Northwest **Power** and **Conservation** Council

September 6, 2017

MEMORANDUM

TO: **Fish and Wildlife Committee members**

FROM: **Karl T. Weist**

SUBJECT: **Willamette Falls Pinniped Predation Update**

BACKGROUND:

Presenter: Dr. Shaun Clements, Research Scientist and Native Fish Investigations Program Leader for ODFW and
Steve Jeffries, Research Scientist for WDFW

Summary: Willamette winter steelhead, already in low abundance due to a variety of factors, have seen predation by sea lions this year in the 20-25% range of adult fish attempting to pass the fish ladder at Willamette Falls. ODFW has applied for a lethal take permit in an effort to protect the remnants of a once-productive run. Only 512 winter steelhead passed Willamette Falls in 2017, the lowest total ever recorded.

Relevance: Pinniped predation on certain endangered salmonid stocks has the potential to extinguish the efforts and negate the expenditures to recover stocks on the brink of extinction.

Background: ODFW has monitored sea lion predation on salmonids, sturgeon and lamprey at Willamette Falls for the past four years. As noted on ODFW's website "Monitoring efforts in 2017 will include trapping sea lions in order to brand unmarked individuals and to potentially relocate sea lions back to the ocean. Beginning in January, a trap was located at SportCraft Landing

851 S.W. Sixth Avenue, Suite 1100
Portland, Oregon 97204-1348
www.nwcouncil.org

Steve Crow
Executive Director

503-222-5161
800-452-5161
Fax: 503-820-2370

Moorages in Oregon City," with the potentiality of moving the trap to the non-operational locks area managed by the Corps of Engineers, depending on sea lion use.

More Info: Please see
http://www.statesmanjournal.com/story/news/2017/06/16/odfw-seeking-permit-kill-fish-eating-sea-lions-willamette-falls/400318001/
http://www.oregonlive.com/environment/index.ssf/2017/08/oregon_warns_willamette_steelh.html

WILLAMETTE WINTER STEELHEAD | UPDATE

WILLAMETTE WINTER STEELHEAD

A RUN IN PERIL

Fish

512

Returned

40+

Sea lions

Predation

25%

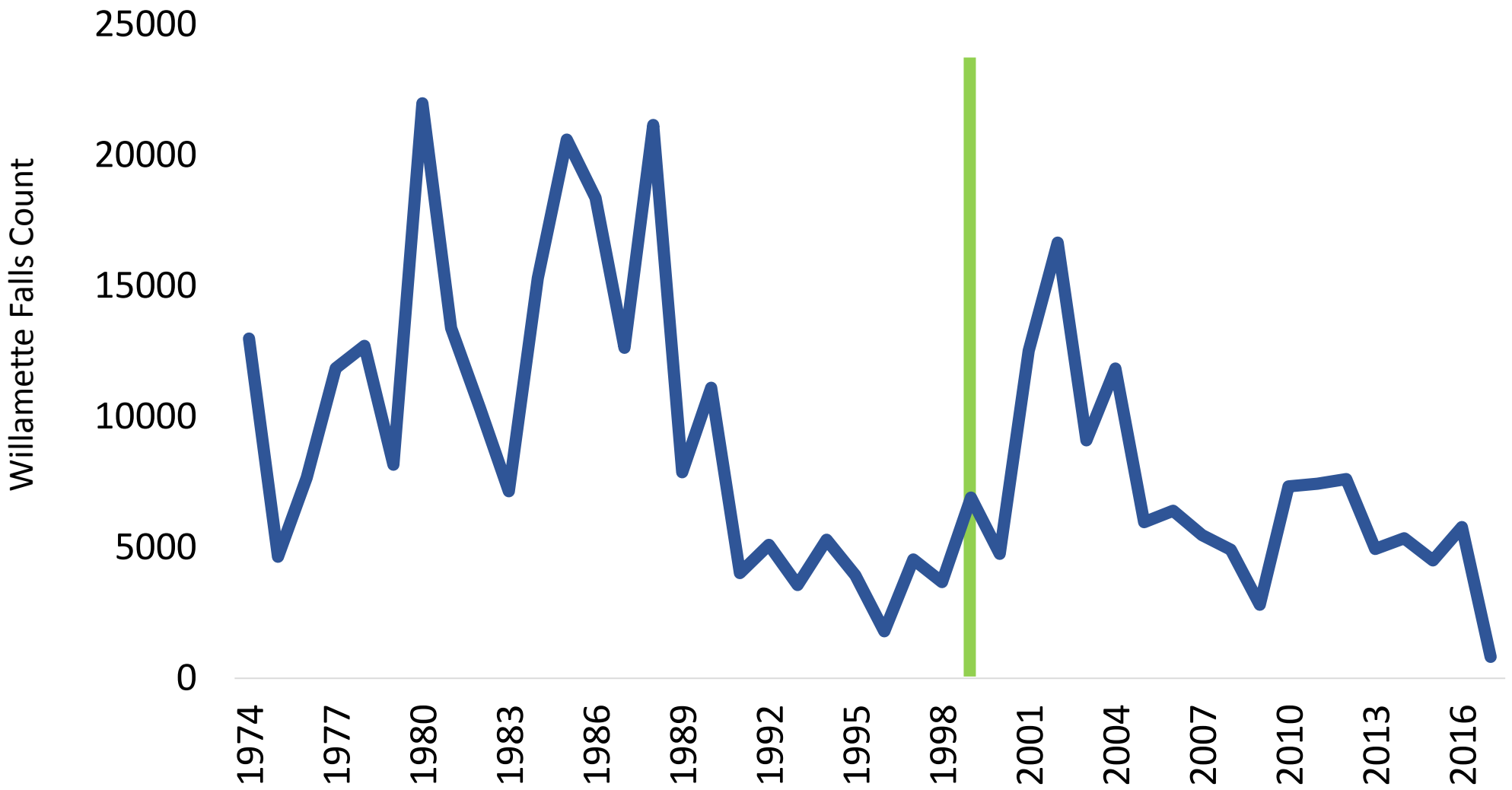
Loss

Probability

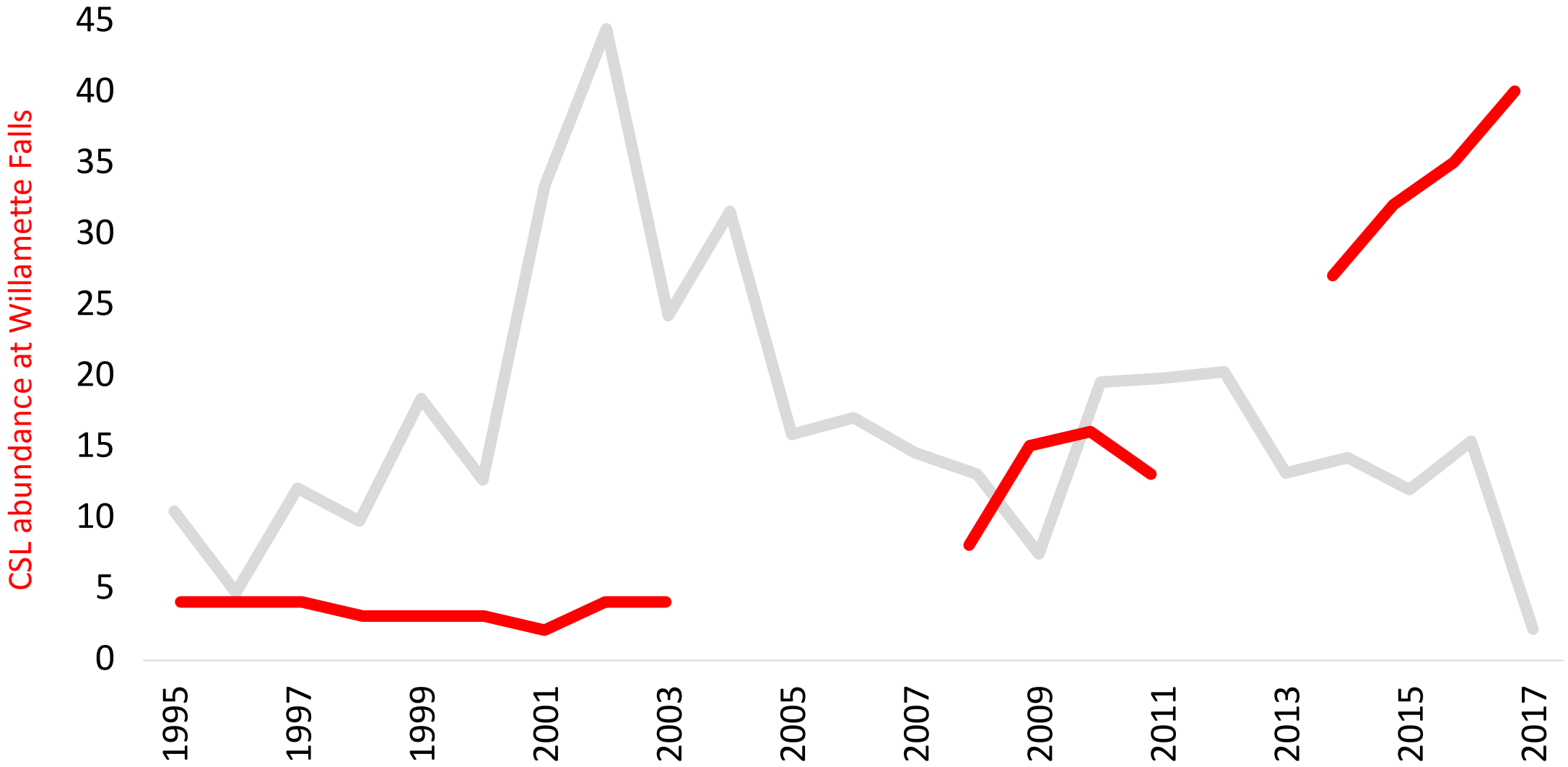
89%

of Extinction

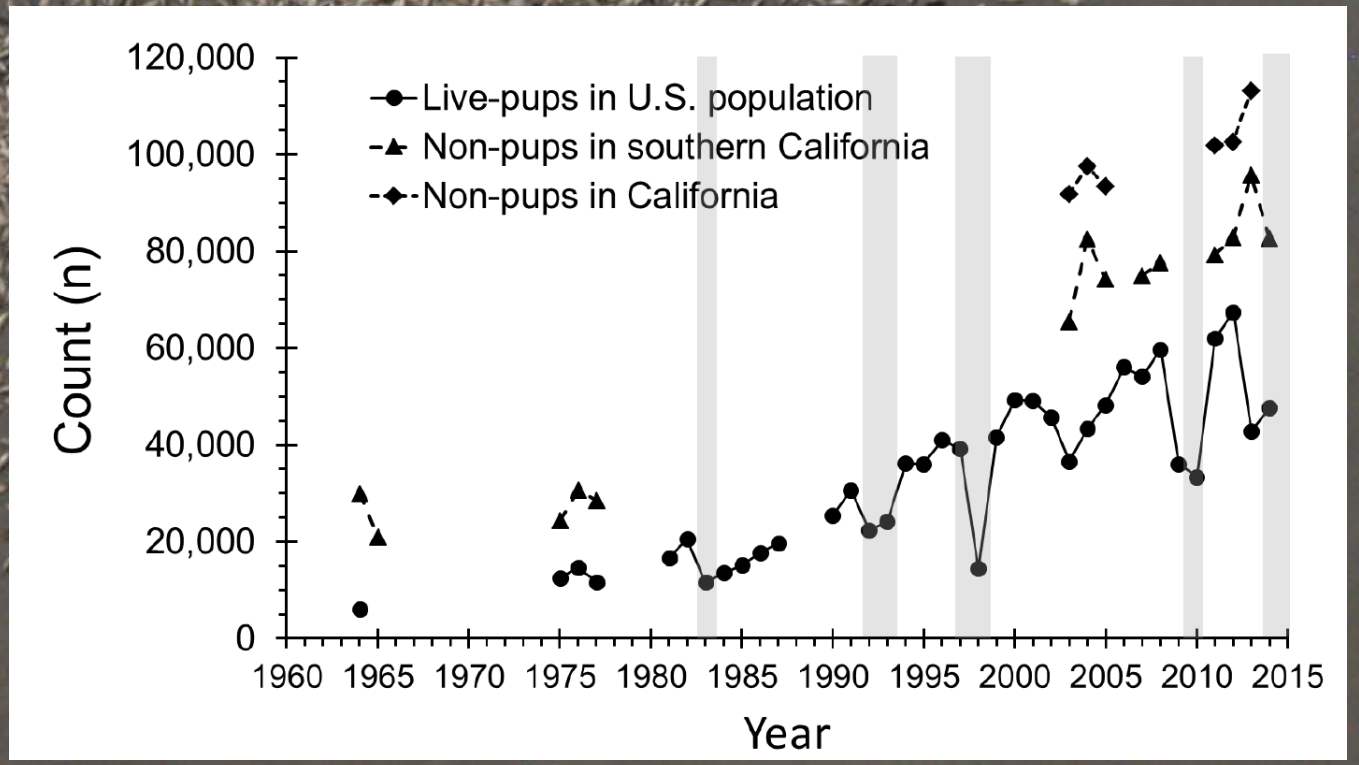
WILLAMETTE WINTER STEELHEAD | IN DECLINE



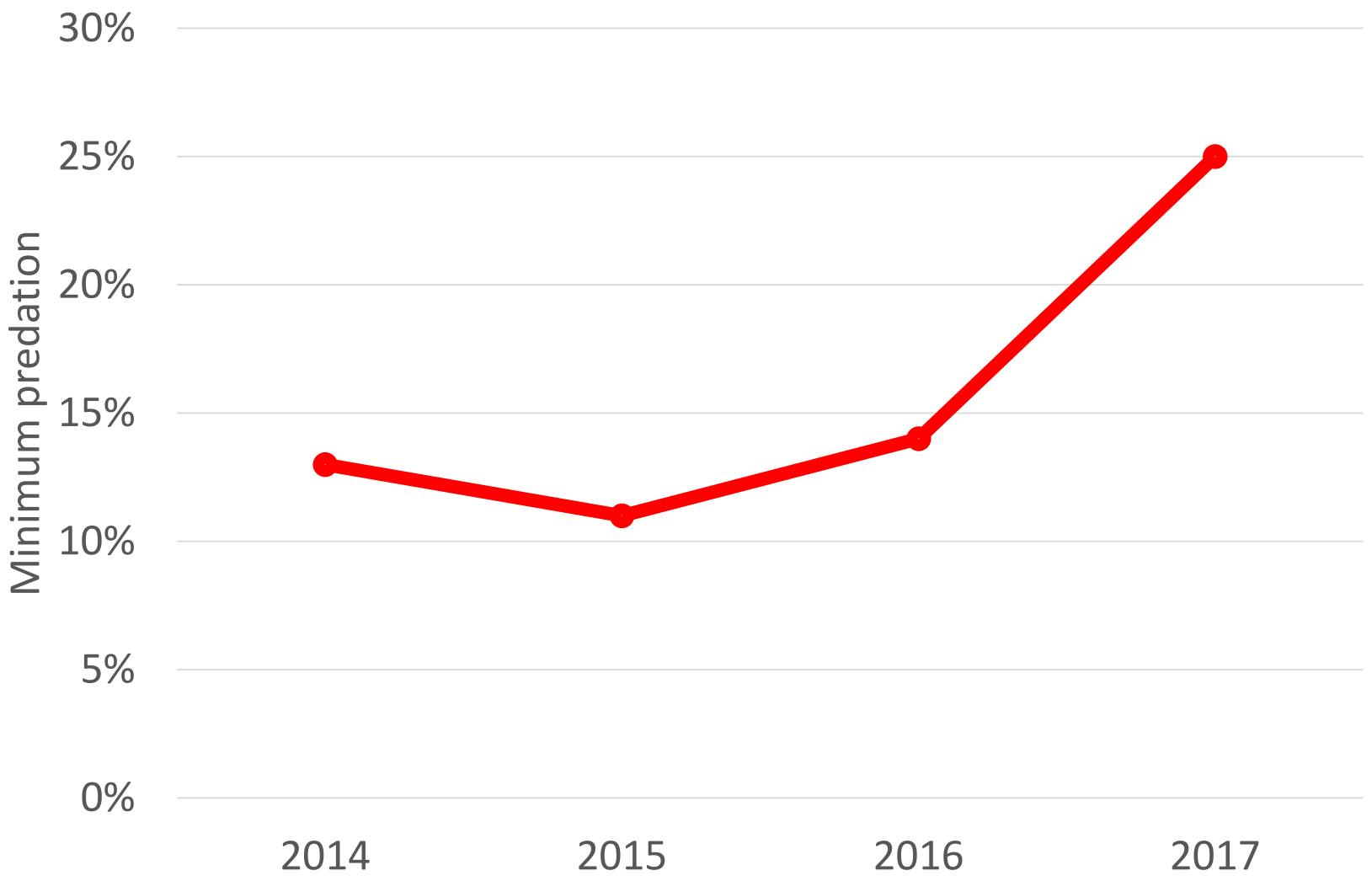
CALIFORNIA SEA LIONS | INCREASING ABUNDANCE



MARINE MAMMAL PROTECTION ACT | A SUCCESS STORY



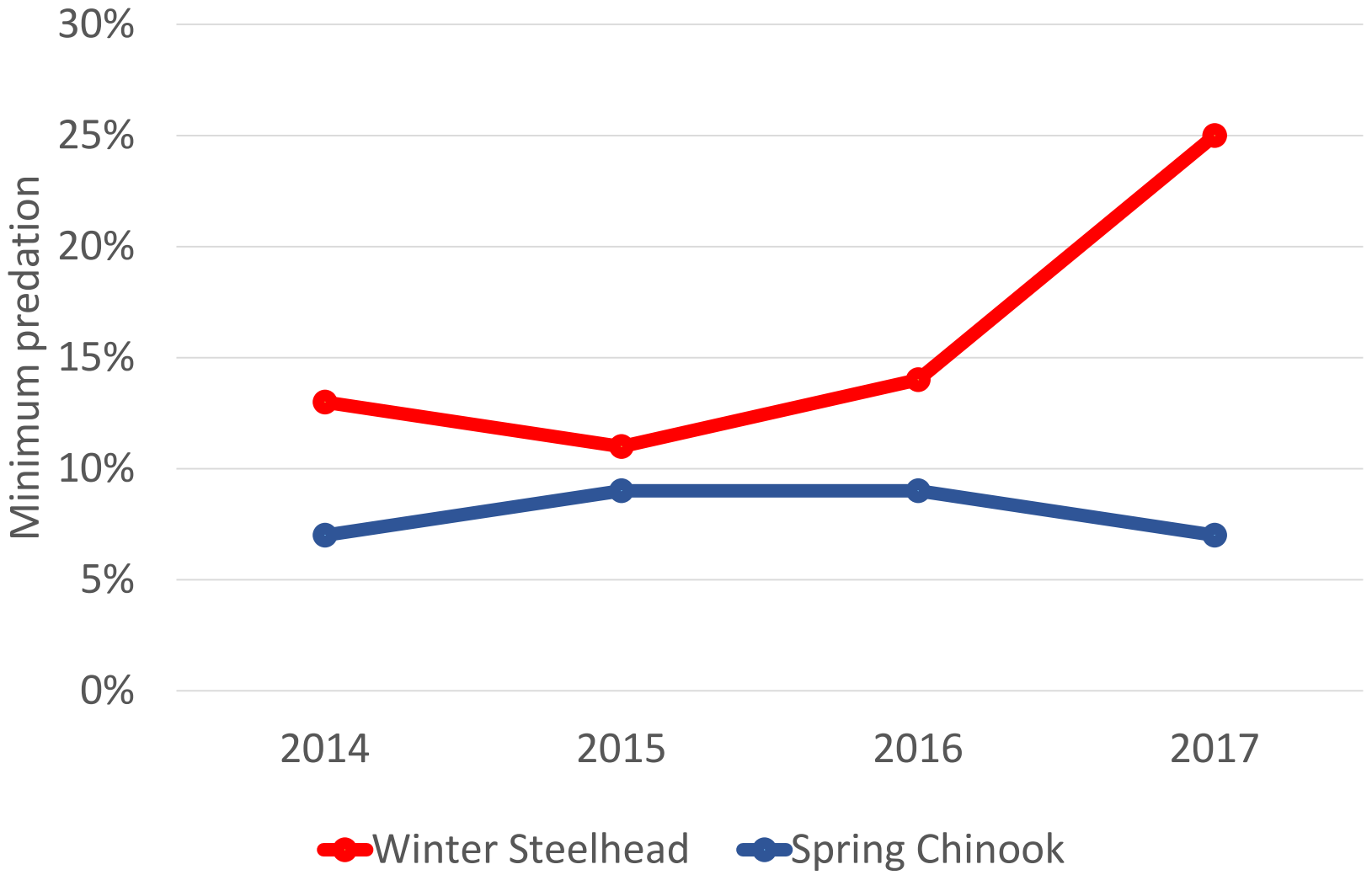
WILLAMETTE WINTER STEELHEAD | INCREASING PREDATION RATE



WILLAMETTE WINTER STEELHEAD | EXTINCTION RISK

Scenario		Single Population			Three Populations
		North Santiam	South Santiam	Molalla	At least 1 goes extinct
Without Sea Lions		2%	5%	0%	6%
With Sea lions	lowest observed predation (2015)	8%	16%	0%	23%
	average predation (2016)	27%	34%	2%	53%
	highest observed predation (2017)	64%	60%	21%	89%

WILLAMETTE SPRING CHINOOK PREDATION RATE



CALIFORNIA SEA LIONS | MANAGEMENT ACTIONS

Non-lethal Hazing

2011, 2012, 2014

Deterrent Type	Effective	Ineffective	The Bottom Line
Physical Barriers for Fishways (SLEDs, FOGs)			No animals in fishways in 2008, but C404 was absent this year.
Acoustic Deterrents at Fishways			No visible effects on sea lion behavior near fishways.
Hazing Calif. Sea Lions			Effects seem temporary; Usual avoidance noted. *Record salmonid catch!*
Hazing Steller Sea Lions			Not as effective as in 2006 and 2007.
Relocation (Trap & Release)			Most animals return to BON after release. *Does help individual ID efforts!*

MARINE MAMMAL PROTECTION ACT | LESSONS LEARNED

Sea lions
193
Removed

Years
20+
Non-lethal effort

Runs
1
Extirpated

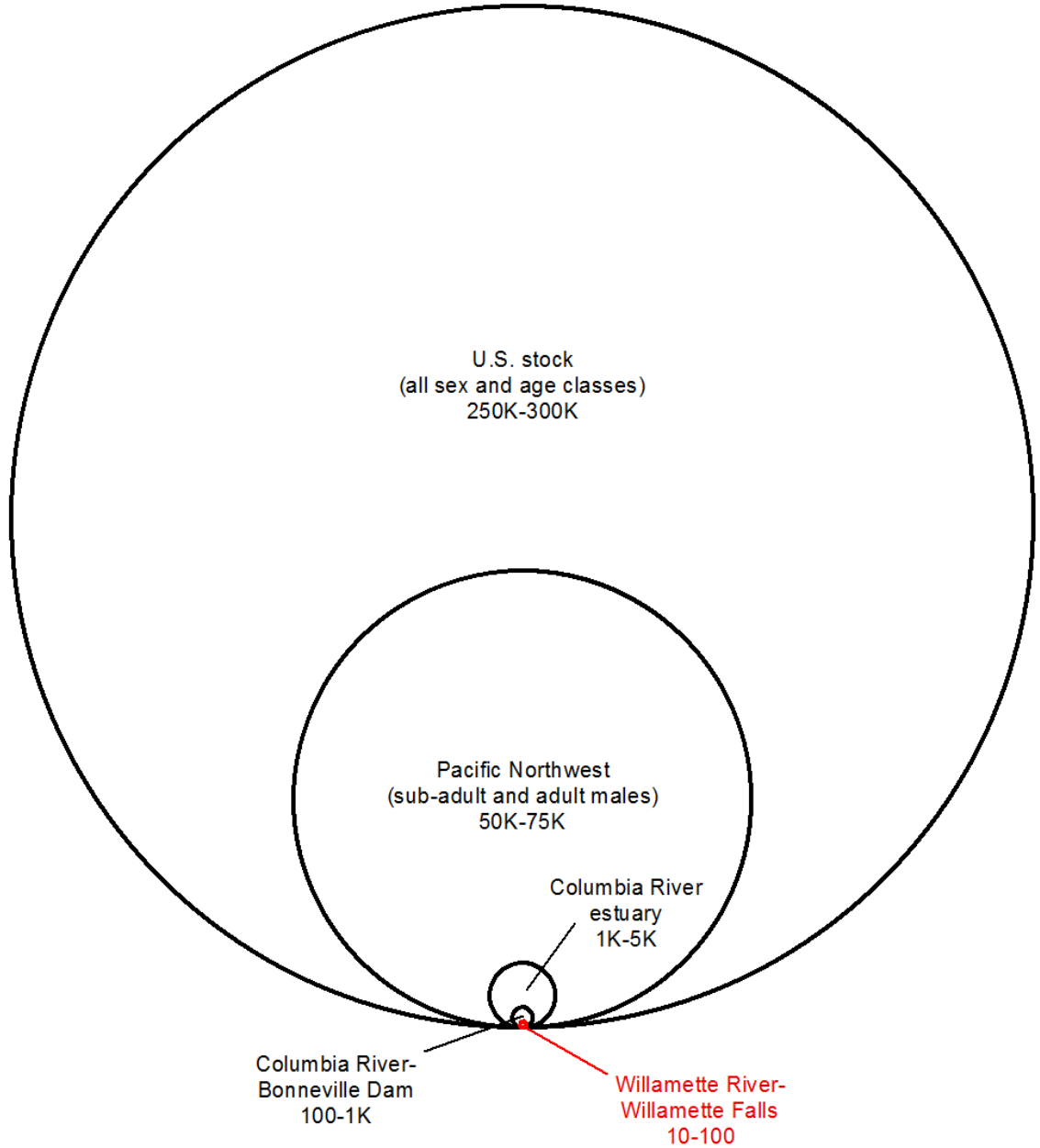
Salmon
80,000+
Consumed

Human Safety
4
Incidents

CSL's in the
~3000+
Columbia

Runs at
1
Extreme risk

Developing
6
Problems


U.S. stock
(all sex and age classes)
250K-300K
Pacific Northwest
(sub-adult and adult males)
50K-75K
Columbia River
estuary
1K-5K
Columbia River-
Bonneville Dam
100-1K
Willamette River-
Willamette Falls
10-100

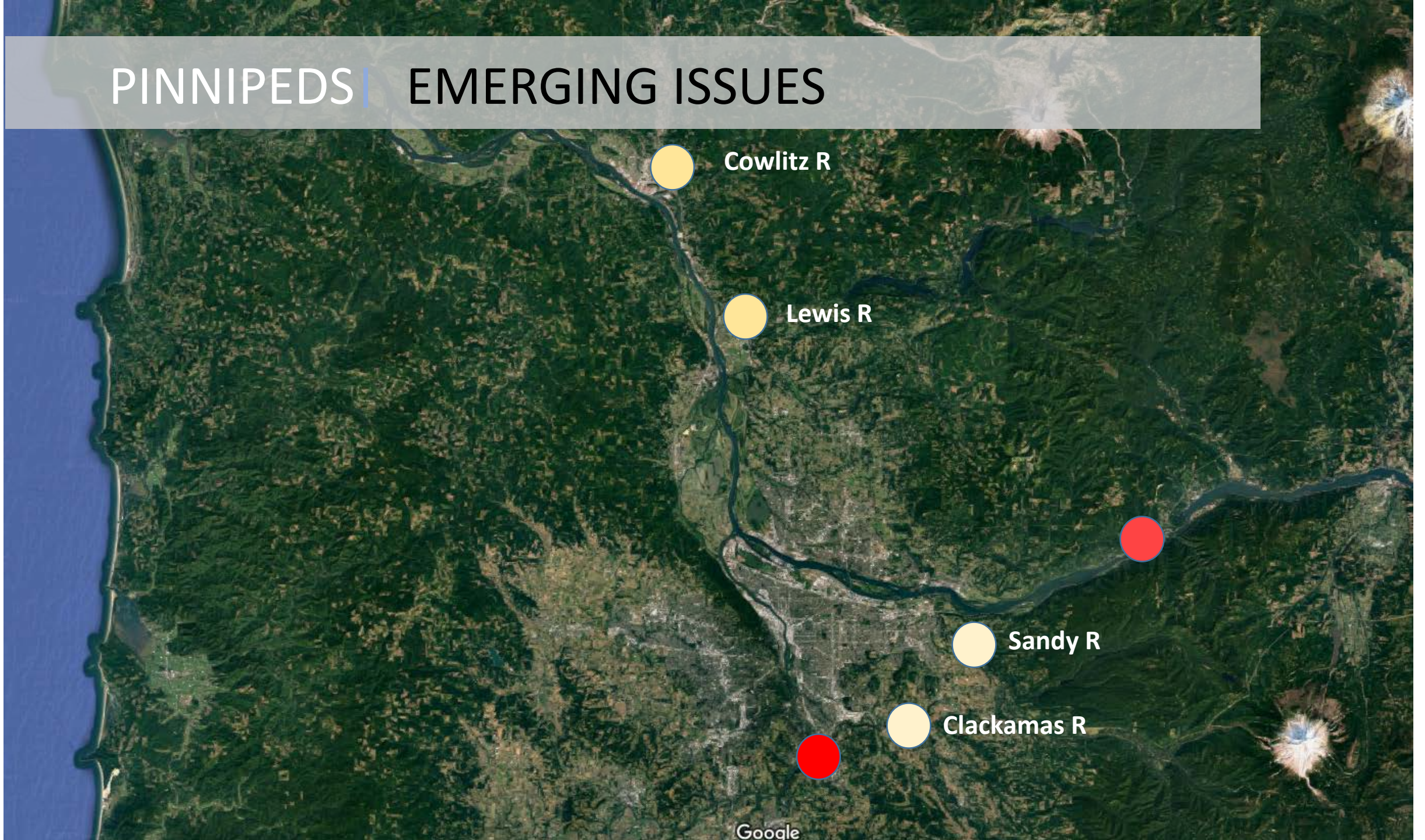
REPORT TO CONGRESS

IMPACTS OF
CALIFORNIA SEA LIONS AND PACIFIC HARBOR SEALS
ON SALMONIDS AND WEST COAST ECOSYSTEMS

A. Implement Site-specific Management for California Sea Lions and Pacific Harbor Seals

Congress should consider a new framework that allows state and federal resource management agencies to immediately address conflicts involving California sea lions and Pacific harbor seals. This framework should provide a streamlined approach for federal and state resource management agencies to take necessary and appropriate action with pinnipeds that are involved in resource conflicts. The framework should provide procedures for lethal removal of California sea lions or Pacific harbor seals where these species are impacting severely depleted salmonids, such as those listed under the ESA. In addition, the framework should provide procedures for lethal removal where these pinniped species are adversely impacting salmonid populations identified as being of special concern by states, or where these pinniped species are in conflict with human activities.

PINNIPEDS | EMERGING ISSUES



California sea lions foraging on eulachon near Skamokawa

Steller sea lions off mouth of Cowlitz River

EMERGING ISSUES | STELLA SEA LIONS & STURGEON

MARINE MAMMAL PROTECTION ACT | CHANGES NEEDED

Support HR 2083 and S 1702

Individually Identifiable

Significant Negative Impact

Emergency action