

**United States Department of Agriculture
Farm Service Agency**

Finding of No Significant Impact

Public Access and Habitat Incentive Program for the
Yakama Nation Wildlife Recreation Enhancement Project

November, 2011

Introduction

The Yakama Nation proposes to utilize United States Department of Agriculture Farm Service Agency Voluntary Public Access and Habitat Incentive Program (VPA-HIP) funds to implement a non-consumptive recreation program for programs currently managed for public hunting on the Yakama Reservation.

The Yakama Nation's Wildlife, Range, and Vegetation Management Program (WRVMP) has enrolled 21,000 acres of land into the Lower Yakima Valley Wetlands and Riparian Restoration Project and Public Hunting Project. Environmental impacts of management actions on these properties managed by the WRVMP were analyzed under a 1994 Programmatic Environmental Assessment (EA) with an associated FONSI. The majority of these WRVMP-managed lands and additional idle lands within the agricultural valley portion of the Reservation are seasonally open to the public for small game hunting and fishing, with no other recreational uses currently permitted. The current project would develop a non-consumptive recreational access program within lands managed by the WRVMP and improve quality of recreational and educational opportunities for the Tribal and non-Tribal publics. Non-consumptive activities include hiking, bird watching, and photography.

Proposed Action

The Yakama Nation proposes to use \$428,880 of Farm Service Agency VPA-HIP funding in conjunction with \$194,300 of non-federal funding over a three-year period to enhance the non-consumptive educational and recreational value of Lower Yakima Valley Wetlands and Riparian Restoration Project and Public Hunting Project lands through construction of trails, fences, blinds, boardwalks and interpretive signs, and printing of maps and brochures, and to implement a non-consumptive recreation permit system.

Reasons for Finding of No Significant Impact

In consideration of the analysis documented in the current Project EA and in the 1994 Programmatic EA for the overall Lower Yakima Valley Wetlands and Riparian Restoration Project, the Proposed Action would not constitute a major Federal action that would significantly affect the human environment within the meaning of the National Environmental Policy Act of 1969. Therefore, the preparation of an Environmental Impact Statement is not required. The determination is based on the following:

- 1) Potential beneficial and adverse impacts have been fully considered within the EA. No significant adverse direct or indirect effects are anticipated.
- 2) The Proposed Action would provide beneficial impacts to recreational and educational opportunities. Effects to the quality of the human environment are not likely to be highly controversial, nor do they involve unique or unknown risks.
- 3) The Proposed Action supplements continuing efforts on the project lands to increase quality of wetland, riparian, and upland habitats, providing benefits to native plants and animals. Effects of potential increases in disturbance are minimized to cause no significant adverse effects.
- 4) The Proposed Action would not establish a precedent for future actions with significant effects and does not result in cumulative significant impacts when considered with other recent, ongoing, or foreseeable future actions.
- 5) No proposed activities would affect prehistoric, historic, or ethnographic sites and activities are to be compatible with maintenance or enhancement of cultural resources.
- 6) The Proposed Action would not have adverse effects on species listed as threatened or endangered under the Endangered Species Act or on designated critical habitat.
- 7) The Proposed Action does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Determination

In accordance with the National Environmental Policy Act and GSA's environmental regulations at 7 Code of Federal Regulations Part 799 I find the Proposed Action is not a major Federal action significantly affecting the quality of the human environment. Barring any new data identified during the public and agency review of the Final EA that would dramatically change the analysis

presented in EA or identification of a significant controversial issue, the EA and FONSI are considered final 30 days after the date of publication of the Notice of Availability.

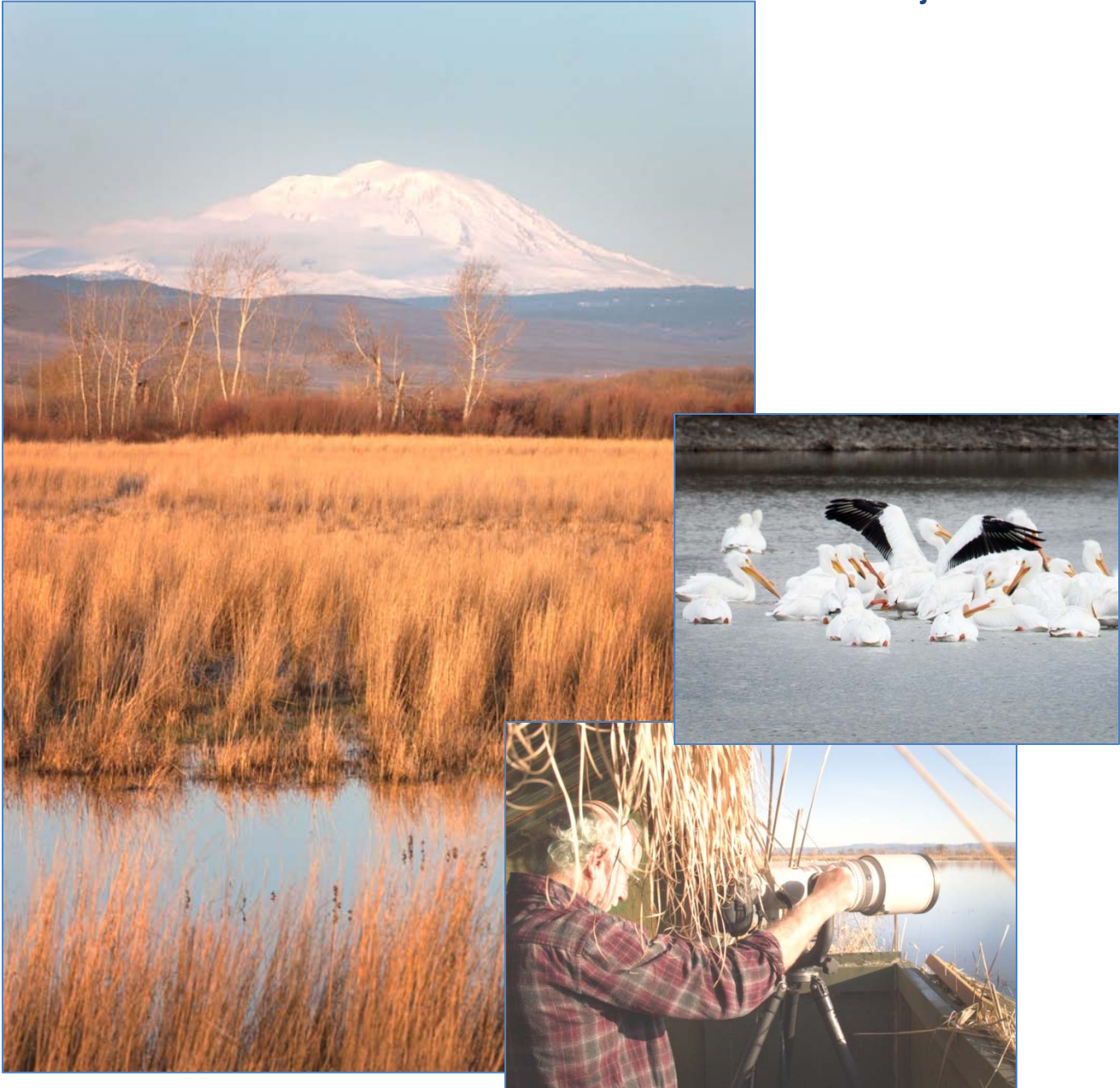


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November 16, 2011
Date

ENVIRONMENTAL ASSESSMENT

Voluntary Public Access and Habitat Incentive Program: Yakama Nation Wildlife Recreation Enhancement Project



Yakama Nation and USDA Farm Services Agency, October 2011

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1.0 PURPOSE AND NEED FOR ACTION

1.1 Proposed Action

The Yakama Nation proposes to expand the existing Lower Yakima Valley Wetlands and Riparian Restoration and Public Hunting Project to increase recreational opportunities on lands in the open areas within the boundaries of the Yakama Reservation. The Yakama Nation's Wildlife, Range, and Vegetation Management Program (WRVMP) has enrolled 21,000 acres of land into the restoration project (Fig. 1). The majority of these WRVMP-managed lands and additional idle lands within the agricultural valley portion of the Reservation are seasonally open to the public for small game hunting and fishing. This project would develop a non-consumptive recreational access program for these areas and improve quality of recreational and educational opportunities for the Tribal and non-Tribal publics. Non-consumptive activities include hiking, bird watching, and photography. These would be enhanced through construction of trails, fences, blinds, boardwalks and interpretive signs, and printing of maps and brochures.

1.2 Background: Existing Lower Yakima Valley Wetlands and Riparian Restoration and Public Hunting Projects

The Yakama Nation's public hunting program is one of the longest-running in Indian Country. Hunting permits have been sold to the non-Indian public since 1952 for game including waterfowl, pheasant, California quail, mourning dove, chukar, Hungarian partridge, and cottontail rabbit. Over 30,000 acres are open to hunting (Fig. 2). Currently about 3,500 permits are sold per year, with about 30,000 hunter-days of use.

Valley wetland and riparian restoration is a major emphasis of the WRVMP. Overall objectives of the Lower Yakima Valley Wetlands and Riparian Restoration Program include the protection, restoration and management of floodplains and adjacent uplands along the Yakima River, Satus and Toppenish Creeks. Methods used include securing large contiguous lands along with their associated water rights. Restoration of these lands emphasizes the return of native vegetation and ecological functions, and thus healthy wildlife populations. Much of this work centers on bringing back natural hydrologic processes, often requiring complex engineering work to recreate channels that were filled or straightened during the era of conversion to agriculture. Other continuing restoration activities include fencing to control domestic livestock, reestablishment of native vegetation to improve habitat values, controlled burning and herbicide applications to manage weeds, cultivation of wildlife food plots, conversion of pastures and croplands to wildlife habitat, construction and maintenance of water control structures, protection of stream shorelines to decrease erosion potential, land contouring to restore previous wetland structures, and development of water sources for maintenance of wetlands.

Activities facilitating recreational use of the properties include construction and maintenance of parking areas, roads, and blinds. Maintenance of gates and fences and posting of areas open or closed to hunting help prevent conflicts with landowners, and prevent destructive trespass into WRVMP wildlife areas. A hunting brochure including basic maps and season information is

produced annually and permits are sold through various local vendors and online (through the Program's website, ynwildlife.org).

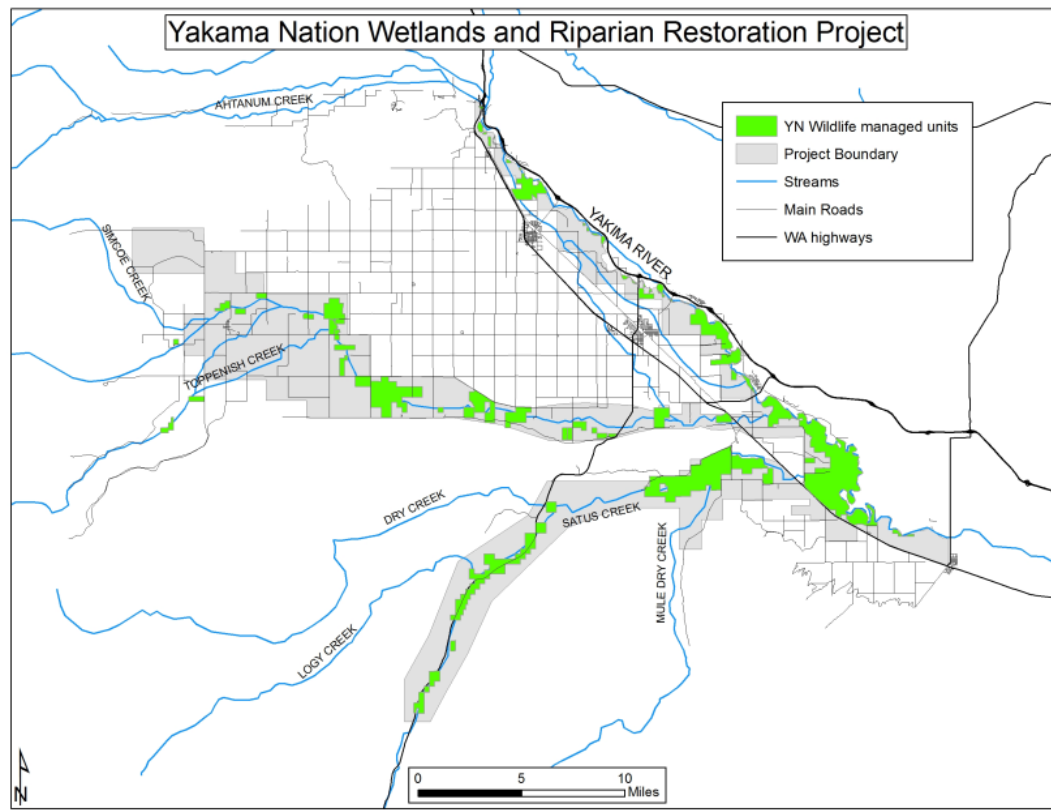


Figure 1. Lands enrolled in the Yakama Nation's Wetlands and Riparian Restoration Project.

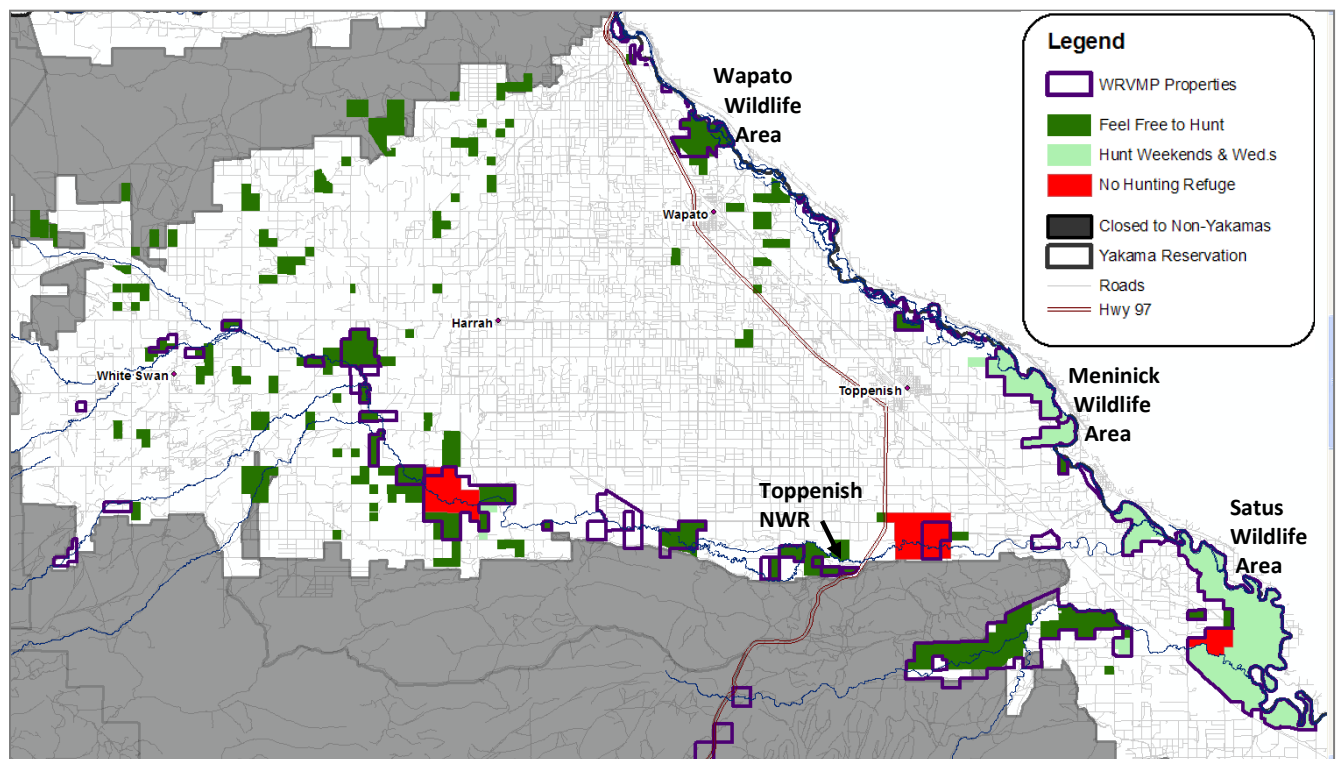


Figure 2. Yakama Reservation public hunting areas.

1.3 Need for the Project

There is currently no easy mechanism for non-Yakamas to utilize areas open to hunting for non-consumptive recreation such as hiking and bird watching, or for educational school field trips and science projects. Even for Yakamas wishing to enjoy their resources on these lands, such use is discouraged by the low number of trails and blinds and lack of readily available information about the areas and the resources and sites of interest they harbor.

Recreational and educational use can have detrimental impacts to wildlife and vegetation if not properly managed, particularly if it also facilitates access by destructive trespassers. This is why access of the larger WRVMP properties and wildlife areas is controlled through gates and fencing. But with carefully-designed infrastructure such as gated access points, trails, blinds, and fences, as well as a system for regulating use by non-Yakamas, the public's enjoyment of these areas can be enhanced with minimal impact. Also, habitat improvement activities under this project would combat invasive weeds and improve suitability of habitat for desirable species.

1.4 Project Objectives

Project objectives are to 1) develop a non-consumptive recreation access permit system similar to that used for the Public Hunting Program; 2) enhance enrolled properties to facilitate non-consumptive use; 3) develop materials to guide non-consumptive use, and; 4) monitor non-consumptive use.

2.0 ALTERNATIVES

Alternative Comparison Table

| | Alt A: No Action | Alt B: Recreation Enhancement Project |
|--|---|--|
| Permitted public uses on WRVMP-managed lands | Non-Yakamas: May hunt on posted lands during season with purchase of permit. Yakamas: Few restrictions, but some areas closed to provide low-disturbance refuges for wildlife. | Non-Yakamas: Adds recreational permit for use of designated areas when hunting is not occurring. Yakamas: No change, except ease of access and time frame for access into gated areas may expand. |
| Infrastructure development for recreation | Very little new construction planned – may be limited to reconstruction of hunting blinds. | Construct trails, parking areas, interpretive signs, blinds, and platforms. |
| Habitat improvement work | Continuation of annual native plant enhancement and hydrologic restoration activities over 21,000-ac. project area. | Areas being developed for recreation would be prioritized for habitat improvement work, in order to improve aesthetics as well as habitat value. |
| Development of educational materials | Annual hunting map and brochure. Some information on species and habitats available on Program website. | Develop brochures, maps, and interpretive signs for each area on the species and habitats present. |

2.1 Alternative A: No Action

The No Action alternative is continuation of the current restoration and public hunting programs. Recreational access would continue for permitted hunters during a season extending from mid-October to mid-January in most areas. Typical 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 (Fig. 2). No additional trail or parking lot construction is planned at this time. Some reconstruction of existing blinds may occur and an occasional new blind might be constructed for waterfowl hunting.

Restoration activities would continue at their current rate, under funding primarily from BPA. Typical activities would include fencing to control domestic livestock, reestablishment of native vegetation to improve habitat values, controlled burning and herbicide applications to manage weeds, cultivation of wildlife food plots, conversion of pastures and croplands to wildlife habitat, construction and maintenance of water control structures, protection of stream shorelines to decrease erosion potential, land contouring to restore previous wetland structures, and development of water sources for maintenance of wetlands.

2.2 Alternative B: Implement the Wildlife Recreation Enhancement Project

2.2.1 Project Location

The 1.3 million-acre Yakama Reservation lies in south-central Washington State, south of Yakima and west of the Tri-Cities. The Reservation extends from the Yakima River all the way up the east slopes of the Cascade Range to the summit of Mount Adams. Only the developed Yakima River Valley portion of the Reservation is open to public access. The project area encompasses about 21,000 acres of valley lands enrolled in the Yakama Nation’s habitat restoration and public hunting program, within the 50,000-acre Wetlands and Riparian Restoration Project area (Fig. 1). These include lands owned by hundreds of individual Tribal members, and lands owned by the Yakama Nation. Additional properties may be added within the footprint of the overall project area.

2.2.2 Methods

Non-consumptive recreation permit system: 1) A permit would be developed to allow the public access to approved areas for non-consumptive recreational purposes. A definition of approved recreational activities would be developed and included in the language of the permit. These permits would be made available for purchase from the Yakama Nation, using purchase sites similar to those from which YN Public Hunting and Fishing permits can be obtained. These locations include the YN Wildlife Resource Management office, the wildlife program website, and other established local vendors. 2) The permit system would be enforced by incorporating a fine into the Law and Order Code, with parking sites patrolled by our 8 game wardens.

Enhancement of enrolled properties to facilitate non-consumptive recreational use: Non-consumptive recreational use would be allowed at locations and during the times of year that would provide a diversity of recreational activities while also protecting the resources that are being enjoyed. Emphasis would be on ecologically diverse floodplain habitat areas. 1) Areas appropriate for non-consumptive recreational use would be identified and included in a non-consumptive recreation development plan. This plan would guide the implementation of the other tasks within this objective. 2) Small gravel parking areas (likely no more than 1 per year) would be established or improved at property entrance locations. Trails would be cleared to guide recreationists through desirable areas, and fences may be installed or improved. Trail width will be $\geq 36''$ in stretches designed for wheelchair accessibility, but generally will be designed as low-impact nature trails with a tread width of 12- 20'' and additional vegetation clearing of about 20'' on each side. Signs would be posted to identify parking areas, trail heads, and to delineate the trails themselves. 3) Interpretive signs would be designed and placed along trails and parking areas to enhance the educational value of the visits. 4) Platforms and photography/wildlife viewing blinds would also be constructed in high-interest areas, allowing optimal viewing of habitats and animals with minimal disturbance. Some habitat improvement work (such as weed removal in recreation areas) would be conducted specifically as a component of this project, however the ongoing Yakama Nation Wetlands and Floodplains Restoration Project would continue to provide most of the habitat enhancement work that draws large populations of interesting birds and mammals to these areas.

Development of materials to guide non-consumptive use: Overview maps showing the locations of properties open to non-consumptive use would be developed, as well as finer detail maps of each recreation area. These maps would show parking areas, trailheads and other useful information to guide the recreational visitor and avoid accidental trespass onto lands not open for recreational use. Interpretive brochures would be developed and made available in weather-proof holders at trailheads. The Yakama Nation Wildlife Program website would also be redesigned to include the non-consumptive recreation information in a manner similar to the way the public hunting and fishing program is presented.

Monitoring of non-consumptive use: Permit sales and the number of inquiries about non-consumptive recreational opportunities (by e-mail, phone, or in-person) would be monitored. An annual questionnaire similar to that currently used to assess satisfaction with our Public Hunting Program would also be developed and mailed to permit holders. Information regarding the number of recreation days, areas visited, types of recreation, and suggestions for improvement would be tracked by this method.

3.0 AFFECTED ENVIRONMENT

3.1 Soils

The majority of the soils in the project area fall within the Toppenish-Umapine and Weirman associations (Rasmussen, 1976). Weirman association soils are deep, well to excessively drained, medium to moderately coarse in texture and originate in recent to old alluvium. They

are more prevalent in the northern portion of the project area (in the Wapato vicinity). The Toppenish-Umapine association tends to be deep, somewhat poorly drained, medium to moderately fine textured soils formed in alluvial deposits. Hydric soil conditions were historically prevalent in the areas of interest for enhanced recreational access, and these conditions are increasing as hydrology is restored. Care needs to be taken when ground-disturbing activities are conducted on hydric Toppenish-Umapine soils adjacent to water bodies to avoid soil transport.

3.2 Water

The Yakima River Basin is a roughly 6,150 square mile area, and Yakima River annual flows are reported at about 2 million acre feet in a typical year. Irrigation diversions within the project area result in streamflow severely diminished from natural conditions from April through October. Tributaries in the project area are the lower reaches of Toppenish Creek and Satus Creek, which peak in January and February and run lowest in August and September. Both are augmented by surface and subsurface irrigation return flows, out of phase with the natural hydrograph such that summer flows are unnaturally high.

The Washington Department of Ecology defines water quality conditions that affect both aquatic life and human health for surface waters in Washington State. During the summer irrigation season, the water quality parameters for temperature, pH, dissolved oxygen, fecal coliform, turbidity, nutrients, and toxicants have been exceeded in the Yakima River.

Ongoing WRVMP restoration activities to restore hydrologic processes redistribute rather than increase water in the system. They do not measurably affect the net amount of surface water leaving the project area, but do raise ground water levels in localized areas. Reestablishment of native vegetation and more natural landforms also buffer the effects of floods and improve water quality through sediment settling, uptake of nutrients in vegetation, shading, and other natural wetland processes. Short-term degradation of water quality and/or quantity during any necessary construction work is offset by positive long-term effects of restoration of degraded channels and wetlands.

3.3 Biological Resources

Threatened and Endangered Species

No terrestrial ESA-listed species occur in the project area. Listed fish species in the project area are Middle Columbia steelhead (*Oncorhynchus mykiss*) and bull trout (*Salvelinus confluentus*). Bull trout are migratory in the Yakima River. Steelhead spawn in Toppenish and Satus Creeks. All habitat restoration projects are designed in cooperation with Yakama Nation Fisheries, Water, and Engineering Programs to minimize effects of short-term degradation of water quality and quantity and maximize long-term benefits to native fish.

Wildlife and Habitats

The Yakima River corridor encompasses a broad band of relatively undisturbed and diverse riparian forest and shrub habitats, while the Toppenish and Satus corridors tend to be narrower

and more disturbed. Larger mammals include river otters, bobcats, deer, bears, and coyotes. Bird diversity is high and includes nesting colonies of great blue herons, black-crowned night herons, Canada geese, bobolinks, and great egrets. Several raptor species nest in the area, including bald eagles. Flooded wetlands along the Yakima River and Toppenish and Satus Creeks are heavily used by migratory waterfowl.

Vegetation types within the project area are primarily riparian (forest, shrubs, and herb), with some agricultural, lacustrine/riverine, and shrub-steppe grasslands. Along the major river courses, riparian vegetation historically consisted of willow, cottonwood, hawthorn, wild rose and chokecherry (Rasmussen 1976). On saline and alkaline soils, greasewood, salt grasses and giant wild rye were principal species. In addition, just over 1,500 acres of emergent wetland remained following extensive historic draining and land leveling. The remaining area was degraded by heavy grazing by the time our restoration activities began. WRVMP restoration efforts focus largely on the areas currently or historically in natural riparian and wetland cover types due to the very high value of these habitats in a largely cultivated landscape.

3.4 Social, Economic, and Cultural Resources

The project area is entirely within the 1.3-million acre Yakama Reservation – a small portion of the area that the 14 tribes and bands of the Yakama Nation historically occupied. The project area lies in the lower Yakima Valley, where many winter villages likely occurred. Fish, deer, and elk in these areas are still culturally important foods and many of the native plants in valley wetlands and riparian areas historically (and to some extent still) provide basket materials, tule mats, and various foods and medicines. The WRVMP works with the Yakama Nation Cultural Program to actively manage these lands to restore culturally important plants and make them readily available for use.

The Allotment Act of 1880 and subsequent partitioning and sale of land to non-Indians accelerated the conversion of the natural landscape to one modified to maximize irrigated crop and cattle production. At the time of the Yakama Nation Wetlands and Riparian Restoration Project's initiation, 23% of the project area was privately owned by non-tribal members, 46% was in allotments owned by tribal members, and 31% was held in trust by the federal government for the Yakama Nation. Agriculture forms the economic base of the general area and the primary land use was agriculture or pasture on 95% of the area within the project footprint (BPA YN BIA 1994). According to 2000 Census data, only about 12% of the Reservation's residents were Native American, while over 80% were white, 3% Hispanic and the remainder mixed or other races.

3.5 Recreation

A majority of the Yakama Reservation is closed to non-Yakamas except for those employed by the Yakama Nation or by special entry permit. The project area is within the developed valley portion of the Reservation, outside of the Closed Area. Access for recreation depends on ownership and management status. Areas open to the public for outdoor recreation are fairly

limited, and include the U.S. Fish and Wildlife Service’s 1,978-acre Toppenish National Wildlife Refuge and the 200-acre Fort Simcoe State Park.

Public outdoor recreation on properties managed by the Yakama Nation is limited to the Public Hunting Program, through which about 3-4,000 hunters per year hunt within just over 30,000 acres. A much smaller number of Yakamas hunt in these areas during the hunting season as well. Public safety is ensured through hunting regulations and clear posting of “Feel Free to Hunt” areas, safety zones, and properties closed to hunting. There is currently no provision for non-consumptive users to access these areas for recreation.

4.0 ENVIRONMENTAL CONSEQUENCES

Alternative Effects Comparison Table

| | Alt A: No Action | Alt B: Recreation Enhancement Project |
|---------------------------------------|--|--|
| Recreation | Continued access to Public Hunting Areas/ Wildlife Areas for hunters with permits, only during the hunting season. Typical use level of 30K hunter-days per year. | Portions of the Public Hunting Areas/ Wildlife Areas open to use for non-consumptive recreation and educational use with permit. Anticipated additional use of approximately 5K person-days per year. |
| Wildlife disturbance/noise | High disturbance in the action area during the hunting season (mid-Oct. through mid-Jan.) Some low-level noise generation from short-duration restoration activities other times of year. | Disturbance anticipated to increase modestly in the recreation enhancement areas. Careful placement and screening of trails, blinds, and platforms, seasonal closures of sensitive breeding areas, and minimally noise-producing nature of activities anticipated to minimize effects. |
| Threatened or Endangered Species | Two fish species are only ESA-listed T&E species in the project area. Activities are designed to benefit these species. | No additional activities affecting these species are planned. |
| Wildlife habitat improvement work | Continuation of annual native plant enhancement and hydrologic restoration activities over 21,000-ac. project area. | Areas being developed for recreation would be prioritized for habitat improvement work, in order to improve aesthetics as well as habitat value. |
| Development of educational materials | Annual hunting map and brochure. Some information on species and habitats available on Program website. | Develop brochures, maps, and interpretive signs for each area on the species and habitats present. New educational materials also available on the website. |
| Archaeological and cultural resources | WRVMP archaeologist surveys sites prior to ground-disturbing activities. Cultural resources program works closely with WRVMP such that management actively restores cultural plants. No properties listed under the National Register of Historic Places are included in the project area. | No change. |
| Environmental Justice | No disproportionate impacts on any group because activities do not degrade the environment and land | No change. |

| | | |
|-----------------|---|---|
| | is enrolled only with cooperation of willing landowners. | |
| Water resources | Restoration activities may temporarily degrade water quality and/or quantity during construction, but long-term affect is restoration from degraded toward natural condition. | Minor degradation of water quality during construction of structures in wetlands and minor sediment inputs to some wetlands adjacent to trails from surface flow. |
| Air quality | Small areas may be burned each year to restore vegetation. Burning occurs only when authorized by the Yakima Clean Air Authority. | No change. |

4.1 Soils and Water

Under either alternative, restoration activities designed to reestablish degraded hydrology and wetland functions are planned to continue. Actions are anticipated to continue to improve water quality, raise groundwater levels, and buffer the effects of floods. Implementation of the non-consumptive recreation program under Alternative B may add recreational use areas as a consideration in prioritizing restoration actions.

Given that the areas of greatest interest for recreation under Alternative B are in or adjacent to wetlands with extreme seasonal variations in water levels and soil saturation, and the fact soils are predominately Toppenish-Umapine association, there is marked potential for transport of sediment into water bodies. Generally level terrain decreases susceptibility to these problems and trails and structures to be constructed are to be designed to avoid contributing sediment or otherwise impacting water quality. Methods will include placement to avoid areas of frequently saturated soils, grading away from open water, and water barring and/or surfacing with rock where necessary. Elevated boardwalks and puncheons (simple, low boardwalks) are planned where appropriate to enable low-impact crossing of areas with saturated soils. Some trails may need to be closed seasonally if degradation of water quality and rutting of trails is occurring in spite of these measures. Nonetheless, surface flow and channelization of water across exposed trail soils may lead to a minor increase in inputs of sediment to localized areas. In addition, some short-term localized impacts to water quality may result from placement of posts and other support structures in water or saturated soil adjacent to water bodies during construction.

4.2 Biological Resources

Implementation of Alternative B would involve a limited amount of vegetation removal. A wheelchair-accessible trail may be constructed, which would involve removal of all vegetation in a 36" wide corridor to a viewing platform. However, the standard is for low-impact nature trails with a 12- 20" wide bare soil track and additional clearing of vegetation to about 20" on each side. Trails are to be designed to minimize tree removal. Overall impacts to vegetation are anticipated to be low, and are off-set by ongoing habitat restoration efforts.

During the mid-October to mid-January public hunting seasons, wildlife disturbance from human presence and gunfire will continue to be fairly intense, particularly in those portions of our Wildlife Areas with waterfowl hunting blinds. However, larger WRVMP properties are

managed to minimize disturbance to wildlife most of the year, with access controlled by gates. The WRVMP employees who work and live in our Wildlife Areas report occasional use by tribal members for hunting, fishing, or trapping, and some trespass use of portions of our lands (most noticeably by people fishing the Yakima River). Some disturbance also occurs from WRVMP restoration activities, which may involve use of machinery such as tractors. These disturbances are localized and short in duration and fairly low in intensity. Short-term disturbance of wildlife is considered to be offset within one growing season by benefits of increased habitat values. Removal or decrease in numbers of cattle on lands transferred to management by the WRVMP also decrease disturbance to wildlife and degradation of habitat.

Under the action alternative, implementation is anticipated to increase disturbance modestly in the recreation enhancement areas outside of the hunting season. Disturbance from non-consumptive uses such as hiking is much less intense than that from hunters, but may occur during the breeding season when species are more vulnerable to disturbance effects. To minimize these effects, trails, blinds and platforms would be placed carefully and would incorporate natural vegetative and constructed visual screens between visitors and wildlife. Recreation and those restoration activities with high disturbance potential would not be permitted in sensitive concentrated breeding areas during the early nesting season. Construction activities would likewise be deferred until late- to post-breeding season in these areas. Disturbance from restoration activities is not anticipated to change appreciably under the action alternative, although activities may shift somewhat toward the areas being developed for non-consumptive recreational use.

Elevated wildlife disturbance and damage to resources and infrastructure could occur if enhanced access for recreation enables non-permitted users to more easily access the areas. Currently access roads into the larger contiguous WRVMP-managed blocks are gated. Implementation would be designed to ensure that areas can still be secured against vehicular trespass.

4.3 Social, Economic, and Cultural Resources

Under current management, and archaeologist and Cultural Resources staff work with the WRVMP to survey all properties brought into the project to ensure that no proposed activities would affect prehistoric, historic, or ethnographic sites and that activities are compatible with maintenance or enhancement of cultural resources. Under either alternative surveys will be conducted prior to any substantial ground-disturbing activities (should these occur in previously unsurveyed areas), and actions will be designed with restoration of cultural resources as a goal.

4.4 Recreation

It is possible to make only very rough estimates of the likely amount of recreational use that might occur under Alternative B. Recreational use here includes educational use by school groups as well as use by birders, hikers, etc. For reference, use of the Toppenish National Wildlife Refuge for non-consumptive recreation is estimated at about 7,350 visitors per year (Refuge Manager Shannon Ludwig, pers. comm.). We estimate that the properties developed for recreational use under this proposal might draw perhaps 5,000 person-days of use per year within

5 years of project initiation. The substantial increase in wetland areas available for recreational use would provide opportunities for birders and other wildlife enthusiasts to encounter a wider diversity of species and habitats than afforded by currently open areas. The availability of interpretive materials would enhance the experience for all users, and would be particularly useful for instructors using the areas for outdoor education projects. WRVMP properties likely to be developed for recreation lie near the Reservation communities of White Swan, Harrah, Wapato, and Toppenish, and will thus provide high-quality settings for environmental education at a convenient distance to schools.

Under both alternatives public safety would continue to be ensured for hunters through safety regulations and clear posting of “Feel Free to Hunt” areas as well as safety zones and properties closed to hunting. Non-consumptive use may be incompatible with hunting due to safety concerns and elevated levels of wildlife disturbance impacting wildlife and undermining quality of recreation for both groups. Non-consumptive use would therefore be separated in time and/or space from active hunting. Use would also be prohibited from dusk until dawn in the interest of participants’ safety and protection of infrastructure from vandalism.

4.5 Cumulative Impacts

The cumulative effects of impacts of human visitation for non-consumptive recreation in addition to hunting are discussed in section 4.2. Other cumulative effects could accrue from increased visitation or disturbances on adjacent ownerships coincident with increases from this recreation program. An example of a change that could appreciably add impacts might be an increase in the use of private hunting areas (aka gun clubs) on properties adjacent to those managed by the WRVMP. We are not aware of any planned changes that would result in increased use. Any such increase would be limited in duration to the hunting season. Increased use for other types of recreation at a level that would impact resources affected by this project are not anticipated. Substantial changes in land use on adjacent ownerships are likewise not anticipated, but should any such changes degrade quality of the recreational experience in an area, the WRVMP would consider shifting recreation area boundaries.

5.0 LIST OF PREPARERS AND AGENCIES CONTACTED

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6.0 REFERENCES

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