

## **Addendum to Nason Creek Spring Chinook Salmon HGMP February 25, 2010**

The following information should be added to the Nason Creek spring Chinook salmon Hatchery and Genetic Management Plan (HGMP) in order to provide further information to evaluate take of listed species and also to update the HGMP with new information that was not available at the time that the draft HGMP was submitted to National Marine Fisheries Service (NMFS).

### Facilities

#### Alternatives - Modification of existing facilities

An alternative to a full hatchery facility on Nason Creek that is being considered is to modify existing facilities such as Chelan PUDs Eastbank Hatchery. This approach has many desirable features such as 1) an ability to start the program earlier, 2) ability to have all of the adult spring Chinook salmon collected at Tumwater Dam go to one place (e.g., Eastbank Hatchery), 3) consistency in fish production that would benefit evaluation of the monitoring plan, and 4) reduction in ground disturbance, water withdrawal, and other potential impacts at the Nason Creek site. Overwinter rearing and release would occur on Nason Creek, regardless of where other life-stages are cultured.

Some of the potential fish culture options that exist include: 1) all life-stages cultured at a Nason Creek facility (e.g., adult holding through smolt release), 2) adult holding, spawning, incubation, and rearing at an existing facility (e.g., Eastbank Hatchery) and release on Nason Creek, and 3) adult holding, spawning, and incubation at an existing facility (e.g., Eastbank Hatchery) and rearing at another existing facility or at Nason Creek, and release on Nason Creek.

Some of the factors that will be considered in deciding whether to modify existing facilities or to develop a full hatchery facility on Nason Creek include: 1) ability to find candidate facilities and get agreement to modify existing facilities (e.g., Eastbank Hatchery - in this case the critical questions will be water conservation and suitable agreements between Grant PUD and Chelan PUD), 2) support from the Priest Rapids Coordinating Committees Hatchery Sub-committee to proceed with a long-term agreement, and 3) time until implementation. Grant PUD and Chelan PUD are in the process of evaluating the feasibility of these options at Eastbank Hatchery. Until agreements about existing facilities are made, Grant PUD will continue to work in parallel on a full facility at Nason Creek and evaluation of modifying existing facilities.

#### More detail to determine construction effects on listed species

Current plans are for a long-term hatchery or acclimation facility on Grant PUD owned property (i.e. Boyce/Youngsman and Cascade Gardens) at approximately RM 9.3. Planning and site evaluations for design and construction are advancing but facility

designs are not yet available. Thus, specific details about impacts from development and operation are unavailable. Plans for this site include year around use or rearing and overwinter rearing of fish on surface water from November through May of each year. The Cascade Gardens property would be used for hatchery staff housing and/or storage. This site was previously a residence and no instream or riparian vegetation disturbance is expected, so further impacts to listed species are expected to be minimal at this site.

Negative impacts to ESA listed fish species from construction and operation of facilities at the Boyce/Youngsman site are expected to be minimal. The primary factors that may influence listed species include: water withdrawal, in-creek work, sedimentation, riparian vegetation disturbance, and hatchery effluent water.

Water withdrawal will depend upon the number and size of fish that are on station. However, it is anticipated that surface water withdrawal will range between 2 and 9.5 cfs during periods of adult holding, rearing, and release. Based on stream discharge data from 2003-2009, the range in withdrawal amount is anticipated to be approximately 0.3 percent (June) to 11 percent (September) of mean monthly discharge and 3 percent (June, 2005) to 33 percent (September, 2005) of minimum daily discharge. The water right will be non-consumptive and the bypass reach (distance between the intake and outfall) will be limited. The exact bypass distance will be determined during development of facility designs but will be as short as possible while preventing the outfall from influencing the intake (e.g. less than 100 feet). The intake will be screened according to Washington Department of Fish and Wildlife and NMFS screening criteria. In-water work for facility development will include the intake and outfall structures with associated bank stabilization, grade control, and stream restoration work. In-water work will be conducted within all local, state, and federal permit conditions (e.g. work windows, equipment limitations, etc).

The Boyce/Youngsman parcel is approximately 11 acres and is located between the United States Highway 2 and the Burlington Northern Santa Fe Railroad tracks. Roughly half of the property is in the floodplain and the other half is approximately 12 feet above the floodplain. Most of the parcel contains mature trees and undergrowth. Riparian habitat throughout the entire site is in good condition downstream of the riprap bank along the railroad and upstream of the highway bridge abutment. The site has approximately 480 linear feet of shoreline. A minimum of mature trees in the riparian corridor will be removed during development of the site and the riparian corridor will be planted to accelerate riparian habitat restoration. Streambank stabilization will likely be necessary in the vicinity of the surface water intake. In the areas that are stabilized, the bank will be replanted with vegetation.

It is anticipated that the total footprint for the facility will be approximately 6.5 acres. Mitigation for floodplain development will meet all local, state, and federal permit conditions (e.g. restoration ratios). In addition to mitigation for development of the facility, plans are to partner with interested entities (e.g. non-governmental organizations, state and tribal entities, etc) to develop and implement habitat enhancement projects that will improve conditions throughout the site.

The construction activities of the project are likely to have low impacts to listed species because the scope of the project is relatively small, construction practices will be done within permit conditions, and mitigation activities for construction activities will be implemented. Construction activities will pose fewer risks to listed species if all life-stages are held at a location away from Nason Creek (e.g., Eastbank Hatchery) and only final rearing and release occurs on Nason Creek.

### **Facility Maintenance**

Grant PUD believes that the existing hatchery facilities that are used for the programs are maintained such that rearing conditions for program fish meet all standard fish health guidance or program-specific criteria as described in the HGMP and this addendum.

During 2009, Grant PUD co-funded installation and operation of the PIT-tag arrays in the White and Little Wenatchee rivers and an array was installed in Nason Creek. Data collected from the arrays this year is currently under evaluation. If it appears the arrays will provide useful information for monitoring and evaluation and broodstock collection, Grant PUD would pursue cost sharing opportunities with other partners to ensure continued operation and data collection.

#### Nason trap

If the parental-based tagging approach is determined to be insufficient as a broodstock collection technique, a weir and trap on Nason Creek may be built and operated to collect broodstock for the hatchery program. Grant PUD has developed preliminary designs for a floating weir at river mile (RM) 2, upstream of the Nason Creek campground. Construction of the weir has the potential to negatively impact riparian vegetation adjacent to the weir (e.g., 25 feet on both sides of the creek), increase sedimentation, and disturb stream substrate in the area of the weir. Construction will be conducted within all local, state, and federal permit conditions (e.g. work windows, equipment limitations, etc).

The completed weir has the potential to delay upstream migration, displace spawners, and harm fish that are caught in the trap. The weir and trap will be operated from June through August and operational protocols will be similar to those that are used for the weir and trap on the Chiwawa River. The trap may be operated for 7 days a week with a maximum of 1 of 3 fish taken for broodstock. Alternatively, the trap may be operated 4 days a week with every fish taken up to a maximum of 33% of the run. A maximum of 100% of the fish run will be intercepted at the trap.