



# Classification of Endangered, Threatened and Sensitive Wildlife: Tufted Puffin and Steller Sea Lion

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Wildlife Program



# ***RCW Authority***

- **RCW 77.120 - authorizes Commission to classify “wildlife” as endangered, protected**
- **Identify & classify native wildlife species in need of protection to ensure their survival in WA**



# ***Definitions***

- **Endangered:** Seriously threatened with extinction throughout all or a significant portion of its range in WA
- **Threatened:** Likely to become endangered within the foreseeable future without management or removal of threats
- **Sensitive:** Vulnerable or declining and is likely to become E or T without management or removal of threats

# ***Steps For Listing And Recovery*** **(WAC 232-12-297)**

**Identify species of concern - candidates**

 **Conduct surveys/database/literature/research**

 **Write status reviews to recommend classification**

 **Write recovery plans for listed species**

 **Implement recovery actions for listed species**

 **Monitor listed species**

 **Status reviews to downlist or delist species**

# ***Draft Status Reports, Periodic Status Reviews***



- Status in Washington
- Population & habitat characteristics
- Ecological relationships
- Management activities
- Factors affecting the species continued existence
- Internal and external peer review

# *Public Review and Final Reports*



- 1-3 month review of draft report
- Final report & listing recommendation
- SEPA review
- 1 month public review
- Commission meeting

# *Effects of State Listing*

- Increase public awareness and education
- Helps set priorities for WDFW work
- Notifies other agencies and local governments of increased concern
- Restrictions on harassment, killing
- Recovery planning
- Research into decline, manage non-native species, expanded monitoring of prey fish trends, priority for oil spill planning, etc.



# *Tufted Puffin Classification Proposal*



*Getty Images*



Washington Department of Fish and Wildlife



# *Final Classification Proposal*

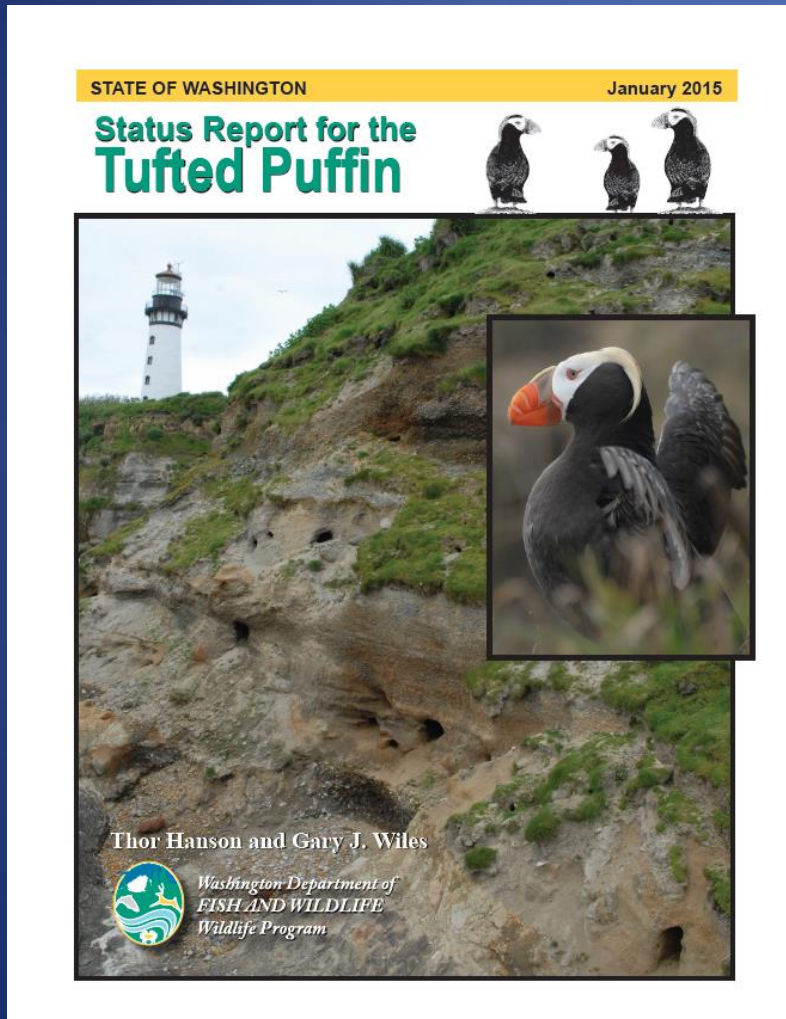


Getty Images

Current Status:  
Candidate (1998)

Proposed Status:  
Endangered

# Status Report for the Tufted Puffin



- Initial information gathering and draft provided by SeaDoc Society.
- Diversity Division edited and expanded upon document, then took it through review process.

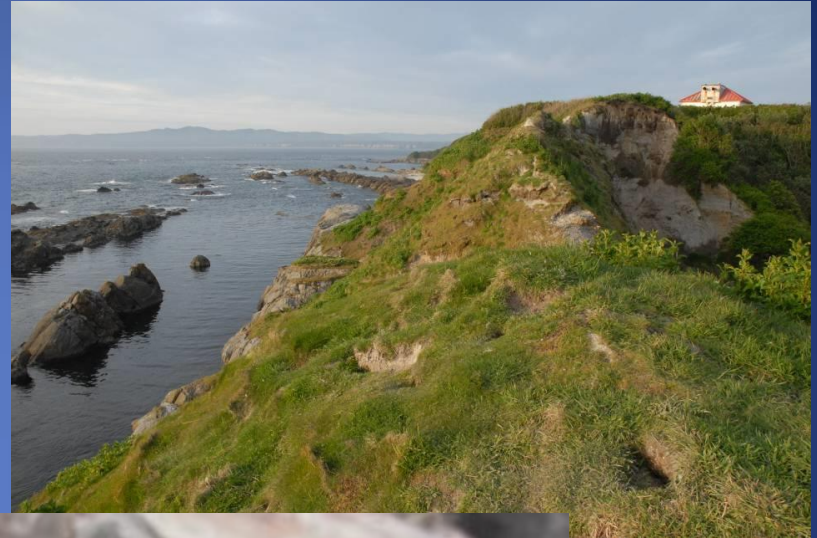
# *Tufted Puffin Natural History*

- One of the largest alcids (murrelets, auklets, puffins)
- Distribution: North Pacific from California to Japan
  - Changes plumage seasonally
  - Forages underwater, superb swimmers
  - Nests on islands and headlands
  - Winters at sea
  - Diet – forage fish; likely sand lance, herring, juv. rockfish, eulachon, sardines, anchovies, invertebrates
  - Feeds at sea up to 100 km from colonies



# *Tufted Puffin Natural History*

- Breeding sites occupied from April to Sept
- Nests are mostly in burrows on steep grassy slopes and deep soil bluffs
- 1 clutch with 1 egg hatching ~July 1
- Fledging from Aug to Sept



# *Status of Puffins in Washington and Reasons for Listing Recommendation*

Once one of the most common seabirds in WA

## **1. Minimum population estimates have greatly declined in last 3-4 decades:**

25,000 birds in 1906-1908 (colony visits)

23,342 birds in 1978-1982 (colony visits)

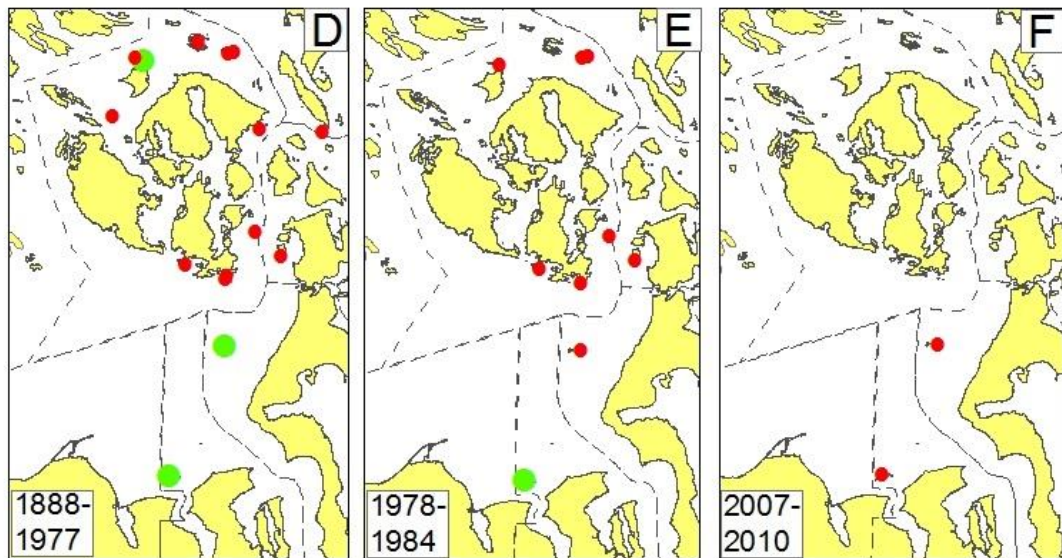
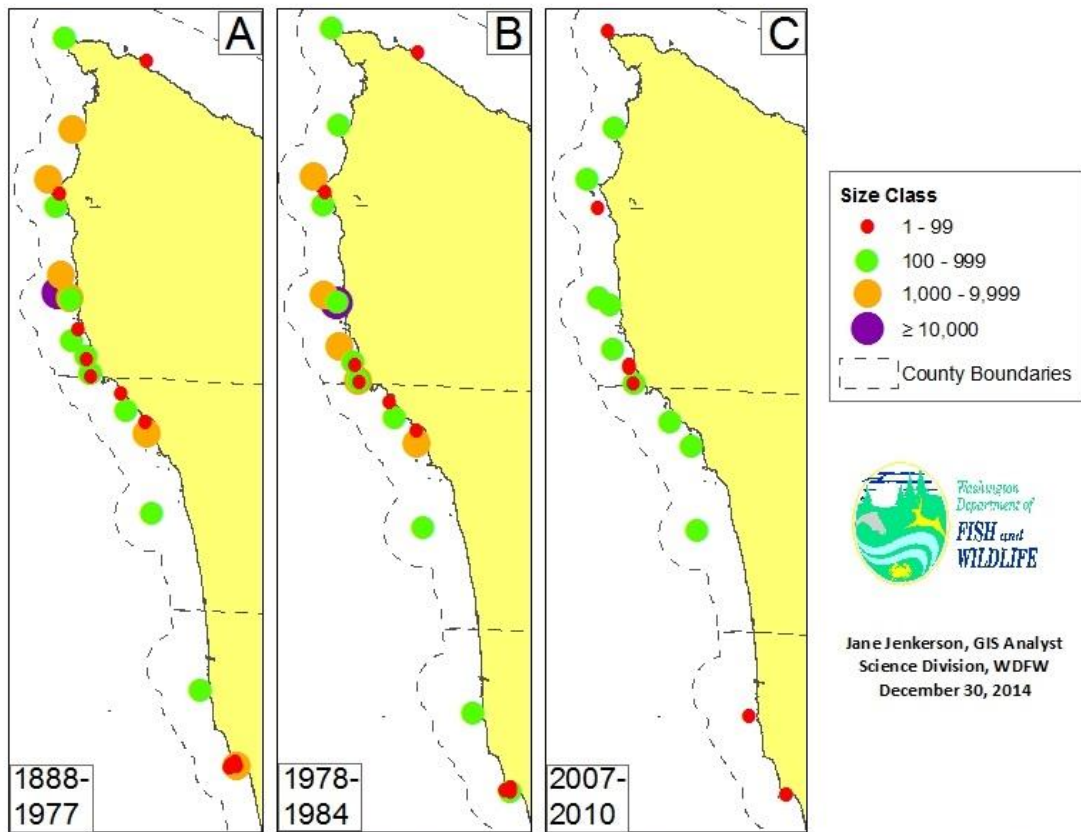
2,958 in 2009 – (birds on-water, nearshore transects)

- Declines most dramatic from mid-1980s to the late 1990s
- Decline follows a similar trend in CA, OR, Japan

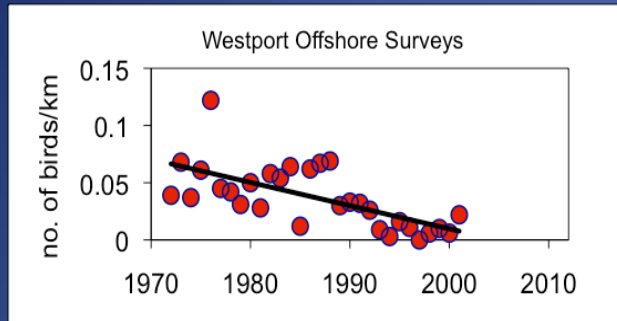
## 2. Declines in Colony Size and Distribution

- 8 of the 9 colonies that once supported  $\geq 1,000$  birds remain occupied, but the highest count at any site in 2007-2010 was 211 birds.
- Of remaining 19 current colonies, only 3 support numbers similar to those in 1978-1982.

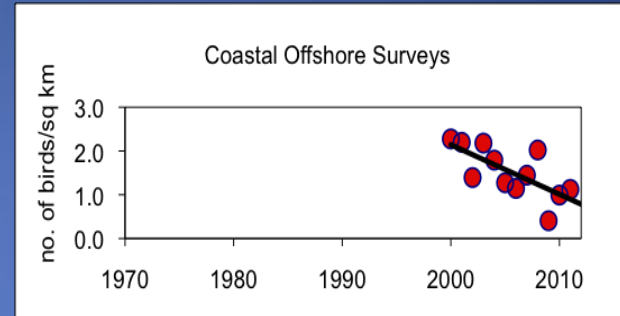
Colony size (no. of birds)	No. of colonies per survey period		
	1886-1977	1978-1984	2007-2010
1-99	24	18	10
100-999	13	11	9
1,000-9,999	6	5	0
$\geq 10,000$	1	1	0
Total no. of occupied sites	44	35	19
% change since 1886-1977	-	-20%	-57%



### 3. Declining Numbers during Boat-based Surveys

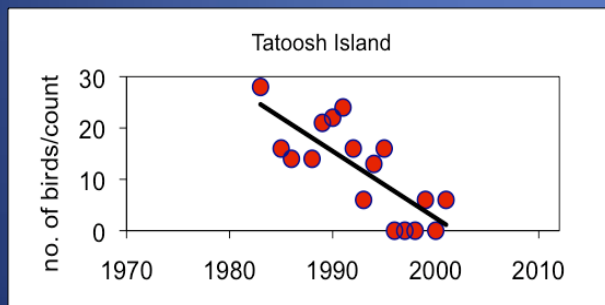


**13.6% mean decline per year,  
1972-2001**

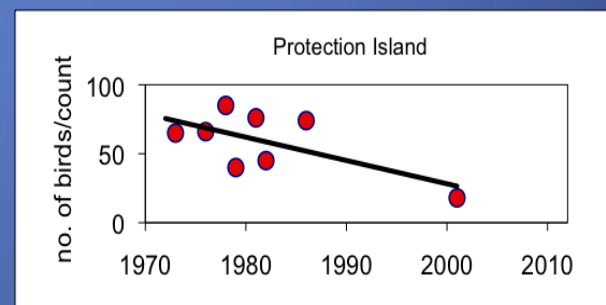


**8.9% mean decline per year,  
2001-2012**

### 4. Declines in Attendance at Colonies



**16.9% mean decline per year,  
1983-2001**



**13.9% mean decline per year,  
1973-2001**



# Threats to Tufted Puffins

**Causes for decline largely unknown**

**Potential causes include:**

- **Reduced prey availability**
  - Forage fish pops can vary with ocean conditions, harvest levels
  - Some have declined (herring, juv. rockfish), others maybe not
- **Climate change**
  - Vulnerable to prey changes from warmer ocean temps, sea level rise
- **Entanglement in fishing nets**
  - Major problem in past, but not currently known to be significant



Bob Whitney



Tim Zimmermann

# Threats to Tufted Puffins

- Mortality from oil spills, chemical contaminants
  - *Tenyo Maru* spill killed 9% of population (1991)
  - Smith Is. bird highly contaminated with PCBs, DDTs, PBDEs (2009)
- Impacts from introduced species
  - European rabbits at Destruction Is., non-native plants at Protection Is.
- Increased interactions w/ eagles
- Harmful algal blooms
  - Increasing, large 2009 seabird mortality event
- Human disturbance of breeding colonies
  - Likely minor, except in SJI



# *Other Puffin Management Conservation*



*Peter Hodum*

- Nearly all nesting islands part of Washington Maritime NWR Complex, San Juan Is. Wilderness
- Outer coast waters surrounding nesting islands managed as part of the Olympic Coast NMS
- WA, OR, and CA population petitioned in 2014 under ESA. USFWS will begin evaluation in 2016-2017

# *Public Comments/Concerns*

- Support for listing (23)
- Opposed to listing (1)
- Concerns about:
  - Human disturbance of nesting colonies (2)
  - Declines in forage fish (1)
  - Too many cormorants (1)
  - The report is full of poor science (1)
- Technical comments (1)

# Questions?



*Alan Wilson*



*Peter Hodum*

# *Steller Sea Lion Reclassification Proposal*



*Andrew Trites*



Washington Department of Fish and Wildlife

# *Final Reclassification Proposal*



Current Status:  
Threatened  
(1993)

Proposed Status:  
Delisted, but will  
retain status as  
protected wildlife

# *Periodic Status Review for the Steller Sea Lion*

STATE OF WASHINGTON

January 2015

## Periodic Status Review for the Steller Sea Lion

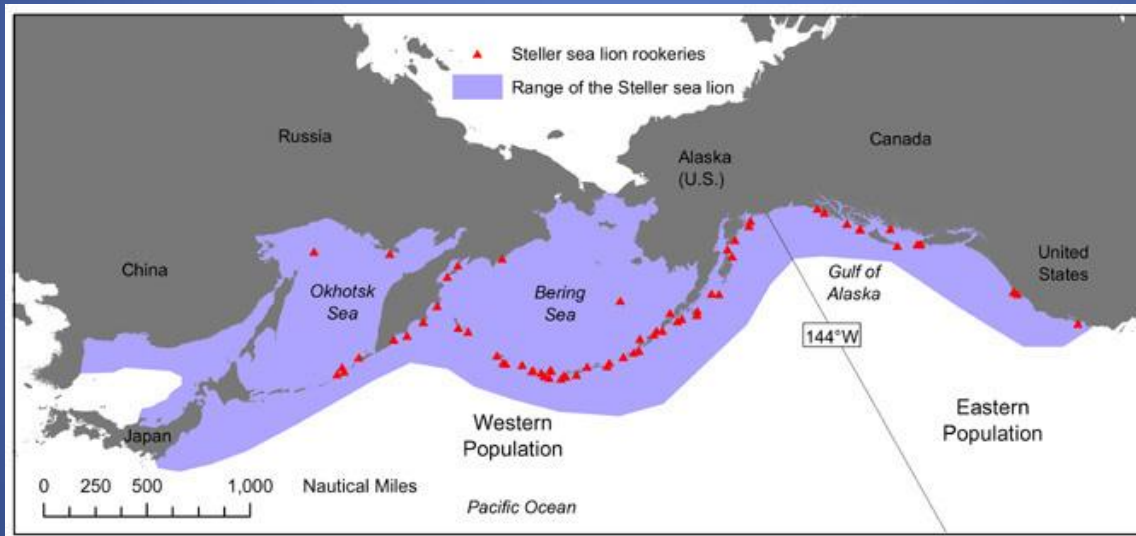


- Initiated PSR after federal delisting of Distinct Population Segment (DPS)
- Wildlife Program Diversity Division drafted and led



# *Steller Sea Lion Natural History*

- One of the largest pinnipeds
- Distribution: rim of North Pacific from Calif. to Japan
- 2 recognized DPSs: eastern and western



- 1 of 2 sea lion species in WA
- California sea lions are smaller and much more common in WA

# *Steller Sea Lion Natural History*

- Rookeries on islands, offshore rocks from May to August
- Adult males defend territories
- 1 pup born every 1-3 yrs
- Year-round haulouts on islands, offshore rocks, jetties, buoys, docks

marinemammal.org



Joel Sartore

# *Steller Sea Lion Natural History*

- Highly mobile, females usually remain within 500 km of rookeries, juveniles regularly go >500 km
- WA visited by animals from OR, CA, BC, and SE Alaska



Carroll Island –  
Jeff Harris, NOAA



# *Steller Sea Lion Natural History*

- Feeds mostly within 60 km of shore
- Dietary generalist, feeds on a wide variety of fish and cephalopods
- 6 WA studies
  - Pacific hake most important prey in 3
  - Smelt, starry flounder, clupeids (herring, sardines, others), and skates in 1
  - Clupeids, skates, rockfish, and salmon in 1
  - White sturgeon, salmonids at Bonneville Dam



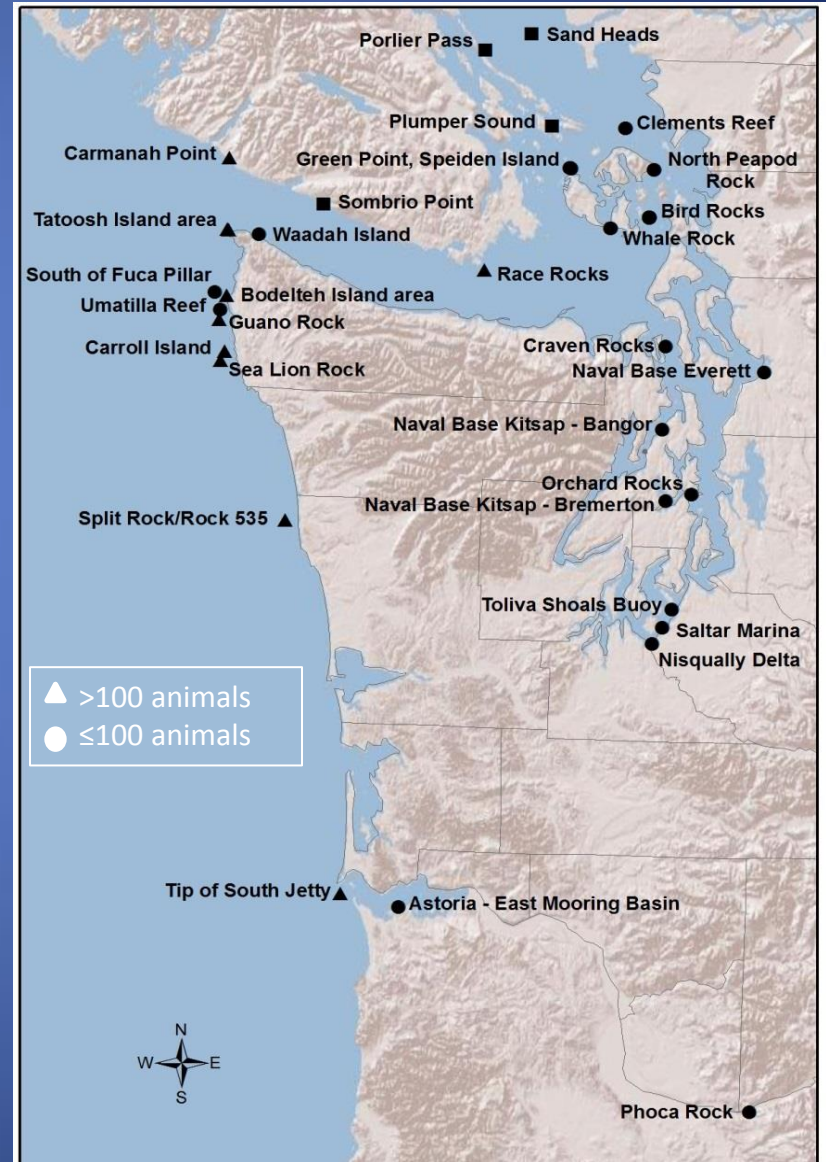
Veronica Holloway

# Haulouts in Washington

- 22 haulouts in WA
  - 8 along outer coast. Largest at Bodelteh Island with up to 2,000
  - 14 in inner waters, often human-made
- 3 nearby in OR, 6 nearby in BC

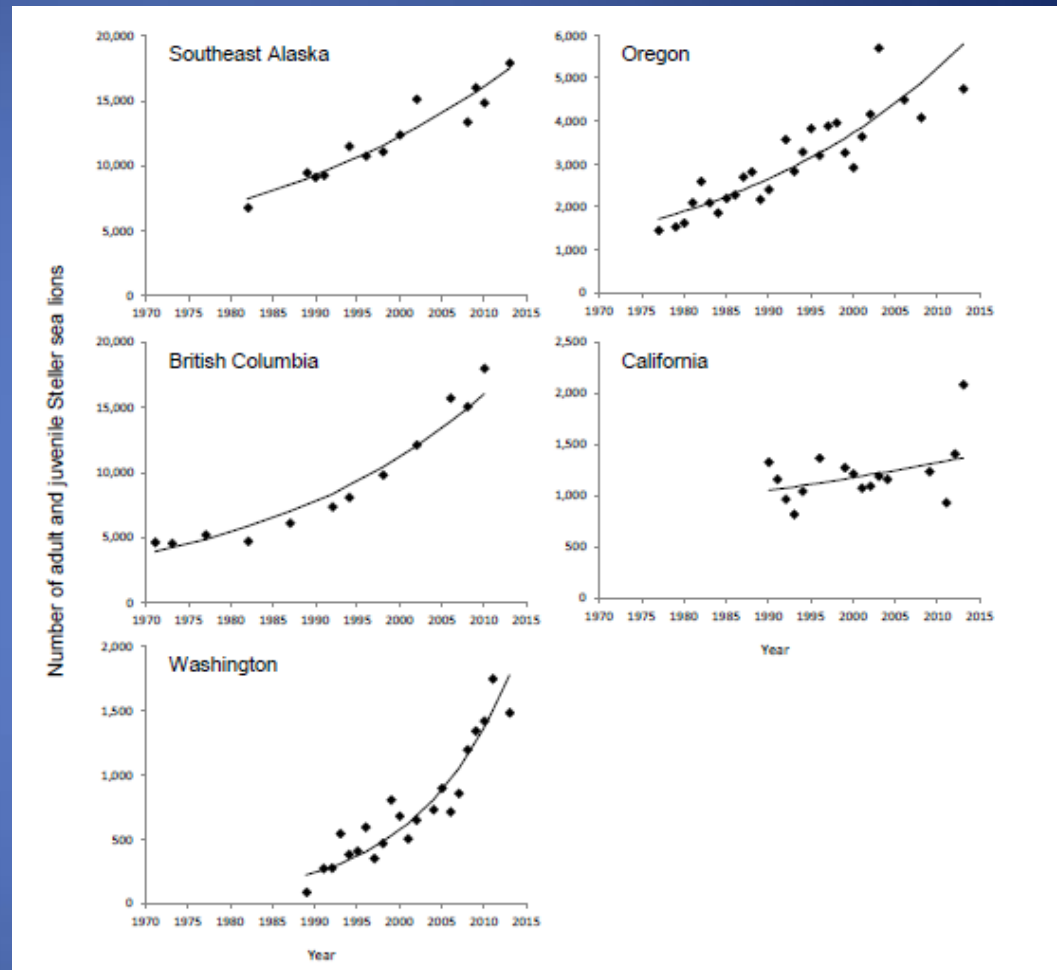


Rock 535 - Steve Jeffries



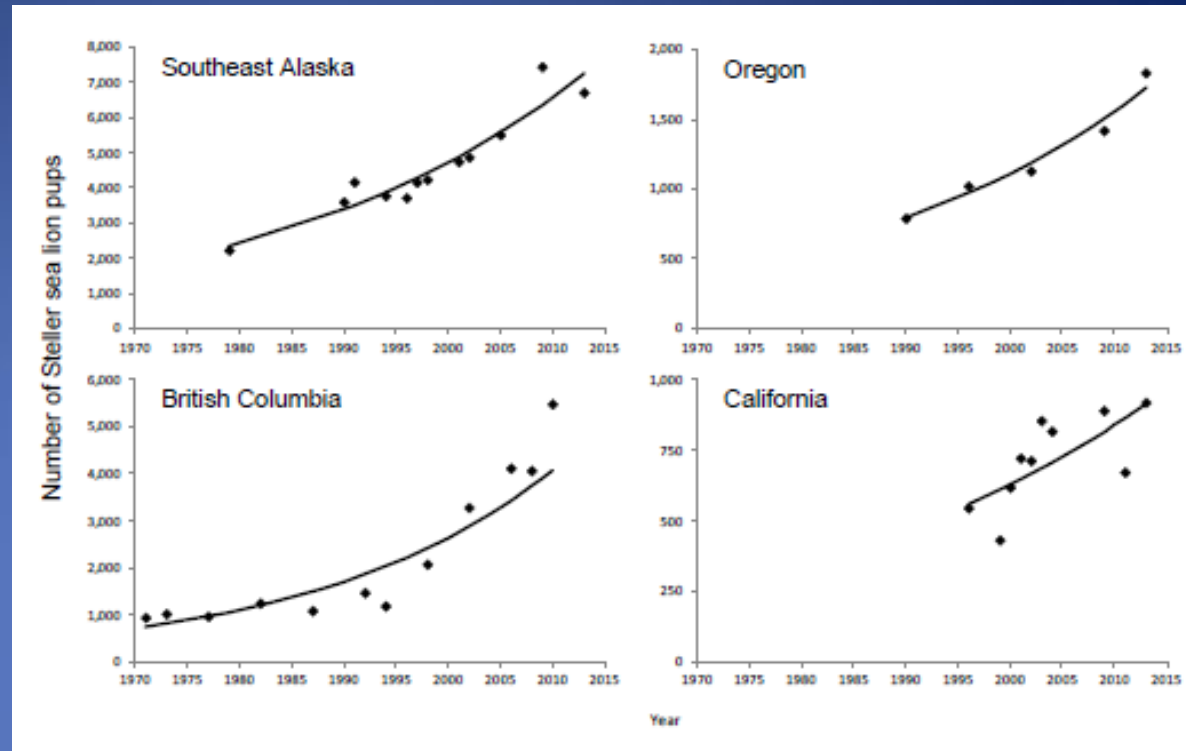
# Current Status of Steller Sea Lions in WA

- Greatly depleted thru early 1970s
- Increase in non-pup numbers in E DPS
  - Total DPS +2.99% (sig)
  - WA +9.13% (sig)
  - SEAK +2.78% (sig)
  - BC +3.68% (sig)
  - OR +3.44% (sig)
  - CA +1.16% (non-sig)



- Summer trend counts of non-pups at 4 haulouts in WA increased from ~250-300 in early 1990s to 2,157 in 2014

- Increase in pup numbers in E DPS
  - Total DPS +4.18% (sig)
  - SEAK +3.37% (sig)
  - BC +4.49% (sig)
  - OR +3.43% (sig)
  - CA +2.95% (non-sig)



- Total population estimate increased from ~18,300 in 1979 to ~70,200 in 2010
- WA has no rookeries (defined as sites with >50 pups)
- WA pup numbers have increased from 1 in 1992 to 60 in 2014

# Threats to Steller Sea Lions



Steve Jeffries



Oceana

- **Climate change**
  - Altered food webs, sea level rise, novel diseases and parasites
  - Future threat
- **Reduced prey availability thru competition with fisheries**
  - Likely had a role in decline of W DPS
  - Numerous fisheries in WA
- **Human disturbance**
  - Haulouts, rookeries
  - Also in aquatic habitats through vessel traffic, energy development



# Threats to Steller Sea Lions



*Alaska Dept of Fish and Game*



*Alaska Dept of Fish and Game*

- **Incidental take in fishing gear**
  - Net entanglement, ingesting hooks
- **Entanglement in marine debris**
  - Nets, packing bands, etc
- **Intentional killing by fishermen**
- **Environmental contaminants**
  - Many Salish Sea animals exceed PCB threshold levels for harbor seals
- **Oil spills**
- **Disease and parasites**
- **Harmful algal blooms**
  - California SLs susceptible to domoic acid poisoning
- **Predation**

# *Other Steller Sea Lion Conservation & Management*



Alaska-in-Pictures.com

- Many haulouts managed as part of Washington Maritime NWR Complex
- Outer coast waters surrounding haulouts managed as part of the Olympic Coast NMS
- Eastern DPS delisted in 2014 under ESA but remains protected under MMPA
- If state delisted, species would remain as protected wildlife
- State delisting could result in some limited lethal removal at locations where authorized by fed, state laws

# *Public Comments/Concerns*

- **Comments still being compiled**

# Questions?



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Craig Damlo