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March 7, 2006

To: Council Members

From: Doug Marker, Director
Fish and Wildlife Division

Subject: Briefing on the Marine Mammal Protection Act and its application to sea lion predation below Bonneville Dam

Garth Griffin, of NOAA Fisheries, will brief the Council on the provisions of the Marine Mammal Protection Act that limit measures to control sea lion predation on salmon, sturgeon and other fish migrating into the Columbia River. This follows a briefing by the Corps of Engineers at last month's meeting on the specific measures being taken to ward off sea lions from Bonneville Dam itself.

Last year the Council sent a letter to NOAA Fisheries and the Corps asking those agencies to take action to exclude sea lions from the Columbia River at and immediately below Bonneville Dam. Mr. Griffin has recently briefed the fish and wildlife commissions of both Oregon and Washington on NOAA's broader actions to monitor seal and sea lion predation on Columbia River fish. This briefing is an opportunity to hear more about the provisions of the Marine Mammals Protection Act and current Columbia River Action as the basis for any further actions the Council may want to discuss.

A copy of last year's Council letter and Mr. Griffin's Powerpoint presentation are attached.

w:\drm\ww\mmpa packet document march 06.doc



Marine Mammal Protection Act 1972



Overview

- Key Concepts of the MMPA
- Jurisdiction & Status of Pinnipeds of Concern
- Congressional Concerns & NOAA's Response
- Emerging Issues



Goals and Objectives of the MMPA

- Species/stocks should not fall below their **Optimum Sustainable Population** (OSP). Measures should be taken to restore species/stocks that have diminished below OSP
- Species/stocks should be protected and encouraged to develop to the greatest extent feasible...primary objective being maintenance of a healthy, stable marine ecosystem



Section 101 Take Moratorium

"There shall be a moratorium on the ***taking*** and importation of marine mammals and marine mammal products...except...

Take is defined as "hunt, harass, capture, kill



Section 101 Exceptions

- Take by Alaskan natives, living in Alaska, for subsistence or creation and sale of native handicraft & clothing.
- Taking in self defense or defense of others.
- Non-lethal deterrence for protection of fishing gear, catch or to protect private/public property from damage.



Section 109 Cooperation With States

- States may not make or enforce state regulation on take of marine mammals without return of management
- States may request return of authority for conservation and management
- Federal, state and local officials may take marine mammals in the course of official duties.
 - Protection of the animal
 - Protection of the public health & welfare
 - Non-lethal removal of nuisance animals



Blunt tip arrow



Section 118 Incidental Take in Commercial Fishing

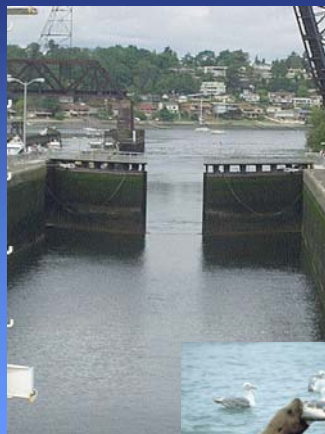
- No intentional lethal take
- Fisheries categorized into three groups based on marine mammal take profile.
- Categories I & II must register.
- All fishers must report injuries and mortalities.



Section 120 Pinniped Removal Authority

States may apply for authorization to lethally take individually identifiable pinnipeds that are having a significant negative impact on the decline or recovery of a salmonid stock that is being considered for or is listed as threatened or endangered under the ESA.

(aka "Ballard Locks amendment")





Jurisdiction for Marine Mammals is Divided

U.S. Dept. of Commerce



National Oceanic
& Atmospheric
Administration



U.S. Dept. of Interior



U.S. Fish &
Wildlife
Service



West Coast Pinnipeds *The Big Three*

- Steller Sea Lion
- California Sea Lion
- Harbor Seal



Harbor Seal

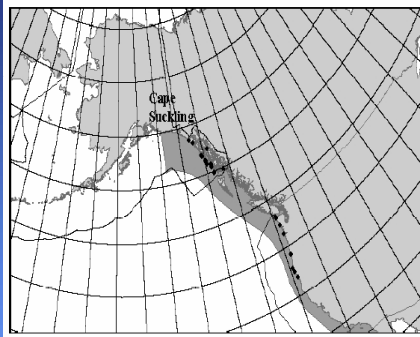


CA Sea Lion

Steller Sea Lion



Steller Sea Lion (eastern stock)



Geographic Range of Steller sea lion (eastern stock – shaded) showing major haulouts & rookeries

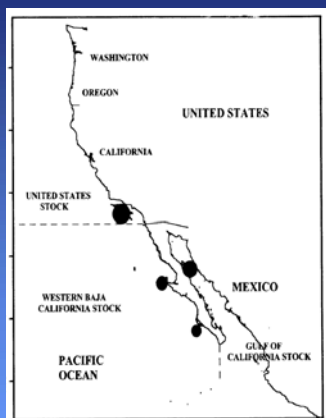
- Current population estimate = 31,028*
- Oregon breeding population trend **stable/increasing**



* 2003 Pacific Marine Mammal Stock Assessment Report



California Sea Lion

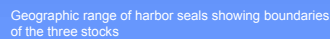
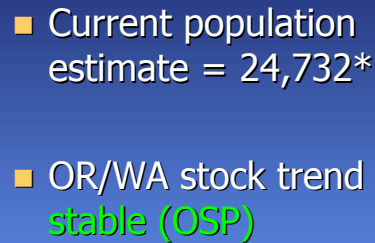


Geographic range of California sea lions showing stock boundaries and major rookeries

- 2003 population estimate = 244,000*
- Population trend **stable (OSP)**

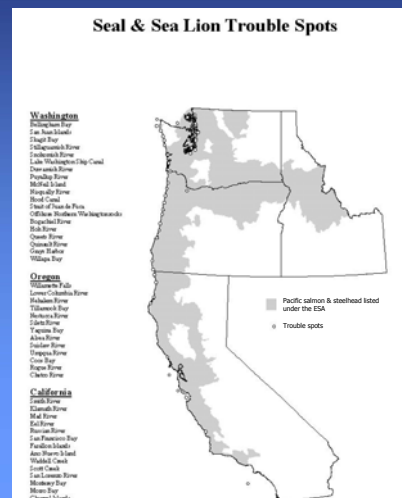


* 2003 Pacific Marine Mammal Stock Assessment Report



1994 Congressional Mandate for Scientific Investigation

- Determine whether seals & sea lions are:
 - having negative impact on salmon recovery
 - having broader impacts on coastal ecosystem.
- NOAA's 1997 Technical Memorandum presents investigation results and identifies further research needs.





1998 Congress Funds Further Ecosystem Research

Up to \$750 k annually to study pinniped impacts on salmonids and West Coast ecosystems



Sea lions on Columbia River Jetty



Harbor seals on Desdemona Sands, Columbia River
May 2, 2005. WDFW photo



NOAA Administers Funds via PSMFC for use by the States

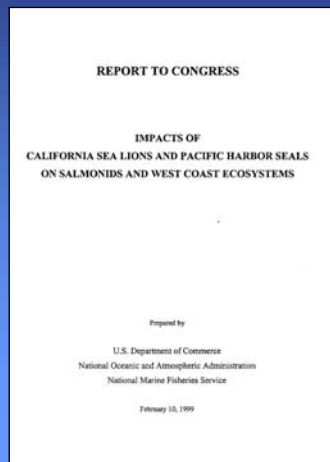
- Pinniped predation and affects on depressed salmonids
- Direct conflicts with commercial & recreational fisheries
- Investigate non-lethal methods to mitigate conflicts with people/resources
- Monitor continuing population increase
- Other coastal eco-system impacts





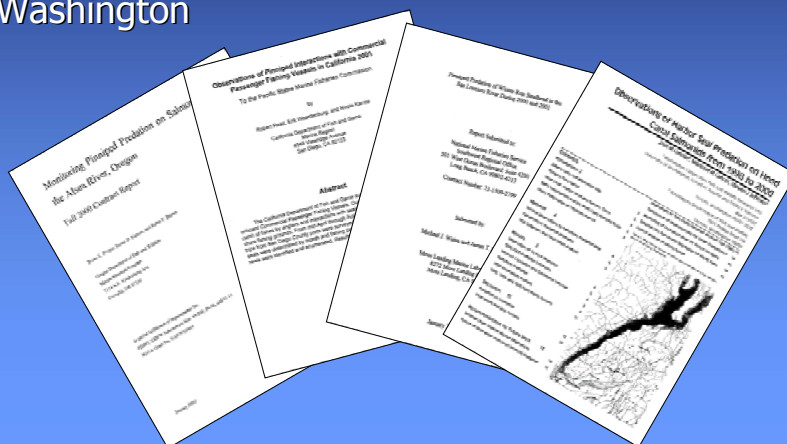
1999 NOAA Report to Congress with Recommendations

- Implement site-specific management for CA sea lions & harbor seals
- Develop safe & effective non-lethal deterrents
- Selectively re-instate lethal take for protection of gear and catch
- Conduct additional research and studies



NOAA Investigations

- Address pinniped monitoring, predation, fishery interactions in California, Oregon, and Washington





Emerging Issues

■ Bonneville Dam & Fish Ladder



■ Rogue River Salmon Fishery



Bonneville Dam & Fish Ladder

- 2001 - Sea lion numbers at the Dam began increasing
- 2002 to 2004 - COE begins evaluation of seasonal abundance and salmonid consumption
- 2005 - low Chinook returns prompted additional concern. Also:
 - Sea lions show up early
 - Salmon show up late and fewer than forecasted
 - Lots of news coverage



2005 Inter-Agency Cooperation

Non-lethal deterrence actions taken in the ladder and tailrace. Findings include:

- Hazing moves animals but majority return when action is suspended
- Predation increases in areas where sea lions moved in response to hazing
- Fish passage may be positively correlated with hazing



2006 Recommended Actions

- Begin hazing animals as soon as they arrive at the dam
- Complete installation of fish ladder exclusion gates
- Install "acoustic fence" near ladder entrances
- Keep sea lions from using locks
- Monitor predation rates and effectiveness of deterrents





Predation in the Tailrace

PRELIMINARY DATA	2002	2003	2004	2005
Adult Spring Chinook Past Bonneville	284,733	217,185	186,804	82,006
Estimated Spring Chinook Taken	929	2,396	3,872	2,920 *
% of Spring Chinook Run Taken	0.3%	1.1%	1.9%	3.4%
Estimated # Pinnipeds at Bonneville	31	111	105	87 *
Mean Daily Pinniped Number	4.4	13.3	13.7	21.4
% of Fish Caught But Escaped	11.9%	9.5%	1.8%	0.8%
% of Lamprey in Diet	5.4%	11.3%	12.2%	25.1%
Total Hours of Observation	734	1,440	553	682+



* 2005 data
collection began in
mid-March