Non-Native Fish Predators in the Columbia River Basin

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February 3, 2010
Native and Non-Native Fish

Basin-Wide (Ward and Ward 2004)

Fish Species Present: 105-110
Non-Native: 50%

Snake River Predation Sampling (Bennett 2008)

Fish Species Captured: ≈30
Non-Native: >60%

Non-Native Predators: 10 of 12
Potential Non-Native Fish Impacts

• Predation
• Competition for Food and Habitat
• Food Web Alterations
• Disease Transmission and Parasites
Non-Native Fish Predators

Smallmouth Bass

Walleye

Channel Catfish
• Locally Abundant
• Local Impacts on Subyearling Salmon
• Little Potential for Control Through Fishing
• Best Bet- Normative Hydrograph, Turbidity
Smallmouth Bass

Yakima River (Fritts 2008):
- Consume up to 7,000 Salmon per Day
- 98% are Subyearling Chinook Salmon
- 70% of Prey are Natural Origin
Smallmouth Bass

Control Considerations:
- Small Fish are Most Predaceous
- 50% (or more) Released by Anglers
- Have a Fan-base
Walleye

- Less Abundant (More Than We Think?)
- Population Fluctuates with Conditions
- Major Predator on a Per-Cap Basis
- Best Bet For Control - ?
Various ODFW and USGS Publications:
• Individual Consumption Similar to Northern Pikeminnow
• Seem to do Best in Low Flow Years
Channel Catfish

- Abundance - ?
- Relative Predation Level - ?
- Best Bet For Control - ?
PREDATION WORKSHOP

Review, Evaluate, and Develop Strategies to Reduce Non-Native Piscivorous Predation on Juvenile Salmonids

September 24, 2008
Oregon Zoo

Hosted by BPA; CBFWA
Predation Workshop

Potential Management Strategies

• Normative Hydrograph
• Drawdowns
• Localized Removals
• De-regulate Sport Fishery
• Exclude Shad
• Restore Lamprey
• More Research
Predation Workshop

Policy Considerations

• Normative Hydrograph
• Drawdowns
• Localized Removals
• De-regulate Sport Fishery
• EXCLUDE SHAD
• Restore Lamprey
• More Research
Predation Workshop

Prospective New Project

• Evaluate Influence of Juvenile Shad
• Evaluate Predatory Impact of Channel Catfish
• Evaluate the Response of Smallmouth Bass to Localized Removals
Independent Scientific Advisory Board

- Enforce Current Regulations
- De-regulate Fisheries
- Habitat Restoration
Years of Predation Research

Summarized by Bennett (2008)

- Lower Water Temps Reduce Predation
- Lower Water Temps Reduce Recruitment; Slow Growth
- Higher Turbidity Reduces Predation
Reduce Impacts of Non-Native Predators

Turn This

To This