

Response to ISRP comments

Project ID: 31024

Protect, Enhance and Maintain Wetland, Riparian, and Upland Habitat on the Shillapoo Wildlife Area.

WDFW has reviewed the ISRP comments on the proposal named above. There were four main points where a response was appropriate which are listed below and followed by our response.

**1) “The objectives and tasks are measurable and appear to have appropriate strategies, but a hydrologist should assess the re-watering techniques described”**

The statement seems to apply specifically to the Shillapoo Lake component of the plan. Wetland projects in other parts of the wildlife area have generally been planned or built with a water supply (well or surface water delivered through a pumped system) to provide a reasonable assurance that desired water levels can be achieved on a reliable basis.

The enhancement project specific to Shillapoo Lake was developed in cooperation with the US Army Corps of Engineers. The Corps provided funding for a hydrological study to model water fluctuations in the project area and determine the feasibility of utilizing a gravity fed water supply to provide water for the management of the lakebed area.

This study was undertaken by Northwest Hydraulic Consultants (1998), which developed models to predict how the system would function under different design alternatives utilizing a screened or filtered water supply. Surface and groundwater inputs were also included in the analysis.

Their final report in 1998 indicated that “Filling of cells 1 through 7 to normal operating levels can be achieved by gravity even in unusually dry years.” (Cells 1 through 7 encompass the entire Shillapoo Lakebed area.) Another aspect of the plan is the ability to periodically flood at deeper levels for reed canary grass control. The study determined that this objective would not be achieved only in “rare instances.” This is acceptable since this objective does not need to be met in every year in order to achieve the desired vegetative results.

It is important to note that as stated in our presentation this alternative is being reevaluated because it continues to preclude fish from entering the project area, which is now behind dikes. Should an open system be deemed appropriate to benefit salmonids, the data from the previous study will be reanalyzed to predict water levels in an attempt to characterize the vegetative communities that may occur under an unscreened condition with no ability to manage water levels.

**2) “There appears to be a master plan for the vegetation desired.”**

The proposed water management system and other management measures were developed to achieve a desired vegetative condition resembling that, which occurred on the site historically. The earliest accounts of this area indicate that this lake was a major source for wapato, which was relied on as a large part of the Native American diet in the area. Wapato and other native herbaceous wetland plants still occur in areas outside the flood control dikes but are limited in distribution and abundance, which can be attributed in part to competition with invasive species such as reed canary grass. These plants seem to be most prevalent in what appears to be a narrow elevation defined zone that is probably too wet for canary grass to dominate and high enough that it is dewatered on an annual basis for a period of time long enough for the plants to grow and reproduce without the effects of carp grazing on them. The plan, in essence, allows for hydrology sufficient to control canary grass and also preclude carp from destroying the vegetation.

By implementing measures to manage water levels, exclude carp and mechanical methods to control exotic plant species such as reed canary grass, it will be feasible to reestablish and maintain a plant stand consisting of wapato, smartweeds, sedges and other beneficial native wetland plants throughout Shillapoo Lake and other wetlands within the project area.

Other native habitat type enhancement or restoration would follow the same theme of attempting to approximate the overstory and understory plant composition that occurred historically. For example the species present in remnant riparian and upland forest stands will be utilized to develop planting prescriptions for areas where restoration or rehabilitation would occur.

**3) “The proposal should address the degree of sensitivity to its components: if one parcel of land is not acquired, or if cooperative agreements with Vancouver Parks are not achieved, how is the master plan affected?”**

The plan includes acquiring the remaining private lands within Shillapoo Lake and entering into a cooperative agreement to manage properties controlled by Vancouver/Clark Parks. If management authority in these areas is not secured, enhancement projects in other areas would not be affected because they can be implemented independently from those proposed in these areas. The plan would only change in terms of area affected.

The layout of the water management features proposed for Shillapoo Lake were planned for the contingency of the private lands not being acquired. Some of the proposed interior water management levees roughly follow existing property boundaries with the intent of being able to establish wetland management on WDFW lands while still providing the capability for the diking district to continue to drain private lands for the purpose of agricultural production. This allows

restoration of the plant community to occur in a large part of the area until those private lands can be acquired. Regardless of whether the land was purchased one year or twenty years from now the system to restore the plant community on those lands would already in place.

Enhancement projects on the Vancouver/Clark Parks Unit are fully independent of enhancements on existing WDFW lands. The county and city purchased this area to preserve it as open space and wildlife habitat. However, the agency does not have staff or budget dedicated for wildlife habitat management beyond weed control and other basic measures. The cooperative agreement would assure that wildlife habitats are both enhanced and maintained on a reliable basis. Through conversations with the Parks staff we are very confident that an agreement can be reached.

**4) “The proposers should also discuss the predation threat to salmonids and potential for temperature traps represented by opening the connection to Shillapoo Lake, which is currently behind dikes.”**

Appendix C in the Subbasin Summary indicates a need to address predation problems in Lake River and Lower Salmon Creek. An open connection of Shillapoo Lake would most likely have to be with Lake River. The current plan of a screened connection was originally due to the desire to exclude carp in order to meet plant community objectives. Concern was also raised that, if open to fish passage, the area may become what some WDFW biologists referred to as a “predation sink.” Beach seine sampling by the Envirosphere Company (1986) from 1982-84 found very high densities of exotic predatory fish in Vancouver Lake and other major waterbodies in the area. Number of fish per 1000 sq. meters for White Crappie, Black Crappie, Largemouth Bass, and Yellow Perch were 21.1, 24.4, 21.8 and 11.6 respectively in Vancouver Lake. Competition between salmonids and exotic fish in the Columbia River is also known to occur and is also as a concern in the Limiting Factors Analysis for WRIA 28 (Wade 2001).

Water Quality, including temperature, is also a source of concern in Lake River, which does not meet state water quality standards for fecal coliform, temperature and sediment bioassay (Washington Department of Ecology 2000). It seems reasonable to predict that a large shallow water body like Shillapoo Lake would have water temperatures at least as warm as Lake River, which would limit its potential value to juvenile salmonids.

All of these factors led WDFW to the conclusion that an open connection would result in habitat that may be of only marginal value to salmonids. Some biologists speculated that such an action could even represent a detriment to the fish. As stated in our earlier presentation, WDFW is currently reevaluating this aspect of the project with input from other agencies and groups. WDFW will also have to evaluate how this alternative would affect habitat goals associated with other

species, as vegetation management capability and the resulting plant communities would differ significantly.

**Literature Cited:**

Envirosphere Company. 1986. Habitat Inventory and Evaluation of the Vancouver Lake/Columbia River Lowlands-Final Report.

Wade, G. 2001. Salmon and Steelhead Habitat Limiting Factors, Water Resource Inventory Area 28, Washington State Conservation Commission-Final Report.

Washington Department of Ecology. 2000. Final 1998 Section 303(d) List-WRIA 28.