

PROJECT WORK PLAN

White Sturgeon Tagging in the Bonneville Dam Fish Ladders

White Sturgeon Management Program

Oregon Department of Fish & Wildlife

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White Sturgeon tagging in the Bonneville fish ladders during large scale dewatering.

Background

In 1986, ODFW and other state, tribal and federal agencies began long-term status & trend monitoring of White Sturgeon (*Acipenser transmontanus*) populations in the impounded lower Columbia River Reservoirs (ILCRR) from Bonneville Dam to the mouth of the Snake River. This monitoring work was intended to develop a better understanding of White Sturgeon population dynamics and aid in developing appropriate management and mitigation actions to maintain and enhance White Sturgeon populations. In 2004 the program was expanded to include the Columbia River below Bonneville Dam as well as the Willamette River up to Willamette Falls. Over time and project goals have been refined as emerging information clarified potential restoration actions. The current focus of this project is to implement and evaluate measures to protect and enhance White Sturgeon populations, and to mitigate for the effects of the Federal Columbia River Power System (FCRPS) on production of White Sturgeon in the ILCRR.

White Sturgeon Management Program Objectives

1. Develop an understanding among resource managers and the public of the critical problems that must be solved to ensure White Sturgeon populations remain at, or attain a status of, providing species viability and long-term sustainability. Develop a menu of population-specific options for implementing specific conservation and management actions that ensure species viability and long-term sustainability.
2. Detail a process that would provide comprehensive monitoring and periodic evaluation of the conservation and management actions. Develop a set of outstanding research needs that would inform current and future investments intended to improve the certainty with which conservation and management actions are planned and implemented.
3. Describe trends in annual age-0 recruitment in the Columbia River both in the impounded reservoirs and downstream from Bonneville Dam.
4. Relate indices of recruitment to broodstock abundance, environmental conditions, and fisheries.
5. Improve understanding of the size structure of the lower Columbia River White Sturgeon population through a stock assessment. Work performed during the stock assessment may provide a foundation for improving population estimates of lower Columbia River White Sturgeon.

Proposed White Sturgeon tagging efforts in the Bonneville Dam fish ladders directly coincides with objective 5. To evaluate White Sturgeon abundance and population dynamics, stock assessments have been conducted on a three-year rotation (since 2001) among the impounded lower Columbia River reservoirs and annually (since 2009) below Bonneville Dam. Biological data collected from captured White Sturgeon included fork length, weight, disposition (i.e., alive, dead, sacrificed), and the presence of a scute removal scars (scute marks are used as secondary marks to indicate the presence of a variety of data parameters, e.g., presence of a Passive Integrated Transponder (PIT) tag, a year mark, hatchery origin, etc.) Biological data collected is used to update population dynamic parameters including abundance, length frequency distributions, growth rates, and condition factors. This analysis is the basis for adaptive management decisions with regards to sport and commercial harvest regulations.

OBJECTIVES

Primary objective: To tag and collect biological data on fish located in Bonneville fish ladders during dewatering events. Additional White Sturgeon sampling will increase the efficiency and accuracy of our annual stock assessment.

Secondary objectives: Test the efficacy of tagging White Sturgeon at dewatering events and create a continuous cooperative relationship with Bonneville Dam and Army Corps of Engineers (ACOE) in an effort to make this an annual sampling event.

To better understand White Sturgeon behavior at adult fish ladders.

METHODS

We will be using had held syringes to insert PIT Tags on White Sturgeon in the fish ladder. We will also be using a line knife to remove a scute for a secondary mark and have a measuring board and tape measure (oversized fish) for collecting a Fork Length. All data will be recorded on a waterproof electronic tablet. Fish handling and biological workup practices emphasize fish health focusing on minimal time interacting with each fish.

SCHEDULE

Schedule will be dependent on fish ladder dewatering and when it is safe to have access to fish in the ladder. Tentative dates are set for:

02 Dec- Cascade Island to tailwater.

03 Dec- Washington shore ladder to tailwater.

08-10 Dec- Washington shore collection channel.

09-10 Dec (alt 14-15 Dec) Cascade Island Entrance Bay.

FACILITIES AND EQUIPMENT REQUIREMENTS

With the exception of assistance accessing the fish ladders, the ODFW sampling team will be self-sufficient for the purpose of sampling fish in the ladders. We will be able to provide our own PPE, including hard hat as well as all necessary sampling equipment.

Project Impacts

ODFW strives to have little to no impact ACOE operations or personnel. Tagging efforts will begin and end at the direction of ACOE. Individual fish sampling efforts should be limited to no more than a few minutes.

Project Services

ODFW's goal in this project is to have as little impact as possible during annual fish ladder dewatering events. ODFW personnel will require access to White Sturgeon that are in the fish ladder after the dewatering process. Accessibility may require being "flown" in by crane or accessed via ladders. ODFW personnel will work closely with ACOE personnel, particularly Fish Biologist & Research Coordinator, Andrew Derugin. ODFW will follow all ACOE protocols and trainings, including HECP certification and a Fall Protection training. ODFW personnel

Security

Project security issues involve gaining access to the study areas by ODFW personnel and vehicles. Primary work areas will be the Cascade Island and Washington shore ladders down to the tailwater and the Washington shore collection channel and Cascade Island entrance bay. ODFW plans on using the same two employees and vehicles for the duration of the project and will inform Mr. Derugin if there are any necessary changes. A letter requesting access badges was mailed to Operations Manager, Mike Adams, on November 9th 2020.

Safety

All personnel will follow ACOE protocols and directions. ODFW personnel will perform daily tailgate safety meetings, have been trained in Fall Protection and certified HECP. ODFW will also follow COVID19 safety measures whenever possible including wearing a mask and social distancing to the best of our ability.

The Activity Hazard Analysis and Accident Prevention Plan is attached.

Employee and Vehicle Information

Employee Name	Vehicle Make Model	License Plate #	State
Rybacki, Kevin	Nissan Frontier*		OR
Lovejoy, Michael	Nissan Frontier*		OR

*White Sturgeon Management Program is waiting to get confirmation on borrowing vehicles from another project in order to not bring larger dually diesel trucks. Accurate information will be emailed to Mr. Derugin upon confirmation.