BIOLOGICAL EVALUATION OF EFFECTS ON ESA-LISTED SPECIES OF YAKAMA NATION VPA-HIP WILDLIFE RECREATION ENHANCEMENT PROJECT

Prepared by: Gina King, Yakama Nation Wildlife; Ryan Deknikker, Yakama Nation Fisheries; Karen Fullen, USDA, NRCS, West National Technology Support Center.

SUMMARY OF EFFECT DETERMINATION

The Yakama Nation has been awarded a 3-year USDA Voluntary Public Access and Habitat Incentive Program (VPA-HIP) to expand opportunities for non-consumptive recreational use within about 21,000 acres currently open only for hunting and fishing. Middle Columbia Steelhead (*Oncorhynchus mykiss*; Federally Threatened) are known to migrate through and spawn within the area, and bull trout (*Salvelinus confluentus*; Federally Threatened) are presumed to migrate through the Yakima River, bordering portions of the project area. The increased visitation may result in increased disturbance and sediment delivery at some locations. Infrastructure improvement work such as leveling and gravelling of parking areas, installation of small structures near streams and ponds, installation of gates and signs near roads, and installation of fences may deliver some sediment to streams during construction, and parking area improvements have the potential to increase longer term sediment delivery and surface water flow.

Given the measures incorporated to minimize possible impacts it is our evaluation that these actions **may affect, but are not likely to adversely affect** Middle Columbia Steelhead, bull trout, or bull trout critical habitat. Of terrestrial ESA-listed species that may have historically occurred within the project area, these actions are anticipated to have **no effect** on Ute Ladies-Tresses (*Spiranthes diluvialis*; Federally Threatened), Greater sage-grouse (*Centrocercus urophasianus*; Federal Candidate), Yellow-billed cuckoos (*Coccyzus americanus*; Federally Threatened), grizzlies (*Ursus arctos*; Federally Threatened), Canada lynx (*Lynx canadensis*; Federally threatened), or gray wolves (*Canis lupus*; Federally Endangered but proposed for delisting).

PROJECT AREA AND ESA-LISTED SPECIES OCCURRENCE

The Yakama Nation's Wildlife, Range, and Vegetation Resources Management Program (WRVMP) has enrolled 21,000 acres of land within the agricultural valley portion of the Reservation into its Wetlands and Riparian Restoration Project (Fig. 1). The acquisition target is

27,000 acres to be enrolled within the overall project boundaries. The primary purpose of this project is to restore degraded floodplain habitats along fish-bearing streams to benefit fish and wildlife and to sustain the traditional cultural uses of these plant and animal resources by Yakama people. These lands have only been open to the non-Yakama public for purposes of fishing and hunting waterfowl and small game under the Public Hunting and Fishing Program, and use by the Yakama public has been minimal. The current project expands permitted uses for non-Yakamas to include non-consumptive uses within designated wildlife viewing areas. These areas are expected to start as a small portion of the Yakama Nation WRVMP properties but to expand and shift over time within the properties.

ESA-Listed Fish Species Occurrence

In the project vicinity, resident bull trout are known to occur in Ahtanum Creek over 25 river miles north of the northern-most WRVMP property. Bull trout are also known to occur in the Yakima River from the confluence with the Naches River northward, about 5 miles north of the Reservation boundary. It is presumed that the Yakima River on the eastern project boundary serves as a migratory corridor between the Columbia River and the upper Yakima River basin populations. The 2010 Bull Trout Critical Habitat designation includes the Yakima River and Ahtanum Creek.

Middle Columbia Steelhead are widely distributed in Reservation streams, and spawning in Satus and Toppenish Creeks and their tributaries is well-documented and monitored by the Yakama Nation Fisheries Program (Fig. 1). A main impetus of the Wetlands and Riparian Restoration Project is restoration of floodplain function and riparian condition for this species, and continuation of these efforts is identified as a key strategy in the Yakima Steelhead Recovery Plan[1]. Steelhead spawning generally occurs upstream from the WRVMP properties. The exceptions are spawning within the irrigation canal running south from Harrah then east along the north side of our Zimmerman/Xapnish property (Fig. 1; no activities are planned along this canal), and properties along Satus Creek in our rangelands (where no activities are planned because they lie within the Reservation's Closed Area). The stream reaches below the spawning areas, including reaches flowing through WRVMP properties, have been found to be important steelhead winter rearing habitat.

[1] Conley, A., J. Freudenthal, D. Lind, P. Mees, and R. Visser. 2009. Yakima Steelhead Recovery Plan: Extracted from the 2005 Yakima Subbasin Salmon Recovery Plan with Updates. Yakima Basin Fish & Wildlife Recovery Board. Yakima, WA.

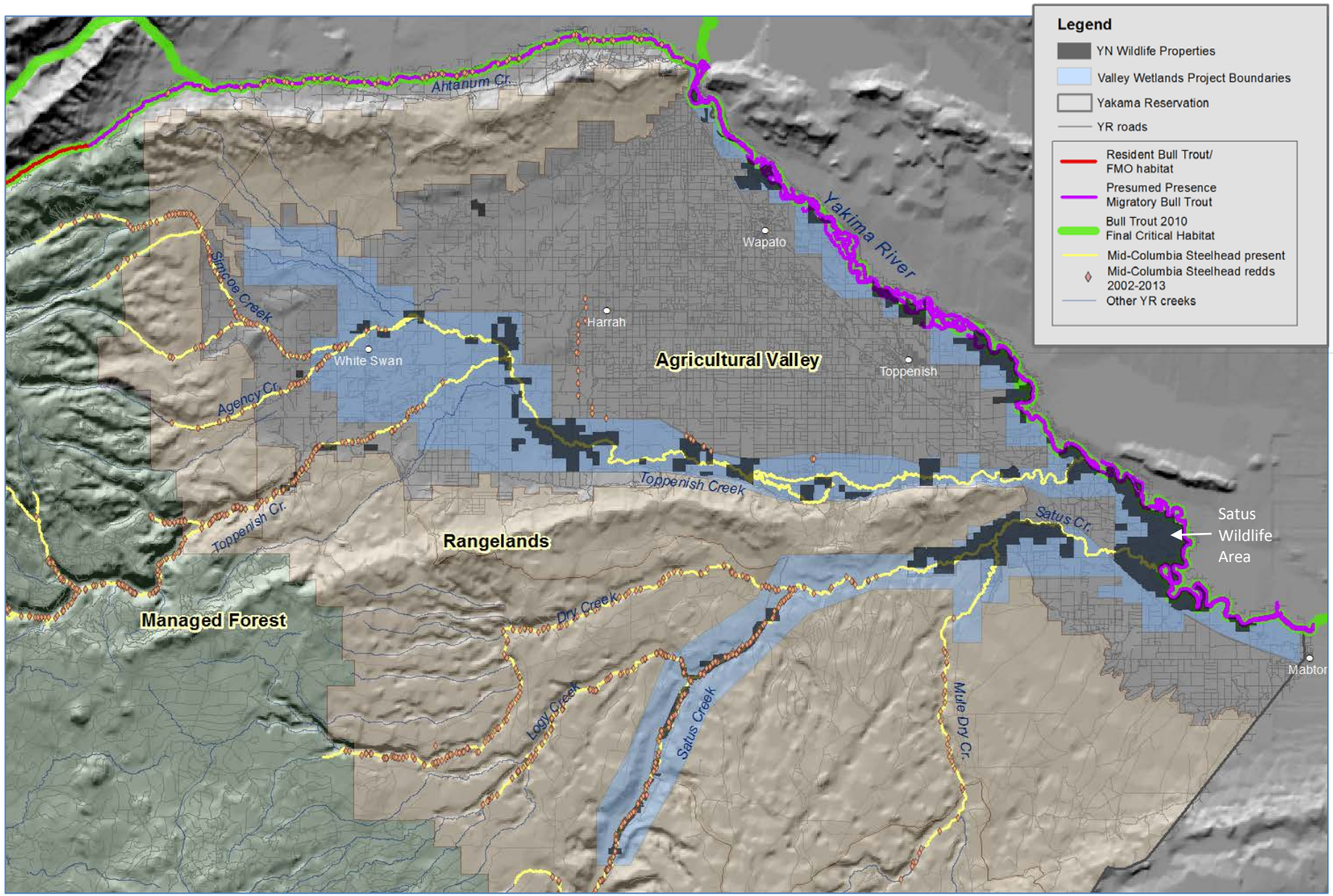

Figure 1. Lands enrolled in the Yakama Nation's Wetlands and Riparian Restoration Project, currently open to the public for hunting and fishing and proposed for expansion of wildlife viewing opportunities.

ESA-listed Terrestrial Species Occurrence

The project lies within the broadly-defined historic range of Greater sage-grouse, Yellow-billed cuckoos, grizzlies, Canada lynx, and gray wolves, and possibly within the historic range of Ute ladies-tresses. No critical habitat has been designated for any of these species on the Reservation.

It is possible that suitable riparian habitats for Ute ladies-tresses (such as seasonally flooded river terraces) and Yellow-billed cuckoos exist in the project area. Yellow-billed cuckoos are characterized as favoring dense cottonwood forests over dense understories[2], which describes much of the riparian habitat on the WRVMP properties along the Yakima River. However, there is no documentation of either species having ever occurred on or near the Yakama Reservation. Yellow-billed cuckoos are considered extirpated from Washington except for rare vagrants, and Ute ladies tresses are known to occur at only 4 sites in the state, the closest of which is over 100 miles away. Therefore, occurrence of either of these species in the project area is unlikely.

Canada lynx are believed to have historically occupied high elevation forests in north-central and northeastern Washington, and the south-central Cascades around Mt. Rainier and Mt. Adams. The last trapping of lynx in Yakima County occurred in 1977. Only the northernmost portions of the state are considered to host resident populations at present[3]. Lynx habitat is typically considered to occur at elevations above 4,000 feet in the Washington Cascades region, and primarily consists of Engelmann spruce and subalpine fir forests[3]. No such habitats exist within the project area, and species occurrence is extremely unlikely.

The gray wolf and the grizzly bear are culturally-important species native to the Yakama Reservation. Although both were once distributed across the Washington and Oregon Cascades, by the late 1940s predator control efforts had resulted in their extirpation in this portion of their range. Since reintroduction, wolf populations have recovered rapidly in Montana, Wyoming, and Idaho - resulting in the delisting of the Northern Rocky Mountain Distinct Population Segment and proposed delisting of most other DPSs - and packs are forming in Oregon and Washington as individuals move from Idaho. There are now 14 confirmed wolf packs in Washington State. The closest of these, the Teanaway pack, occurs about 50 miles north of the Reservation. In addition, the State Department of Natural Resources Wildlife Heritage database shows several “probable”

[2] http://birdweb.org/birdweb/bird/yellow-billed_cuckoo#

[3]Koehler, G. M., Maletzke, B. T., Von Kienast, J. A., Aubry, K. B., Wielgus, R. B. and Naney, R. H. (2008), Habitat Fragmentation and the Persistence of Lynx Populations in Washington State. The Journal of Wildlife Management, 72: 1518–1524. doi: 10.2193/2007-437

wolf sightings in forested areas all around the Reservation. Within the Reservation, there have been increasing reports of lone wolf sightings, tracks, and vocalizations in recent years. However presence of wolves has not yet been confirmed, and most of these sightings have occurred in remote forested areas, far from the project area. Wolves are nonetheless habitat generalists and is possible that individual wolves could pass through the project areas at some point in the future.

Grizzlies are less likely to stray onto the Reservation. The Wildlife Heritage database shows two probable grizzly sightings about 15 and 20 miles from the northern Reservation boundary in 1993, but all other sightings have been in the North Cascades. Even there, populations are believed to be extremely low, with recent estimates from 20 bears[4] to as low as 6 individuals[5]. This species is extremely unlikely to ever occur within the project area.

Greater sage-grouse are a culturally-important species native to the Reservation's expansive shrub-steppe habitats, and the WRVMP is in the process of reestablishing a self-sustaining population. In spring of 2013 we utilized a USFWS Recovery Grant to capture and relocate 38 sage-grouse from northern Nevada to a highly suitable area of East Satus. Birds were equipped with radio collars and were tracked until the radios ceased to function. Survival rates were unusually high (with roughly 76% survival past the first 2 months), and in spring of 2014 a lek was established just south of the Reservation boundary. The reintroduced birds have been found to be concentrating their activities in remote shrub-steppe areas far south of the properties included in this project. Most of the project area is within floodplain habitats unsuitable for sage-grouse, but some properties do include upland areas of shrub-steppe habitat that could receive incidental use by sage-grouse (particularly if we are successful in increasing their numbers).

PROJECT DESCRIPTION AND ANTICIPATED EFFECTS

This project is intended to expand currently very limited opportunities for non-consumptive recreation and educational trips to wetland areas in the Lower Yakima Valley, while also controlling and monitoring this access to prevent conflicts with the goals of the Wetlands and Riparian Restoration Project and the existing Public Hunting Program. The WRVMP developed the Yakama Nation Valley Restoration Areas Wildlife Viewing and Environmental Education

[4] USFWS. 2011. Grizzly Bear (Ursus arctos horribilis) 5-Year Review: Summary and Evaluation U.S. Fish and Wildlife Service, Grizzly Bear Recovery Office, Missoula, Montana. 205 pp.

[5] Romain-Bondi, K.A., R. B. Wielgus, L. Waits, W. F. Kasworm, M. Austin, and W. Wakkinen. 2004. Density and population size estimates for North Cascade grizzly bears using DNA hair-sampling techniques. Biological Conservation 117:417–428.

Management Plan ("Wildlife Viewing Plan"; Attachment 1) in 2012 to address these needs and has received a 2014-2017 USDA VPA-HIP grant for implementation. Although habitat restoration activities are a component of the project, those activities are implemented under Bonneville Power Administration funding and are covered under a Programmatic Consultation with the National Marine Fisheries Service (NMFS no. 2013/9724). This Biological Evaluation therefore focuses on activities directly related to facilitating recreational access.

The Wildlife Viewing Plan includes aerial maps of the properties to be developed as our first Wildlife Viewing Areas (Attachment 1 pp. 10-13) that show planned locations of improvements, but these are subject to change with implementation. The 4,500-acre Satus Wildlife Area is our premier property for recreational opportunity, so much of the initial focus is on this area. This Evaluation generally considers common anticipated effects of actions that may occur over multiple years, rather than very site-specific effects of individual actions (except in a few cases where actions are to occur at a small number of already-designated sites). Given that the only known ESA-listed species to occupy the project area at present are fish, and the fact that the areas of greatest interest for recreation are in or adjacent to wetlands with extreme seasonal variations in water levels and soil saturation, we consider the potential for increased transport of sediment into water bodies as the most potentially impactful effect of these activities on ESA-listed species.

Gates, Fences, Parking, and Roads

Vehicles will utilize existing roads to access parking areas for the properties. Access routes will generally be well-maintained gravel roads. Poorer two-track dirt roads are common on the properties, but these are generally to be used only as foot trails for visitors. Because these areas are already part of the Public Hunting Program, some gates and parking areas are already in place to control access and impacts to vegetation. However, this project includes installation of additional gates to better protect cultural and natural resources in sensitive portions of properties. These will generally be simple cable-lock gates, with construction disturbance typically consisting of excavation immediately adjacent to the road to place metal pipes or wooden posts for anchoring the cable. Excavation of larger volume holes may be required for posts to be anchored in concrete. As with all ground disturbance under this project, digging is not to occur at times of the year when the ground is saturated (as is typical in spring through early summer). Given the proximity to water of many of these roads and the tendency for the roads to channel water into streams and ponds, these activities may contribute sediment into nearby water bodies but in small amounts and for a short duration.

New fence construction may be needed to prevent vehicles from driving around gates. Fences may also be constructed to exclude cattle from shores where trampling damage is evident (Fig. 2). These are standard 4-strand barbed wire fences, with ground disturbance occurring where posts are installed, and some associated risk of short-duration inputs of sediment into water bodies. Where possible, logs and branches may be piled to create barriers to cattle as an alternative to artificial fences. The net effect of these actions is anticipated to be positive, as cattle exclusion will prevent continued shoreline degradation and sloughing directly into ponds and streams.

There are also areas where ill-defined roads and parking areas are resulting in ground compaction and conversion of native vegetation to bare dirt and weeds over unnecessarily large areas near ponds and streams. We plan to improve at least two such locations on our Satus Wildlife Area (Fig. 2 below; map on p. 10 in Attachment 1). We also plan to improve a parking area in a dry, heavily-altered former agricultural field on the northern end of our Zimmerman/ Xapnish property (map on p. 11 in Attachment 1), and possibly one on our Island Road property, at an old homesite south of Toppenish Creek (map on p. 13 in Attachment 1). Additionally, similar sites may be improved in future years.

Parking area improvements are to involve establishing parking areas further back from the water bodies (in the cases above, where current use is adjacent to ponds), utilizing wooden posts or fences to delineate the perimeter and tying in to barbed-wire fencing where necessary to exclude vehicles and cattle from the sensitive shorelines. Where vegetation has been heavily impacted outside of the designated parking area, native vegetation is to be planted to prevent further sedimentation, to filter any runoff from the parking area or roads, and to reduce wildlife disturbance by providing a visual screen between parking areas and open water. Gravel may be used within the parking areas, unless it proves possible to maintain very low vegetative cover that would sufficiently stabilize the soil. Although some grading may be necessary in certain locations, we will generally avoid recontouring with heavy equipment so as to avoid mobilizing sediment and potential damage to archaeological resources. When establishing precise siting of parking areas, preference will be previously disturbed, reasonably flat areas where the ground naturally slopes away from nearby water bodies. If necessary in addition to these measures, berms and logs would be placed to direct runoff away from water bodies.

Figure 2. Damaged shorelines to be improved through delineation of parking areas and cattle exclusion fencing on the Satus Wildlife Area. (A) Sumac Lake. (B) south shore of Corral Lake.

Although these activities would be conducted when soils are dry, the necessary ground disturbance may result in some sedimentation into the water bodies during and immediately following construction. Some chronic runoff of sediments and of toxic materials that leak from vehicles could occur from the parking areas, but the measures described above should minimize such runoff.

Sedimentation from roads within Wildlife Viewing areas may also increase due to increased traffic volume and expanded season of use associated with this project. Typical current use is 30,000 hunter-days over the course of the season. This use occurs within about 26,000 acres posted "Feel Free to Hunt", and an additional 7,000 acres open to hunting only three days per week (including the Satus Wildlife Area). Yakama tribal members also make rare use of the properties for hunting and gathering (e.g. tule harvesting) but gates are kept locked outside of Public Hunting days, so

Yakamas either check out a key or walk in. It is difficult to predict how many people will participate in the Wildlife Viewing Program, but it is anticipated to be far lower than use by hunters. We are recommending that Wildlife Viewing Areas be open only one day per week from March through June, and two days per week in July through September. Use by Yakamas is anticipated to increase with the improvements in trails and signs and will not be restricted to particular days of the week. Yakamas would still have to check out a key to drive through the main gate on a property. Non-employees' vehicles are to be restricted to a small portion of the road system, and roads and trails will not be open when wet conditions would result in rutting and/or erosion from use. The additional sediment inputs from increased traffic are expected to be fairly low, and the net effect of this project on sediment delivery into water bodies is anticipated to be positive compared to continued annual use by hunters without the planned improvements in gates, fences, and parking areas.

Trails, Bridges, Docks, Blinds, and Signs

The trail system is to be built around existing roads. Where trails are needed to access interesting areas and connect road segments, they are to be low-impact nature trails created by clearing vegetation in a swath about 4' wide (including shrubby vegetation that can harbor ticks). There are numerous well-established cattle trails on the properties that can be used for hiking trail segments. These are improved by cutting vegetation at least 20" on either side of the existing dirt trail and marking with highly visible markers such as tall fiberglass poles. Overall impacts to vegetation are anticipated to be low, and are off-set by ongoing habitat restoration efforts.

In general, trails will not be established through areas that will be wet during the season of use and will not intercept and channel water. Where crossing wet areas is unavoidable, removable footbridges and boardwalks will be used. Only one such area has been identified thus far, where a trail crosses south of Sumac Lake in order to access the eastern side of the Satus Wildlife Area (Fig. 2 in Attachment 1). The footbridge required will span an approximately 18' channel and consists of two bridge sections to be transported to the site and attached to two long beams crossing the channel. We have not finalized plans for anchoring the beams to the shores during the season of use. The most impactful possibility would be permanently embedding four wooden posts (~6" in diameter) to anchor to each season. Given that the bridge segments and beams would be bolted solidly together, it may be possible to anchor the structure with t-posts.

The removable boardwalk sections built thus far are simple structures roughly 2' wide by about 4' long, with the supporting 2"X6" boards contacting the ground. These are to be chained together

(with gaps of a few inches between sections) through short stretches of muddy trail. The approach to the Sumac Lake bridge is the only place noted so far where these may be necessary due to persistently wet conditions where there are no viable alternative routes.

The canoe docks are also very simple structures, roughly 4-5' wide by 6-8' long planked decks supported by sealed PVC tubes. Although small posts may be needed on shore to anchor these, there will be no piers installed in the water. Docks are only proposed for three sites on Corral and Sumac Lakes on the Satus Wildlife Area (map in Attachment 1, p.10), and would be in place only during the narrow window of time in late summer when boating would be permitted. A small amount of sediment could be produced when posts are installed on shore. Longer-term inputs and bank instability and/or compaction could occur from erosion due to walking and dragging small boats on shores adjacent to docks. The parking area at Sumac Lake is about 300 yards from the middle dock, discouraging use of any boat that isn't light enough to easily carry that distance. Use of this dock is expected to be low, and the planned location is a small side slough with banks well-stabilized with vegetation. The other dock accessible from a parking area is planned for the currently heavily trampled area shown in Fig. 2B. Access will be limited to carry-in only to discourage use of inappropriately large boats. Overall the project should result in a net improvement of shore conditions at this site.

Wildlife viewing blinds are to be installed at multiple locations, most close to shorelines. These are flat structures constructed of 2X4s that are to be anchored by sinking 2X4 or 4X4s into the ground. These may contribute a small amount of sediment to water bodies during and immediately following construction. Some trampling behind the blinds could result in sediment mobilization over time. To minimize this effect (and to prevent wildlife disturbance) each blind is to have a well-delineated approach trail, and thick vegetation is to be maintained adjacent to the blind and approach, as well as in front of the blind to the extent possible. The same measures are to be used to minimize trampling around photography blinds. These are very similar to duck hunting blinds, and shouldn't require posts to anchor them. Ground contact is by 4 small logs or boards (Fig. 3A).

Large information sign boards will be installed at gates and parking areas. These are in dry soils, and ground disturbance will generally consist of digging to place two posts up to ~8" diameter per sign board (Fig. 3B). Additional excavation may be necessary for some signs to anchor them in concrete.

Figure 3. (A) First photography blind under construction (built under 2011 grant). (B) Two sign boards and stacked wildlife viewing blinds built in 2012 and to be installed under this project.

Disturbance and Waste

As discussed under Gates, Fences, Parking, and Roads, this project is intended to increase public use. Increased wildlife disturbance and scattered waste are commonly associated with increased human recreation/use. Effects with relevance to ESA-listed species might be potential for disturbance of wolves (in the unlikely event they were to occur in the project area) and any impacts of waste contamination of water on listed fish species. Our recommendation to Tribal Council to keep Wildlife Viewing Areas open only one day per week from March through June and two days per week in July through September keeps duration of disturbance very limited. Only foot travel and use of wheelchairs and strollers are allowed for visitors, to avoid the increased disturbance from motors or fast-moving bicycles. There will be an increase in employees' activities on the property (including vehicle use on all roads) for installation and maintenance of structures and monitoring of use. However, this increase will be low relative to the baseline level of activities associated with management of vegetation and waterfowl. The properties will thus be maintained as very low-disturbance in comparison to the surrounding, developed landscape.

The sign boards at entrances and parking areas are to include “Leave No Trace” instructions. We would maintain well-anchored and covered garbage cans at parking sites to minimize littering. The properties do not have restroom facilities, and we are considering installation of at least a portable restroom in the Satus Wildlife Area. However, we have not found scattered human waste to be an issue in these areas, in spite of the intense use during the hunting season. We plan to monitor the situation and install restrooms if needed. Thus, there is some potential for increased human waste contamination and/or other trash in water bodies on the properties, but such effects are anticipated to be minimal and remedial action is to be taken if problems are observed.

EFFECTS DETERMINATIONS

Given the low quantity and duration of potential sediment inputs from project activities, the decrease in sediment inputs to be realized by the project’s revegetation efforts, and the fact no activities are to occur near spawning sites, it is our evaluation that these actions **may affect, but are not likely to adversely affect** Middle Columbia Steelhead, bull trout, or bull trout critical habitat.

Of terrestrial ESA-listed species that may have historically occurred within the project area, we anticipate **no effect** on Ute Ladies-Tresses, Yellow-billed cuckoos, grizzlies, or Canada lynx due to low magnitude of potential effects and very low likelihood of any of these species occurring within the project area. Although the chances of eventual occurrence of Greater sage-grouse and/or gray wolves within the project area is higher, we anticipate **no effect** from project activities and the associated low anticipated increase in disturbance.

Attachment 1 – Wildlife Viewing Plan