Oceans Canada / Pêches et Océans Canada

Action Agenda

The Puget Sound Action Agenda is a strategy for cleaning up, restoring, and protecting Puget Sound by 2020

PugetSoundPartnership
we work, we connect, we change

Volume I

Puget Sound Salmon Recovery Plan

Presented by the Shared Strategic Development Committee



5-year ESA Review

- Completed in March 2011
- Reviews actions that have been implemented in last 5 years
- Evaluates whether the recovery criteria (biological and threats) have been met
- Also an opportunity to evaluate criteria- do the criteria reflect the best available information or need revision?
- Conclusions: Criteria still up-to-date, keep Southern Resident killer whales listed as endangered



Additional Information

www.nwr.noaa.gov

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