

Lower Columbia River White Sturgeon Conservation Plan

Presentation to the Oregon Fish
and Wildlife Commission
June 3, 2011

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Topics

- How the conservation and desired status benchmarks were developed
- How the benchmarks relate to current population status and fisheries management
- Three high profile and significant factors affecting the population and associated remedial measures
- An adaptive management framework for monitoring progress, responding to changes in the population and its habitat, and addressing critical unknowns

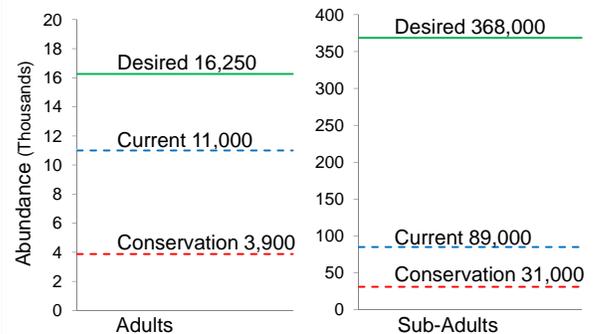
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Background

- Began in 2008 under the Native Fish Conservation Policy
- Worked closely with the Washington Department of Fish and Wildlife
- Drew upon expertise of regional sturgeon managers and scientists
- Solicited input from fishery advisory groups, stakeholders and the public
- Undergoing peer-review by the Independent Multi-disciplinary Science Team

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Terms



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Background

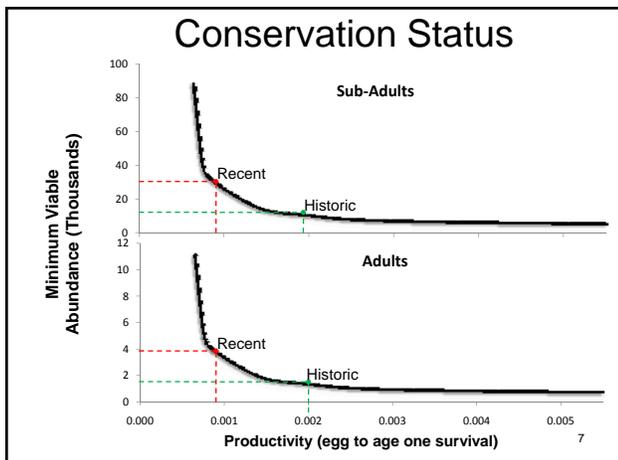
- Deals with population segment of Species Management Unit downstream from Bonneville Dam and in Oregon coastal streams
- Provides conservation and management framework
- Is consistent with Lower Columbia River Conservation and Recovery Plan and Oregon Plan for Salmon and Watersheds

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Conservation Status

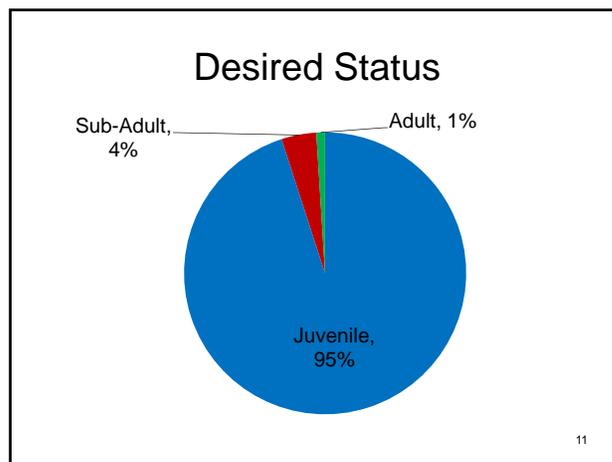
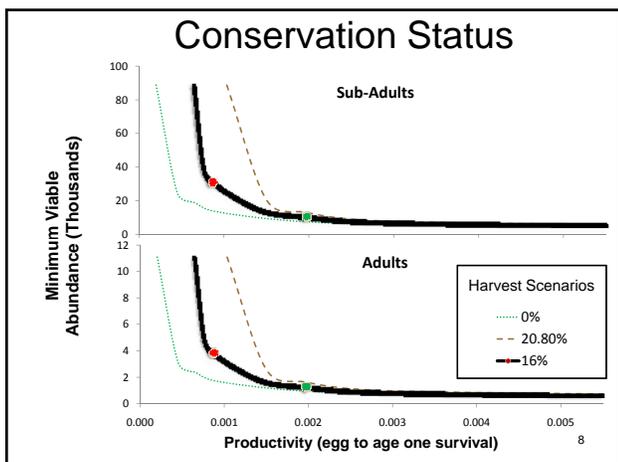
- Represents a condition that we must avoid because it poses a significant extinction risk
- Described in terms of abundance and productivity
- Assumes recent recruitment rates persist into the future
- Accounts for recent increases in sea lion predation
- Incorporates a 16% harvest rate that is sustainable and assures abundant broodstock

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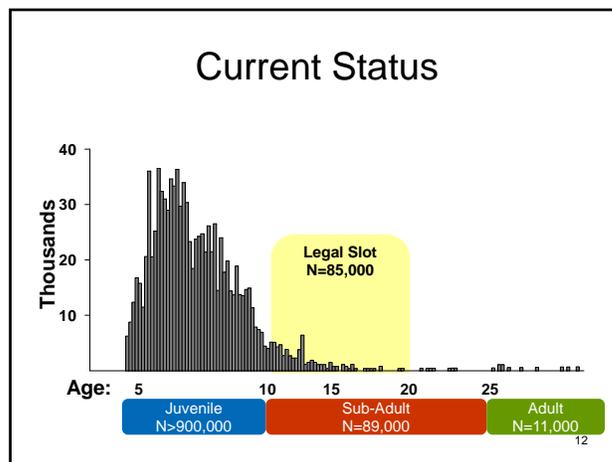


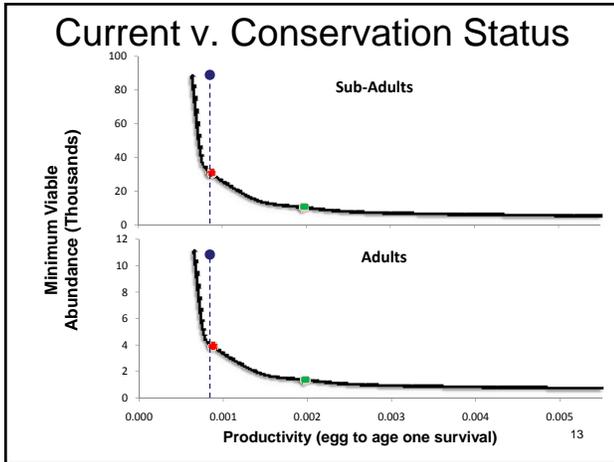
Desired Status

Checkpoint	Adults	Sub-Adults	Potential Harvest
2014	9,250	257,000	38,500
2026	6,250	300,000	45,400
2036	8,650	296,000	43,500
2061	14,250	341,000	50,700
2561	16,250	368,000	55,400



- ### Desired Status
- Represents a condition that is “healthy and harvestable”
 - Described in terms of abundance, productivity, diversity, distribution and habitat
 - Assumes historic recruitment rates persist into the future
 - Accounts for recent increases in sea lion predation
 - Incorporates a 16% harvest rate that is sustainable and assures abundant broodstock



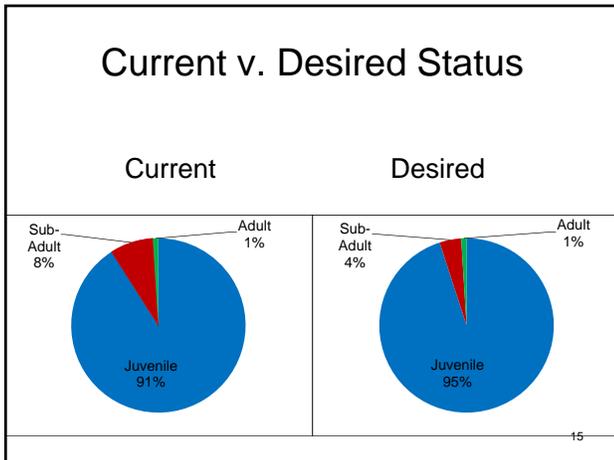


- ### Key Limiting Factors
- Sea Lion Predation
 - Hydropower System Operation and River Conditions
 - Overharvest

Current v. Desired Status

Checkpoint	Adults	Sub-Adults	Potential Harvest
2011	11,000	89,000	17,000
2014	9,250	257,000	38,500
2061	14,250	341,000	50,700

- ### Sea Lion Predation
- Why is this important?
 - Significant increase in past 5 years
 - Major threat to broodstock abundance
 - Total losses unknown
 - What do we intend to do about it?
 - Continue program of harassment and removals of problem animals
 - Assess extent of predation river-wide



- ### Hydropower System Operation and River Conditions
- Why is this important?
 - Sturgeon spawn and rear in the mainstem
 - River conditions affect amount and quality of spawning and rearing habitat
 - Strong relationship between water velocity and recruitment
 - What do we intend to do about it?
 - Continue to advocate for hydropower operations that best mimic a natural hydrograph and normative river conditions

Overharvest

- Why is this important?
 - Sea lion predation has reduced sustainable harvest rate
 - Recent recruitment has been lower than historic
 - Fisheries management must account for increased predation and lower recruitment
- What do we intend to do about it?
 - Reduce harvest rate
 - Continue to monitor populations and fisheries
 - Increase law enforcement

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Public/Advisor/Stakeholder Feedback

Actions

- Sea lion management
- Hydropower system management
- Sustainable harvest rates
- Increased enforcement
- Habitat protection
- Hatchery supplementation

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Adaptive Management

- Framework
 - Take action
 - Assess results v. conservation & desired status benchmarks
 - Make adjustments as necessary
 - Re-assess results
- Assessments
 - Population status
 - Fisheries performance
 - Pinniped predation

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Public/Advisor/Stakeholder Feedback

Research

- Improved assessments of recruitment and broodstock numbers
- Improved assessments of habitat needs and use
- Better understanding of feeding ecology and bioenergetics
- Better understanding of distribution in ocean, coastal estuaries, and rivers

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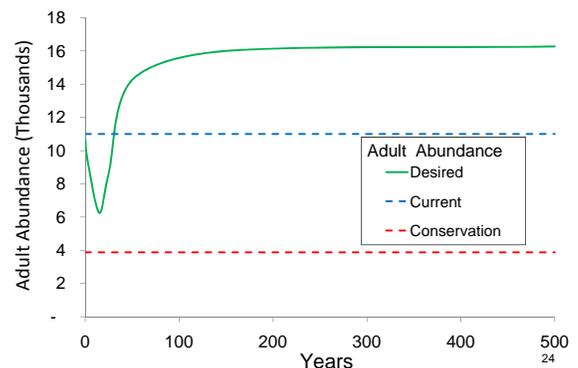
Adaptive Management

Process

- Convene a Lower Columbia River White Sturgeon Technical Management Team
- Use a "weight-of-evidence" scheme for assessing the nature and cause of problems and potential remedies
- Develop a list of feasible remedial measures to address problems
- Work with policy-makers to implement remedies

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A Look Into the Future



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Summary: Current Status vs. Benchmarks

- Current status is about three-times greater than **conservation status** for adults and sub-adults
- Current status is about 75% of **desired status** for adults and about 25% for sub-adults
- Current harvest is about one-third of what it would be at **desired status**

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Summary: Feedback

- Broad concern about recent reductions in sturgeon abundance
- Broad concern about recent increases in sea lion predation and support for sea lion management
- Broad support for improvements to hydropower operations to benefit sturgeon
- Broad support to reduce near-term harvest as a means to rebuild the population

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Summary: Limiting Factors

- The current sea lion management program benefits white sturgeon
- Improvements to hydropower system operations for salmon benefit white sturgeon
- Recent changes in fisheries management are consistent with those needed to protect and grow the population

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Summary: Adaptive Management

- Unknowns and uncertainties demand real-time monitoring of and timely responses to changes in population status
- Existing population assessment and fisheries monitoring programs are essential to success
- Need better understanding of how changes in sea lion predation and potential food sources have affected productivity

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