

PRFF and RRFF White Sturgeon Workshop



Purpose

Develop a policy-level-approved framework that will guide future releases of juvenile sturgeon into the Priest Rapids and Rocky Reach project areas.



Background and Context

Management Plan Objectives

➤ Objectives of the Priest Rapids and Rocky Reach White Sturgeon Management Plans:

- Increase the white sturgeon populations within the reservoirs through supplementation to a level commensurate with available habitat (RR WSMP: ...and allow for appropriate and reasonable harvest).
- Determine the effectiveness of the supplementation programs.
- Determine the carrying capacity of available habitat in the reservoirs.
- Determine natural reproduction potential in the reservoirs then adjust supplementation accordingly.



Background and Context

Initial Stocking Strategy

- Both Plans call for stocking up to 6,500 yearlings per year within the first few years of the licenses (front-end loading).
 - PR WSMP calls for the release of 32,500 yearlings over a five-year period.
 - RR WSMP calls for the release of 19,500 yearlings over a three-year period.



Background and Context

Future Stocking Strategy

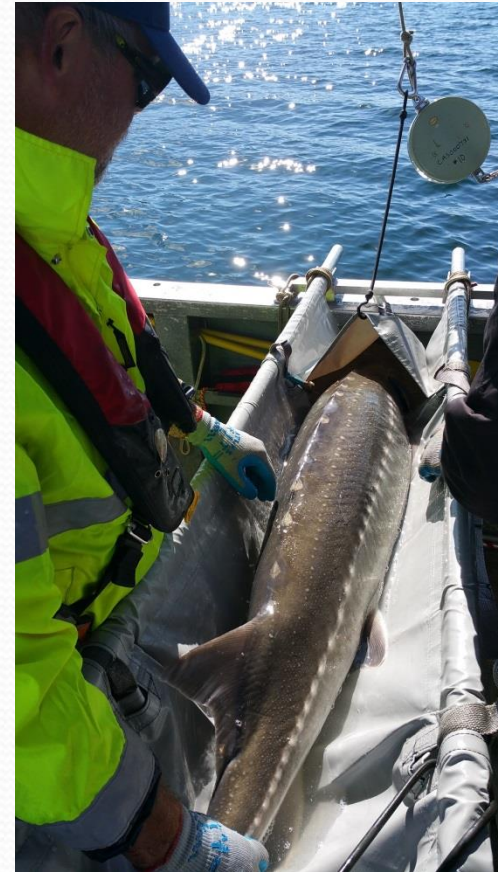
- According to the plans, once the initial releases of juvenile sturgeon have been completed, subsequent releases will range from 0-6,500 juveniles based on results from the indexing programs and/or the evaluation of spawning potential.



Background and Context

Importance of Monitoring

- Both Plans call for a rigorous monitoring program to assess supplementation effectiveness, growth rates, survival rates, movement, entrainment, habitat use, carrying capacity, and reproductive potential.



Background and Context

Density Dependence and Carrying Capacity

- At this time, the monitoring programs have not identified the presence of density dependence.



Background and Context

The Evolution of Annual SOAs

- The lack of conclusive density dependence in the project areas resulted in the drafting of SOAs:
 - WDFW submitted a draft SOA in Jan 2015 and then a revised draft in Feb 2015.
 - Yakama Nation submitted a revised draft SOA in May 2015.
 - Chelan PUD submitted a revised draft SOA in May 2015.



Now What?

- Elements on which the parties agree:
 - If white sturgeon larvae are available, they will be used first towards the 0-6,500 juvenile release target.
 - Broodstock collection will occur throughout the entire contracted length of time without ceasing even if six females and six males have been collected.



Now What?

- Elements on which the parties appear to agree:
 - Family (cross) equalization will be reflected in the releases to the greatest extent possible.



Now What?

➤ Elements on which the parties disagree:

- In the absence of density dependence and estimates of carrying capacity, how many juveniles should be released annually?
- Is it better to set adult abundance (interim carrying capacity) targets in the absence of conclusive density dependence data and manage juvenile releases accordingly?

- or -

Release 6,500 juveniles annually and wait until monitoring data indicate that carrying capacity has been achieved or exceeded and then manage juvenile releases accordingly?



We Need A Workshop!!

- What have we learned from current monitoring efforts in the project areas?
- Are changes needed in the monitoring programs to better inform management decisions?
- What can we learn from other stocking programs (e.g., Upper Columbia)?
- How will CRITFC's White Sturgeon Hatchery Master Plan address some of these issues?
- How important is population genetics really?
- Are there answers to the Yakama Nation's questions?



Questions from the Yakama Nation

- What can the Forums learn about detecting density dependence and its consequences from the 30 years of information obtained by the White Sturgeon Stock Assessment project in the lower Columbia and Snake rivers?
- What has been the Sturgeon Management Task Force's response to density dependence in its management of Zone 6 populations?



Outcomes

- Concurrence from Policy Representatives on the direction the Forums should take to establish annual juvenile release targets.
 - Should the Forums identify interim adult abundance targets and use life-stage survival rates to adjust annual release numbers?
 - Should the Forums stock 6,500 juveniles annually until monitoring data indicate that we have achieved or exceeded carrying capacities?
 - What factors need to be considered in deriving annual release numbers (e.g., genetics, collection effort, potential negative species interactions, survival rates, growth rates, emigration rates, etc.)?



Questions??

