

## Directions to Fish Forums from Policy Representatives

The Policy Representatives of the Priest Rapids and Rocky Reach Fish Forums met on Friday, 6 November at Chelan PUD in Wenatchee, WA. The Policy Representatives agreed to the following:

- The Forums will develop an objective, decision-support framework that will guide the number of juvenile sturgeon released into the project areas in the future.
  - As indicated in the White Sturgeon Management Plans, numbers of juvenile sturgeon released into the project areas will range from 0-6,500 fish.
- As described in the White Sturgeon Management Plans, the decision-support framework will include the following major components:
  - Genetics
  - Carrying Capacity
- With regard to genetics:
  - The Forums will prioritize the collection of larvae and rear them for release.
    - The Forums will identify and prioritize larval collection sites (beginning with recommendations in the Management Plan for broodstock collection).
      - Upper Columbia River larvae may be considered as partial contribution to annual larvae collection efforts.
    - The Forums will consider methods to improve the collection of larvae.
  - The Forums will use juveniles from broodstock collections to backfill any gaps needed to achieve the release goal.
    - Regardless of how many unique crosses are produced, family (cross) equalization will be reflected in the releases (as defined in all the 2015 SOAs).
  - Larvae and broodstock collection efforts will be commensurate with past collection efforts and will be limited to the window (timeframe) in which larvae and broodstock are available for collection.
  - The fate of surplus production (i.e., juveniles in excess of the release goal) will be decided by the fisheries co-managers. Excess production cannot be released into the project areas.
- With regard to carrying capacity, the Forums will include the following elements in the decision-support framework:
  - Age- or stage-survival rates
    - The Forums will conduct age-structured modeling (using the Beamesderfer-Hildebrand model) to evaluate population growth rates using different stocking rates (e.g., 500, 2,500, 4,500, and 6,500 juveniles).
    - The Forums will provide the Policy Representatives with figures showing growth rates under the various scenarios and tables of projected numbers of fish of each age class.

- The Forums will use densities of sturgeon in Bonneville Reservoir as an initial estimate for carrying capacity within the project areas.
    - The Forums will justify any data used in modeling (e.g., source of age-specific mortalities or survival rates, etc.).
  - Ecological Interactions
    - The Forums will evaluate the literature (including gray literature) to determine the effects of sturgeon on other species with a focus on interactions with Pacific lamprey and ESA-listed species.
  - Harvest
    - Although the supplementation programs are not intended to create a put-and-take fishery, the Management Plans allow for harvest opportunities. Therefore, the Forums will evaluate the use of harvest to reduce catchable-sized fish if carrying capacities are exceeded.
      - The Forums will include various harvest scenarios in the modeling of sturgeon populations.
    - The Forums will explore opportunities to reduce juvenile sturgeon if the capacity for juvenile sturgeon is exceeded within the project areas.
- The Forums will include the following additions to the sturgeon monitoring programs:
  - The Forums will conduct annual juvenile index monitoring through 2018 and then reevaluate the monitoring program.
  - The Forums will conduct seasonal sturgeon diet (gut) analysis through 2018 and then reevaluate the monitoring program.

The Policy Representatives will reconvene on Thursday, 17 December at Chelan PUD in Wenatchee, WA. The Policy Representatives will need deliverables from the Fish Forums by Monday, 14 December. Deliverables will include:

1. Results from modeling population grow rates under various stocking and harvesting scenarios.
  - Grant PUD is working with Larry Hildebrand to complete this assignment.
2. Summary of findings from examining literature on ecological interactions.
  - Chelan PUD is currently compiling information to help address this assignment.
3. Methods to reduce juvenile and/or adult sturgeon numbers if carrying capacities are exceeded.
  - The Forums will discuss this assignment during the December meeting.
4. Each entity of the Fish Forums will identify their greatest concern with releasing 6,500 juvenile sturgeon into the project areas and identify what information is available or needed to address their greatest concern.
  - The Forums will discuss this assignment during their December meeting.