

Lower Columbia River Sturgeon Annual Update

Washington Fish and Wildlife Commission Meeting

Olympia, Washington

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Fish Program/Directors Office

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Purpose

Provide annual review to the Commission regarding
Columbia River White Sturgeon Management
as per Commission Policy C-3001



Annual Review Topics

- Stock Status
- Predation Rates
- Review of in-season Management Actions
- Accounting of Fish Left Unharvested
- Review of Harvest Outside Lower Columbia River
- By-catch in all Fisheries
- Recommended Management Changes
- Other Pertinent Information

Policy Guidance

Commission Policy

- Policy C-3001 (2011-2013)
- Precautionary management approach
- Management Objectives
 - ✓ Increase abundance of legal size segment of population
 - ✓ Increase escapement into spawning segment of population
- 2011 Management Actions
 - ✓ Address downward trend in legal size abundance
 - ✓ Account for increased sea lion predation
 - ✓ Address recruitment into legal-size segment
 - ✓ Provide fishery stability

Policy Guidance

Joint State Management Accord

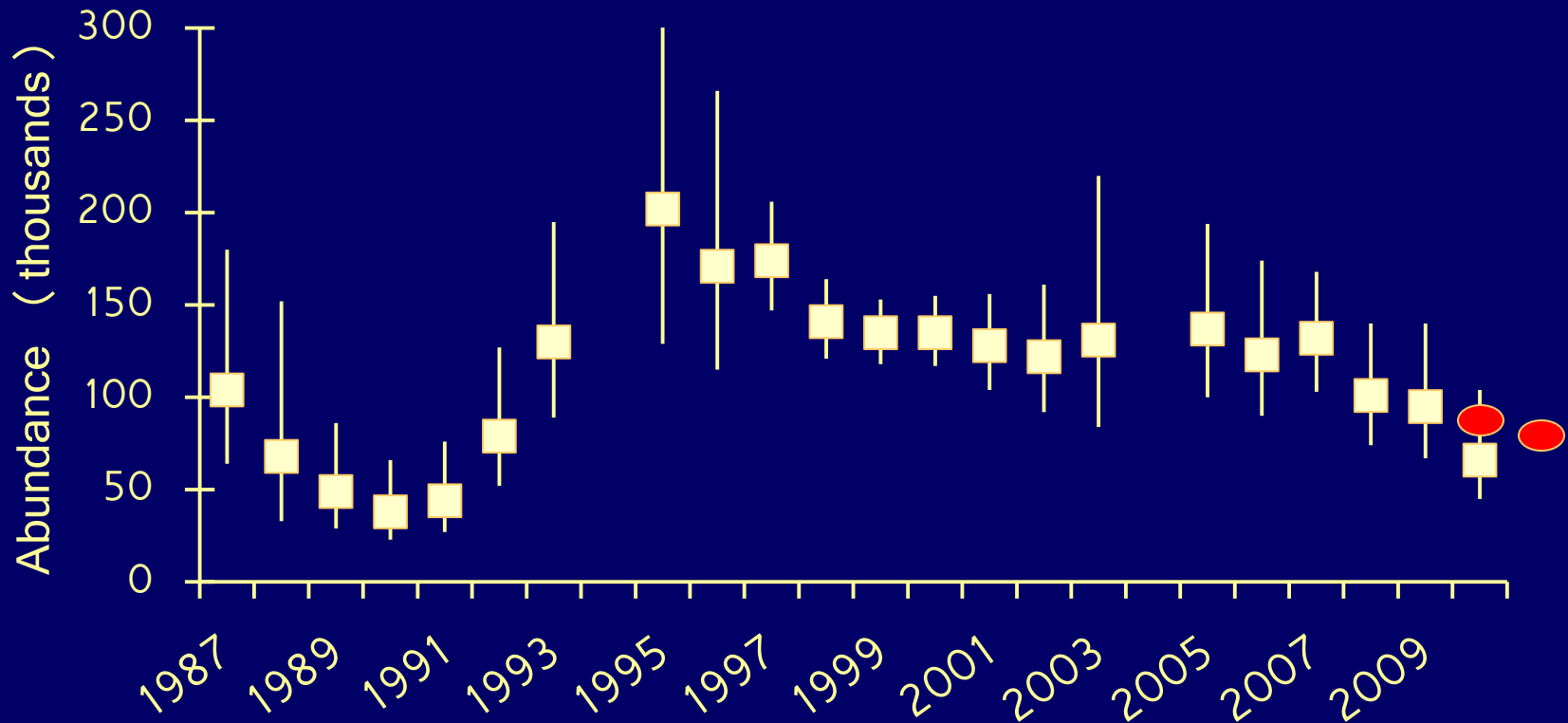
- 3-year agreement (2011-2013)
- Annual review and update
- Harvest rate of 22.5% or 17,000, whichever is less
 - ✓ Legal size segment of population
 - ✓ Based on current stock assessment
 - ✓ Intended to provide population growth
- Annual review of harvest guideline
 - ✓ Meet conservation objectives
 - ✓ Updated stock status and biological information

Stock Status Assessment Tools

- Legal-Sized Abundance (WDFW lead: 1987-current)
 - ✓ Tag fish, recoveries in recreational & commercial fisheries
- Legal-Sized Abundance (ODFW lead: 2010 & 2011)
 - ✓ Tag fish, recoveries in test fishery
- Recreational catch per angler trip (legal & sublegal CPUE)
- Age 1 Productivity Index
- ODFW Population Viability Analysis
 - ✓ Age structured population dynamics model

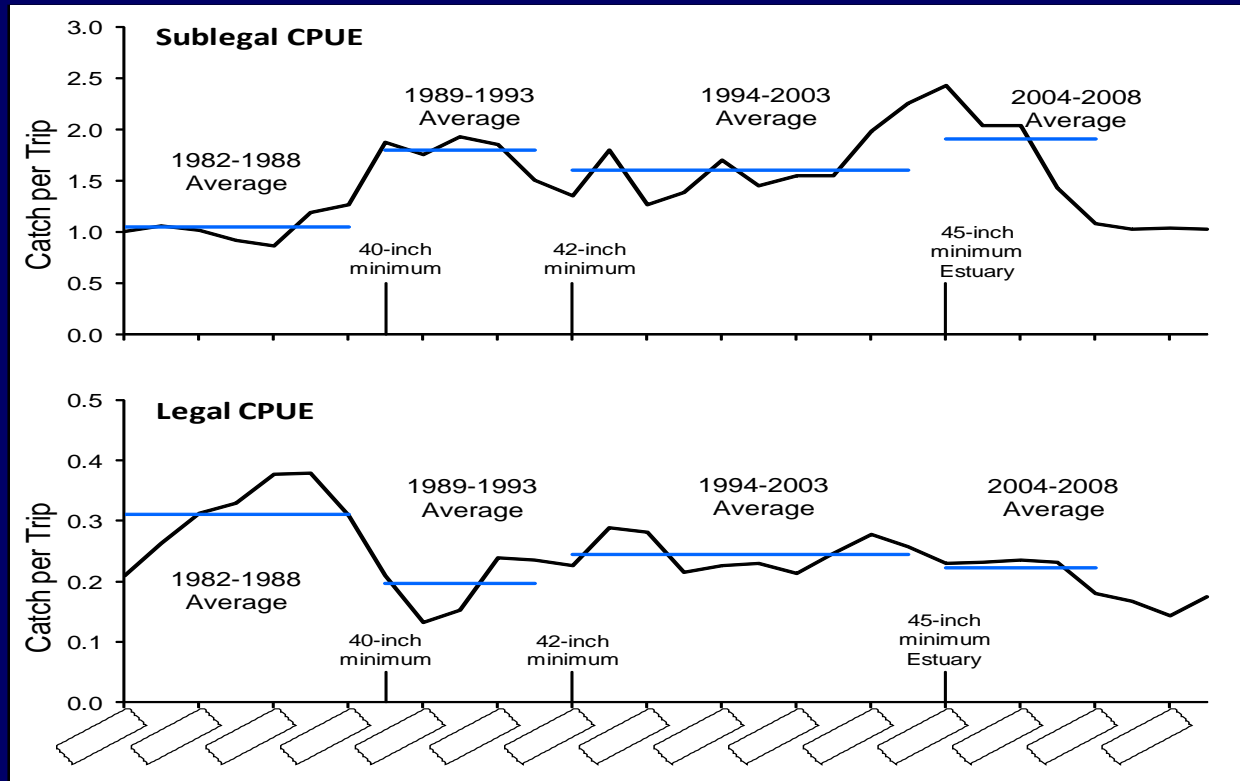
Stock Status

Legal size abundance has declined since 2007



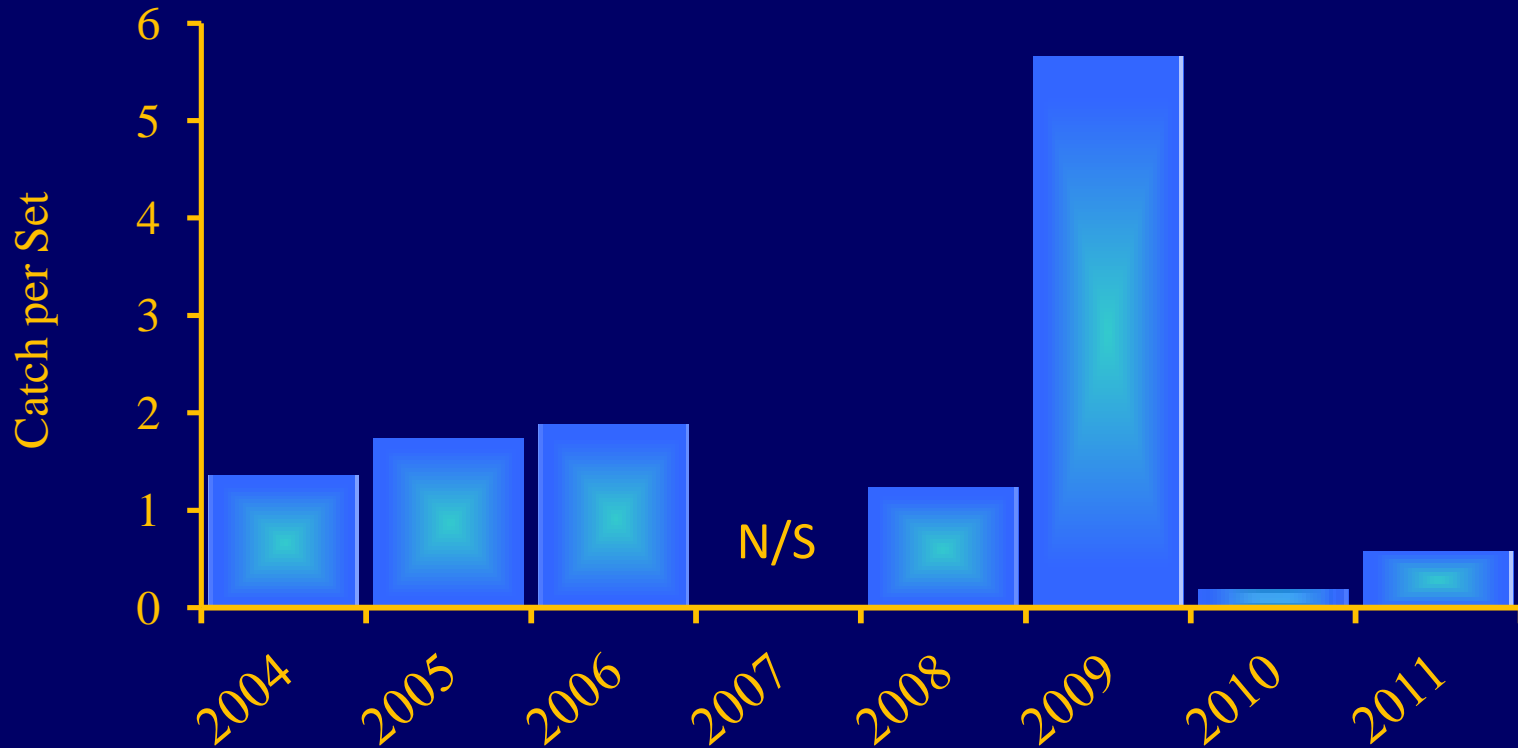
Stock Status

Legal & sublegal CPUE declined since 2007



Stock Status

Age 1 productivity index measurements have fluctuated



Future status will be driven primarily by productivity

Stock Status

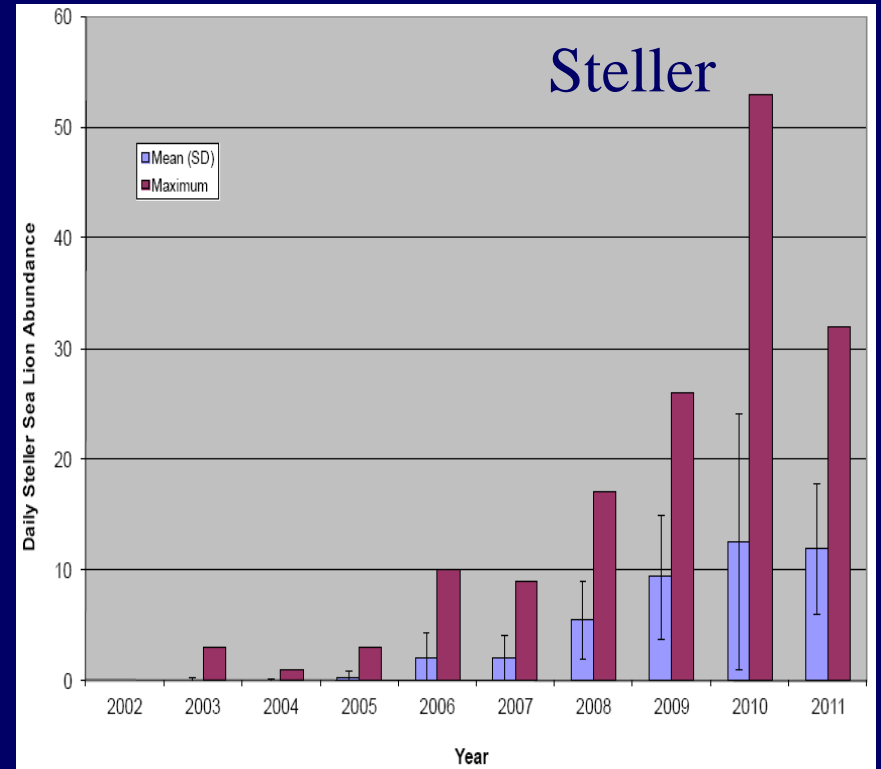
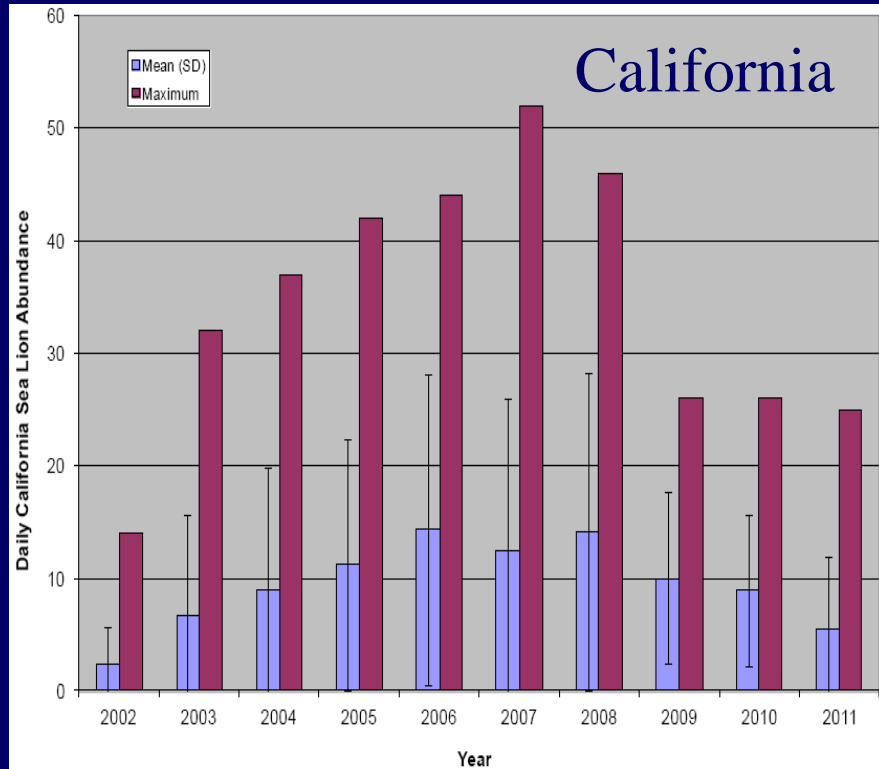
Oregon Population Dynamics Model

- Predicts additional decline in 2012 to 65,000 legal-sized fish
- Predicts short-term increase in abundance in 2013 & 2014
- Key model parameters
 - ✓ Productivity
 - ✓ Mortality between age classes
 - ✓ Growth rates



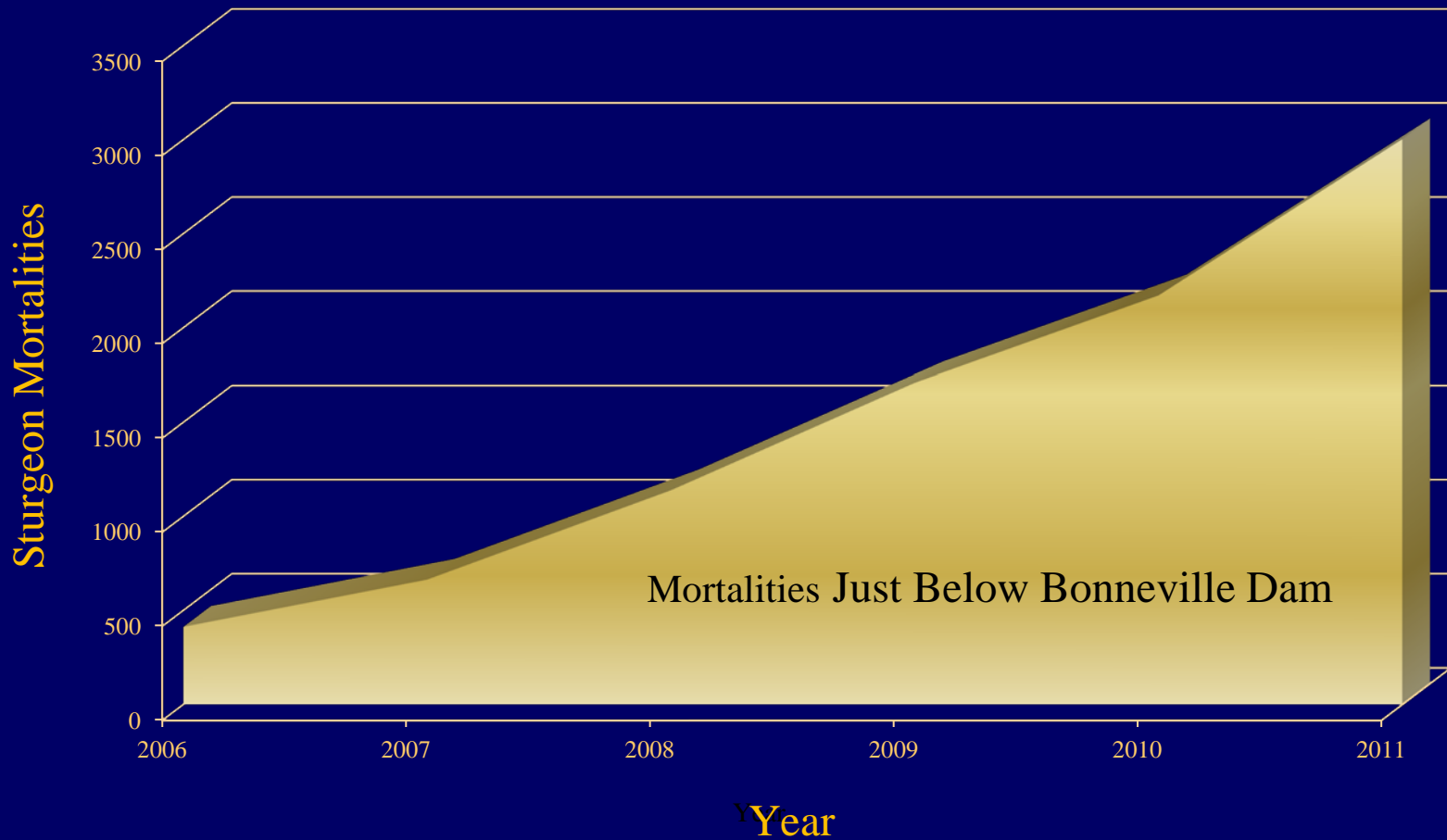
Predation Rates

Sea lion abundance just below Bonneville Dam in recent years (2002-2011)



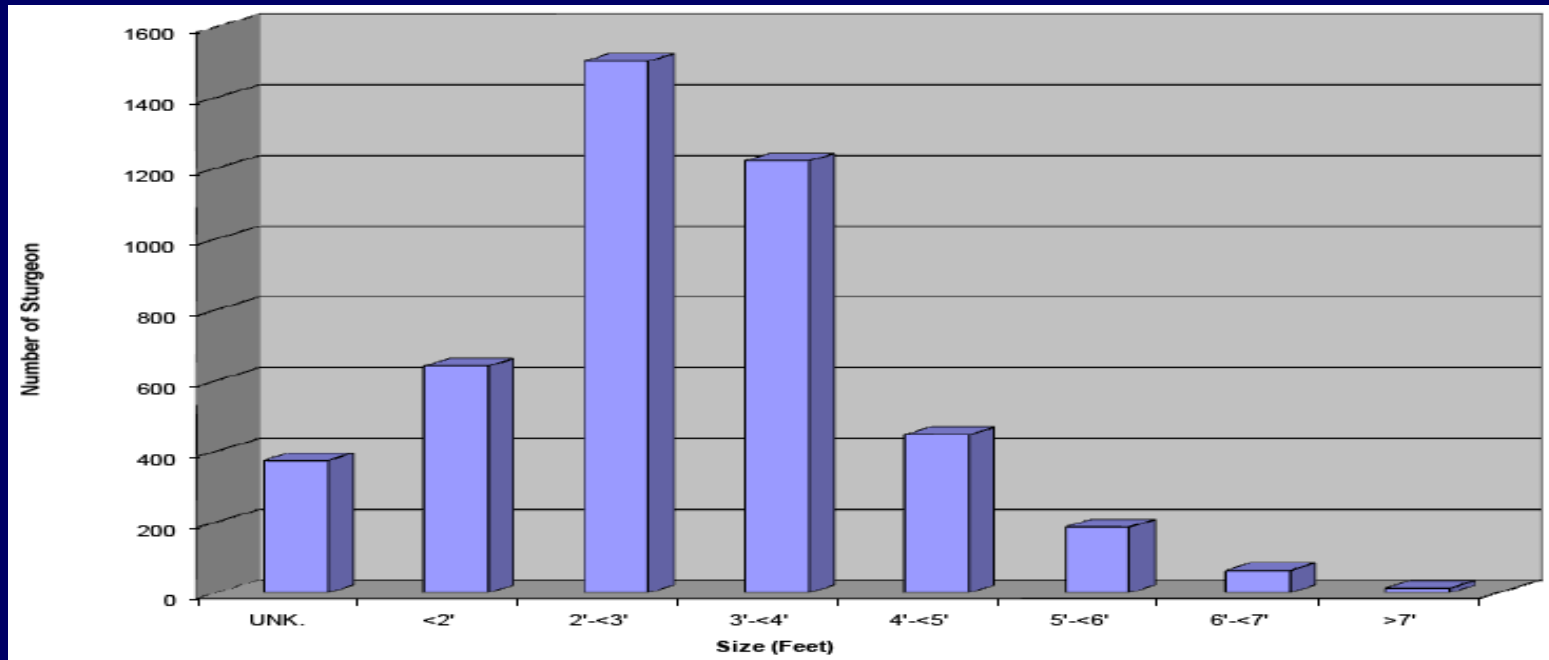
Predation Rates

Sturgeon mortalities have steadily increased since 2005



Predation Rates

Sea Lions predate most heavily on sturgeon in the 2-4 foot length range



Adult –size fish (>6”) comprise 1.4% of total mortalities

Predation Rates

- Monitoring efforts in 2011 expanded from 1 to 16 miles
- Total mortalities due to Sea Lion predation
 - 6,700 in 2009
 - 8,300 in 2011
 - Projected 10,600 in 2014



Management Actions Lower Columbia Sport Fishery

Catch by River Location

Fishing Season	Allocation	Actual
Below Wauna	6,800	6,117
Above Wauna	3,400	2,922
Willamette River	2,550	2,170
Total	12,750	11,209

Management Actions

Lower Columbia Commercial Fishery

Catch by Season

Fishing Season	Allocation	Actual
Winter/Spring	800	191
Summer	400	470
Fall	2,000	2,431
SAFE	200	200
Total	3,400	3,292

Unharvested Fish Lower Columbia River

Fishery Metric	Pre-Season	Actual	Difference
Harvest Rate	22.5%	19.5%	3%
Catch	15,640	14,488	1,152

1,152 unharvested fish will not be added to catch guidelines for 2012

Harvest Outside Columbia

- Willapa Bay and Grays Harbor
 - ✓ Managed to catch quotas
 - ✓ Catch quotas reduced consistent with Joint State Accord
- Puget Sound
 - ✓ Catch increased from 100-200 to 900 during the last decade
 - ✓ Modifications proposed to reduce catch and handle
- Catch monitored via catch record cards



Sturgeon By-Catch

- Low release mortality rates
 - ✓ 2%-3% in Fraser River
 - ✓ 0% from ODFW study in Columbia
- Ensure sturgeon by-catch monitored
- Substantial handle of sub-legal and over-legal fish
 - ✓ Legal size segment < 10% of total population
- Incidental mortalities
 - ✓ Included in future population projections
 - ✓ Accounted for in determining allowable catch

Management Actions for 2012 Joint State Accord



- Joint State Accord prescribes harvest rate of 22.5% or catch of 17,000, whichever is less
 - ✓ Implementation in 2012 would reduce harvest guideline from 17,000 to 14,500
- Projected legal size abundance in 2012 = 65,000

Management Actions for 2012

WDFW Goals

- Initiate transition to lower harvest rate
- Reduce 2012 target harvest rate from 22.5% to 19.25%
- Director-Director negotiation of Accord adjustment
- Adopt seasons at January 26 Compact Hearing
- 2012 Tasks
 - ✓ Work with ODFW to identify sustainable harvest rate
 - ✓ Public process on future fishery structure

Lower Columbia Sport Fishery Possible Harvest Scenarios

	Scenario 1	Scenario 2
Maximum Exploitation Rate	22.5%	19.25%
Projected Harvest 1/	13,500	11,500
Percent of 2011 Management Guideline (number of fish retained)	86%	74%
Percent of 2011 Actual Harvest	93%	80%

1/ Harvest numbers reflect managing for management guideline rather than harvest guideline to account for larger minimum legal size regulation in estuary

Thank You



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