CONFEDERATED TRIBES AND BANDS OF THE

YAKAMA NATION

Wetland Program Plan

2014-2018

CONTENTS

INTRODUCTION AND OVERVIEW

YAKAMA RESERVATION AND WETLAND RESOURCES

The 1.4-million-acre Yakama Reservation in south-central Washington (Fig. 1) encompasses a diversity of landforms and habitats. Habitat diversity arises from a steep precipitation and elevational gradient, from about 700' in elevation and 8" of annual precipitation at the Yakima River (forming the Reservation's eastern boundary) to over 12,000' elevation and 100" of precipitation at the summit of Mount Adams. The USFWS National Wetlands Inventory maps 31,000 acres of wetlands on the Reservation (Fig. 1).

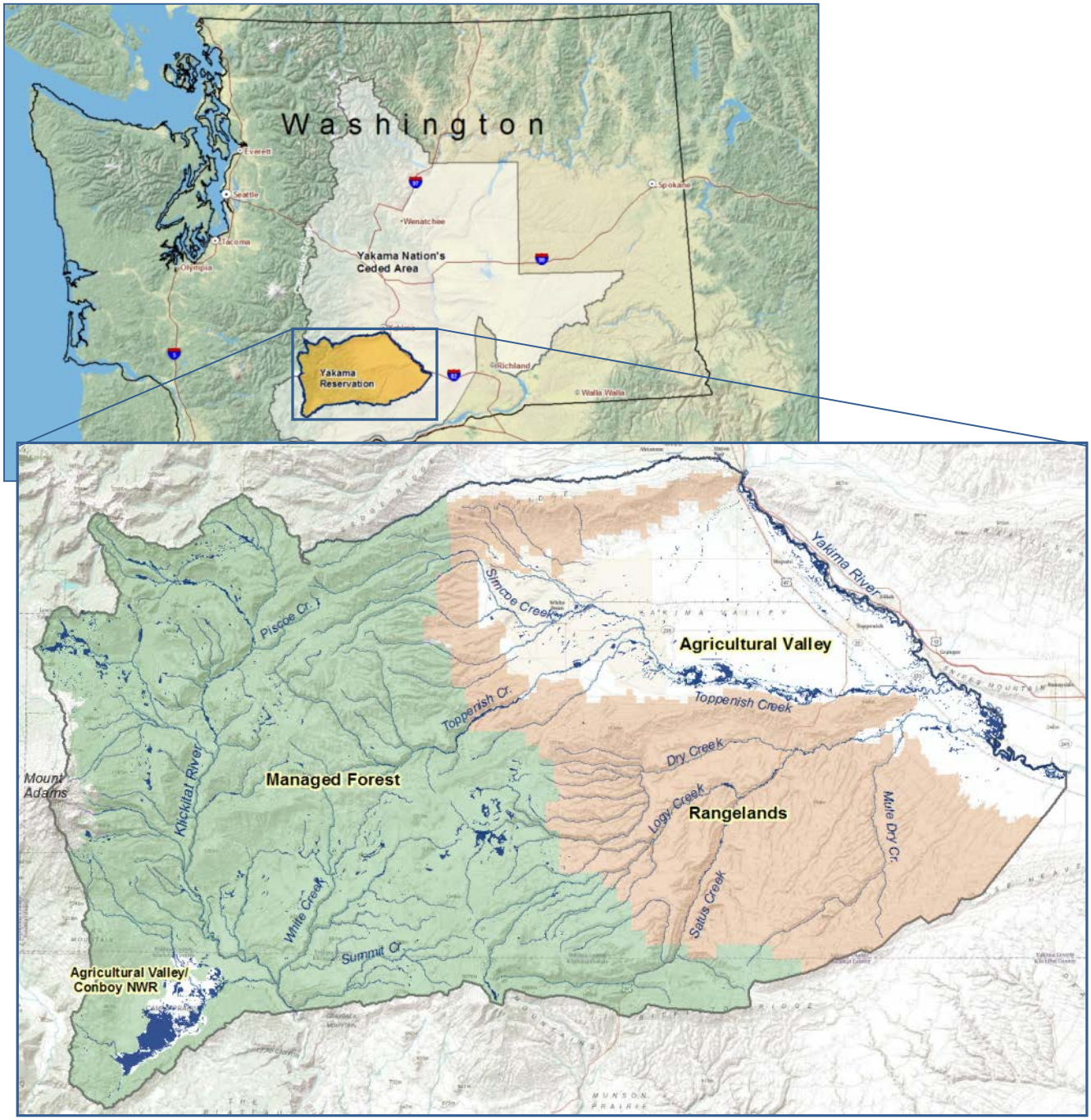

Figure 1. Yakama Reservation wetlands (National Wetlands Inventory, shown in blue), major streams and broad management zones.

Wetlands on the Reservation and throughout the Ceded Area continue to be highly valued by the Yakama people for the culturally important plant and animal resources abundant within them and for the salmon populations they benefit. Floodplains and wetlands provide important salmon habitat while flooded and serve to improve water quality by filtering and storing water, and recharging groundwater reservoirs. The Yakima and Klickitat Subbasin Assessments (Yakima and Klickitat Subbasin Fish and Wildlife Planning Boards, 2004) identified the loss of floodplain function in these watersheds as a critical factor limiting the production and survival of salmonids and wildlife populations, and identified protection and restoration as a high priority.

On the Reservation, wetland characteristics and threats vary considerably by management zone. Wetlands in the valley portion of the Reservation occur as a network along stream floodplains, and are most commonly categorized by the U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) as emergent wetlands, followed by forested/shrub, riverine, and lake or pond. These wetlands provide important breeding, migratory, and foraging habitat for a variety of fish (including ESA-listed bull trout and Mid-Columbia steelhead) and wildlife species in an otherwise arid landscape. For instance, about 300,000 ducks and geese wintered along Toppenish Creek as recently as the 1940s. These valley streams and wetlands were an important source of foods, medicines, firewood, and building and weaving materials for the Yakama people. However, this portion of the Reservation has been most heavily altered from historic conditions.

Permanent settlements are confined to the valley area, and homes and small towns are scattered throughout a landscape converted to intensive agricultural use. Many wetlands and channels were filled and streams diverted and straightened during the European settlement era. The Bureau of Indian Affairs' Wapato Irrigation Project diverts water from the Yakima River and Ahtanum, Toppenish and Simcoe Creek tributaries to provide irrigation water to an area encompassing about 145,000 acres (not all of which is irrigated). About 590 miles of water-delivery ditches and over 300 miles of drains crisscross the valley. This complex system and associated agricultural non-point pollution sources contribute to water quality and aquatic habitat degradation in the valley. A long history of poorly managed grazing, presence of concentrated animal feeding operations, and ubiquitous non-native plants and animals have also degraded the valley's wetland habitats. Monitoring has shown degradation of water quality over time and space, particularly toward the southeast end of the valley where drains collect irrigation returns and flow back into the Yakima River. At the same time, the redistribution of water keeps portions of this area wetter than they may have been historically, and presents opportunities for wetland restoration.

Wetlands are scarce in the rangeland portions of the Reservation, occurring along stream channels and a few natural springs. These are typically categorized by the NWI as Freshwater Forested/Shrub Wetlands. The rangelands are not irrigated or very heavily roaded, but have high concentrations of weeds and are heavily impacted by grazing by livestock and feral horses. The current horse population is currently estimated at approximately 12,000 – far beyond the healthy capacity of the range resources. Wetlands in this zone tend to be highly degraded by trampling, stream incision and very high proportions of non-natives in the plant community.

The montane wetlands of the forested area are diverse and numerous. They are most commonly classified in the NWI as emergent wetlands, followed by forested/shrub, lake or pond, and riverine. The Yakama Nation Wildlife Program mapped about 800 moist meadows in the forested area. Montane wetlands and

meadows serve crucial ecological functions that provide hydrologic benefits to entire watersheds. They function as natural water storage areas, capturing snowmelt in fine soil layers and releasing it slowly over the season, reducing water temperature and increasing hydroperiods. This is critical for the health of downstream fish, wildlife and vegetation. As productive herbaceous openings within the forest matrix, meadows also provide valuable food, cover and reproduction sites for numerous plant and animal species, including federally and state-listed species and many culturally-important food and medicinal plants. Much of the forested area is managed for commercial timber harvest and is heavily roaded as well as grazed by cattle, elk, and horses. The Yakama Nation Wildlife Program's condition assessments of 370 montane meadows found a large portion negatively affected by stressors such as overgrazing, channel incision, weeds, adjacent timber harvesting, and poorly placed roads.

ROLES AND ACTIVITIES OF PROGRAMS INVOLVED IN WETLAND MANAGEMENT

Because so many important resources are concentrated within wetlands, several programs and agencies with management authority on the Yakama Reservation play roles in their protection.

General federal vs. tribal roles: The EPA retains responsibility for administering the federal Clean Water Act with regard to point sources of pollution within the exterior boundaries of the Yakama Reservation. However, the Yakama Nation has established a Water Code "covering all waters that arise on, border, traverse, or underlie the Yakama Indian Reservation. This Water Code shall establish all rights and interests in the water resources of the Yakama Nation, and shall provide a mechanism for regulating the use and management of said waters" (Section 60.01.07 (1) pg 3). Actions affecting waters and wetlands on the Yakama Reservation must comply with both the Clean Water Act and Yakama Nation Water Code. The EPA, YN Water Code Administration, and YN DNR programs work cooperatively on monitoring and enforcement efforts consistent with their respective jurisdictions.

The Yakama Nation Water Resource Program has primary responsibility for water resources protection, restoration, development, and management on the Yakama Reservation.

Program Mission: To protect, manage, restore and develop the water resources of the Yakama Nation (YN) in a manner that will protect the political integrity, economic security, and health and welfare of the tribe and its members.

Key functions: provide technical assistance to the YN for protection of water rights and sovereignty; provide water resource expertise to assist all programs in managing water resource and restoration activities; develop and maintain a water resource inventory and database; ensure water resource protection considerations and/or mitigation measures exist on all major proposed projects; apply state-of-the-art GIS to the analysis, display, and modeling of water resources; implement and update the YN Water Resource Management Plan, and; engage in water resource data collection, monitoring, and assessment for the protection of YN water rights.

The Yakama Nation Water Board and Water Code Administration implements the YN's Water Code. The 4-member Water Board plays a supervisory role and adopts amendments to the Code as needed, while the Water Code Administration program carries out the day-to-day implementation and has the authority to issue permits and citations. The Water Code Administration establishes all rights and interests in the water resources of the YN and provides a mechanism to regulate the use and management of these waters.

Key functions: Issue water use and hydraulic permits and citations; establish and regulate instream flow requirements for Ahtanum, Toppenish, Simcoe, and Satus Creeks and their tributaries; set standards for well construction and decommissioning; monitor temperature and turbidity of Reservation waterways (or utilize data gathered by other Programs) to establish trends and point source locations of water degradation problems; monitor surface water flows and ground water levels for annual and long-term change; require industrial and agricultural water well users to meter their water use; build GIS database of locations of all wells, waterways, and other points of interest; regulates irrigation diversions from Toppenish-Simcoe Creeks.

The Yakama Nation Environmental Management Program is concerned with air, land, and water pollution issues on the Reservation and within the Yakamas' Ceded Area.

Program Mission: To develop and establish the capabilities necessary to manage, protect, and improve Reservation and Ceded Area resources including human health, from environmental pollution.

Key functions relevant to wetlands: The program employs a Pesticides Specialist who works to maintain compliance with USDA/EPA pesticide application regulations on the Reservation. Water Quality Specialists monitor water quality in the valley and Closed Area, develop and update the Yakama Nation's Water Quality Standards, implement measures to protect or improve water quality, develop methods for monitoring non-point sources of pollution, and are working to improve characterization of reference conditions for water quality (such as through a macroinvertebrate community index).

The Environmental Management Program's monitoring efforts emphasize quality of water and wetlands. The YN Water Program is also involved in some water quality monitoring within the agricultural valley's irrigation system, but has a greater emphasis on water quantity Reservation-wide.

The Yakama Nation Fisheries Program employs over 200 people and is very active in wetlands monitoring and restoration on the Reservation, Ceded Area, and wider Zone of Influence as part of its mission to manage for healthy fish populations.


Rentschler's Meadow Restoration Project, YR Watersheds Project 2004

Program Mission: To preserve, protect, enhance, and restore culturally important fish populations and their habitats throughout the Zone of Influence of the Yakama Nation and to protect the rights of Yakama Nation members to utilize these resources as reserved for them in the Treaty of 1855.

Key functions relevant to wetlands: within-streams and wetlands restoration work; road decommissioning, relocations and improvements to address resource impacts; fencing and operation of solar-powered stock wells to keep cattle out of streams and wetlands; restoration implementation and effectiveness monitoring (e.g. photopoints, channel morphology, temperature, water flow, sediment discharge, groundwater levels), status and trends monitoring (e.g. , fish spawning rates, parr density), co-manages minimum instream flows, and; operation of long-term stream temperature monitoring stations.

The Yakama Nation Wildlife, Range, and Vegetation Management Program ("Wildlife Program") has primary responsibility for management of wildlife and habitats on the Reservation, and assists the YN in exercising co-management authority within the Ceded Area and Usual and Accustomed hunting areas. The Program's Wetlands and Riparian Restoration Project has secured over 21,000 acres of floodplains and adjacent uplands along fish-bearing streams in the agricultural valley, and manages these areas to restore natural hydrology and vegetation.

Program Mission: To protect, restore, and enhance the ecosystem integrity and traditional use of wildlife and other natural resources while supporting a culturally and economically strong, self-governing Sovereign Nation.

Key functions relevant to wetlands: Restoring and maintaining valley floodplain project areas for wildlife, fish, and continuation of Yakamas' traditional uses; monitoring floodplain restoration success; securing grants for meadow restoration projects (e.g. fencing, removal of encroaching conifers and weeds, reestablishment of beaver colonies) in the Reservation's forested area; assessing meadows for important values and stressors, establishing and maintaining associated databases and prioritizing restoration actions; control of invasive weeds in the valley portion of the Reservation, and; increasing public appreciation of wetlands through a public waterfowl hunting program, wildlife viewing project, and educational outreach.

Yakama Nation Cultural Resources Program protects cultural resources on the Yakama Reservation, Ceded Area, and all Usual and Accustomed places to the fullest extent of the law.

Program Mission: To preserve, protect and perpetuate cultural resources on behalf of the Fourteen Tribes and Bands of the Yakama Nation.

Key functions relevant to wetlands: Reviewing proposed actions and ongoing management activities to protect wetland-associated cultural resources. The Cultural Program identifies specific sites to be protected and works with action proponents, the Tribal Historic Preservation Officer, and Yakama Nation Tribal Council Cultural Committee to ensure that resources are protected above and beyond the provisions of the National Historic Preservation Act. They also work with other management programs to restore renewable cultural resources, such as the food plants typically found in wetlands.

Bureau of Indian Affairs/Yakama Nation Range Program has primary responsibility for managing livestock grazing and range resources on the Reservation.

Program Mission: To ensure the beneficial use and protection of the range resources of the Yakama Nation through the prudent application of range management principles and practices and the development and maintenance of range improvements.

Key functions relevant to wetlands: Managing grazing leases to prevent resource damage, fencing sensitive riparian and wetland areas, developing and maintaining water sources for livestock away from sensitive areas, and work with the YN Wildlife Program in efforts to reduce wild horse populations to decrease trampling and grazing impacts.

Bureau of Indian Affairs Forest Management Program and Yakama Nation Tribal Forestry manage timber harvesting operations on the Reservation, which are a major source of tribal income.

Program Mission: To enhance and maintain a diversity of forest conditions, maintain sustainable production of forest resources as a dependable source of employment, revenue, and spiritual renewal for the Yakama People.

Key functions relevant to wetlands: Overseeing timber harvest operations to ensure compliance with riparian, meadow, and wetland protection measures within the Yakama Nation Forest Management Plan and managing roads to prevent degradation of water quality or alteration of flow.

The U.S. Environmental Protection Agency has primary responsibility for enforcement of the Federal Clean Water Act on the Yakama Reservation for point sources of pollution (such as discharges from pipes), while the Yakama Nation has primary responsibility for oversight of non-point source pollution and for enforcement of the Yakama Nation Water Code.

Key functions relevant to wetlands: Regulating the discharge of pollutants from wastewater and sewage treatment plants, regulating use of pesticides within the Wapato Irrigation Project canals, preventing discharge of animal wastes and byproducts into water bodies by dairies and concentrated animal feeding operations, and ensuring that drinking water systems comply with federal standards for contaminants.

EXISTING PLANS AND REGULATIONS

RELATED PLANS

There are numerous management plans in effect or under development related to water and wetlands, but none of these presents an overarching strategy for management of all Reservation wetlands.

Acronyms for the responsible YN Programs listed below are as follows: Environmental Management Program (EMP); Fisheries Resources Management Program (FRMP); Water Resources Program (WMP); Water Code Administration (WCA); Wildlife, Range, and Vegetation Management Program (WRVMP); Department of Natural Resources (DNR).

<u>Resource Management Plans</u>

- *Yakama Indian Nation Wildlife Mitigation Plan [1991]* WRMP
  Assesses wildlife habitat losses from construction and operation of the Lower Columbia River hydropower system, identifies target species for habitat restoration actions to mitigate those impacts, and quantifies restoration potential on the Yakama Reservation and anticipated costs.
- *Yakama Nation Lower Yakima Valley Wetlands and Riparian Restoration Project Predesign Management Plan (BPA Project 92-62) [1992]* WRMP.
  The original planning document for the YN's Columbia River hydropower wildlife mitigation project; It describes broad objectives and project implementation strategies for restoration of important valley floodplain areas.
- *Klickitat Subbasin Plan and Yakima Subbasin Plan[2004]* Klickitat and Yakima Subbasin Fish and Wildlife Planning Boards: The Yakama Reservation is split between these two subbasins. These overview documents provide direction for prioritizing allocation of Bonneville Power

Administration funding – a major source of funding for fish and wildlife restoration on the Yakama Reservation.

- *Yakama Nation Land and Natural Resource Policy Plan (LNRPP) [1987]* YN T-92-87
  Provides very general policy guidance for management of natural resources.

- *Yakama Nation-BIA Forest Management Plan [2005; Update planned for 2014]*
  The Forest Management Plan includes numerous guidelines for protection of wetland and water resources in the course of timber sales and other forest management activities. On any given sale or action, specific protection measures are negotiated by an Interdisciplinary Team and incorporated into an Environmental Assessment and Biological Assessment for National Environmental Policy Act and Endangered Species Act compliance.

- *Yakama Nation Water Resource Management Plan [2011]* WRP T-136-11
  In preparing this Plan the WRP accomplished the following tasks: compile, inventory and upgrade existing water resources documents, data, and analytical resources; document and assess current water management policies; prepare water resources inventory and budget; assess water management problems, needs, and objectives; identify potential solutions to water management problems and needs; recommend water management options, and; prepare a draft comprehensive water resources management plan. Some information on current management of wetlands is presented, as well as a summary of anticipated future direction of valley wetland restoration under the Toppenish Creek Corridor Enhancement Plan.

- *Integrated Invasive Plant Management Plan for the Yakama Reservation [2012]* WRVMP
  Outlines a unified approach for managing invasive plants on the Reservation. Provides a YR-specific noxious weed list by management class, but does not prescribe specific actions or site plans.

- *Toppenish Creek Corridor Enhancement Plan [In progress]* WRP, FRMP, WRVMP
  Actions under this plan are designed to reduce irrigation influence on streams, restore channels and floodplains, and restore native riparian and wetland vegetation.

<u>Subbasin Plans and Watershed analyses</u>

- *Satus Creek Watershed Analysis [2000]*DNR
  Summarizes changes in watershed function from historic condition and lays out a suite of management and restoration recommendations, which continue to help guide restoration efforts in this watershed.
- *White Creek Watershed Assessment: Roads and Hydrology [2003]* FRMP
  This analysis of impacts of forest roads on peak flow hydrology in the White Creek Watershed (in the forested area of the Reservation) was completed by Northwest Hydraulic Consultants. The report made several recommendations for road improvements and removal to reduce high levels of impacts to upper watershed streams.

<u>Quality Assurance Project Plans and other Monitoring Plans</u>

- *Quality Assurance Project Plan for Yakama Nation Surface Water Quality [2010]* WRP
- *Quality Assurance Plan for Surface Water Quality Monitoring, Wapato Irrigation Project and Yakama Nation [2011] WRP, EMP, WCA, BIA*

- *Quality Assurance Project Plan for Yakama Nation Surface Water Quality Monitoring, Wapato Irrigation Project and Yakama Nation [2012]* WRP, EMP, WCA
- *Quality Assurance Project Plan for Yakama Nation Surface Water Quality Investigation in Lower Yakima River Tributaries [2007]* WRP
- *Quality Assurance Plan for Flow Measurement, Yakama Nation [draft 2010]*WRP
- *Quality Assurance Project Plan for TSS and Turbidity TMDL Effectiveness-Monitoring in the Lower Yakima River Main Stem [2002]* WRP
- *Quality Assurance Project Plan for Watershed Assessment pursuant to development and implementation of Yakama Nation Water Quality Standards [2010]* EMP
- *Quality Assurance Project Plan for TSS and Turbidity TMDL Effectiveness-Monitoring in the Lower Yakima River Main Stem [2002]* WRP
- *Quality Assurance Project Plan for Assessing Wetland and Meadow Habitat, Condition and Management Needs on the Yakama Reservation[2009]* WRVMP
- *Water Supply Inventory and Monitoring Plan[2006]* WRP
- *YRBWEP Water Quality Monitoring Plan for the WIP [2001]* EMP

REGULATIONS

WATER AND HYDRAULIC CODES

The Yakama Nation Water Code serves as the primary regulatory authority over all waters that arise on, border, traverse, or underlie the Yakama Reservation. The Water Code was established in 1991 by Tribal Resolution T-136-91 and expanded and revised a year later by Resolutions T-160-92 and GC-1-93. The Water Code was revised again and incorporated into Title 60 of the Revised Yakama Code in 2005 by Resolution T-089-05. The Code includes sections on Sovereign Rights and Duties, Jurisdiction, Beneficial Uses, Water Use Permits, Civil Fines Schedule, and Prohibited Activity. The Water Code regulates water use through issuance of permits and citations for surface and ground water use and establishing minimum instream flows for the protection of fish and other aquatic species.

The Hydraulic Code was established as part of Tribal Resolution T-136-91, and is specific to a) diversion of water from any body of water, including groundwater, within the Yakama Reservation; and b) activities affecting water bodies, their channels, banks, shorelines, and riparian zones. The Hydraulic Code specifies work limitations and mitigation required to insure the protection on tribal resources. Hydraulic Code permits are issued by the Water Code Administration.

WATER QUALITY STANDARDS

Yakama Nation Water Quality Standards were completed in 2005. The primary purpose of the Yakama Nation Water Quality Standards is to restore, maintain and protect the chemical, physical, biological, and cultural integrity of waters under the stewardship of the Yakama Nation in a sustainable manner.

The standards establish the quality of water as criteria expressed both in narrative and numerical form. The criteria express what quality of water is necessary to support designated beneficial uses of water.

These standards consist of essentially three main components:

1) Designated beneficial uses of various water bodies

2) Narrative, numeric and biological criteria necessary to maintain those designated uses, and an

3) Antidegradation policy to maintain and protect existing instream uses of water and define a process for assessing the variety of activities that may negatively affect high quality waters.

FEDERAL CLEAN WATER ACT

The Federal Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1977.

Under the CWA, EPA and the Yakama Nation have implemented pollution control programs such as setting wastewater standards for industry. They have also set water quality standards for contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

PLAN PURPOSE AND TIME FRAME

PURPOSE

The Yakama Nation Wetland Program Plan is intended to guide activities for improved wetlands management, restoration, and regulation. It attempts to integrate work across programs and supplements rather than replaces prior documents such as the YN Water Resources Management Plan.

OVERALL GOALS FOR WETLAND RESOURCES

Goal 1: Consistently map and protect wetlands on the Reservation, preventing loss of proper functioning and restoring degraded wetlands to support their designated uses and values.

Goal 2: Create consistent, repeatable wetland and water quality assessment and monitoring methods and maintain georeferenced databases for assessment data and for tracking losses and gains in wetland quality and acreages.

Goal 3: Use data gathered to continually increase understanding of baseline conditions of the Reservation’s wetlands, sources of degradation, and most effective protection and restoration actions.

Goal 4: Improve coordination among all YN programs and other governmental agencies involved in wetlands-impacting activities on the Reservation to ensure high efficiency, consistency, and desirable outcomes for wetland protection.

Goal 5: Improve coordination among agencies, programs, and resource users to ensure compliance with regulatory permitting agencies and provide an efficient and effective regulatory system for protection of wetland and water resources.

Goal 6: Enhance and restore cultural resources in Yakama wetlands. Promote continued traditional uses, improve the local public's appreciation of wetlands, and increase voluntary protection measures.

Goal 7: To mitigate local and regional losses, enhance (improve function beyond historic condition) and create wetlands where feasible, where wetland functions can be most beneficial.

PLAN TIME FRAME

Actions specified in this plan are for a 5-year time frame. Overall goals are assumed to be long-term, but the Plan should be revisited before the end of the 5-year time frame for reassessment of specific core element goals and scheduling of subsequent actions.

CORE ELEMENT: VOLUNTARY RESTORATION AND PROTECTION

GOALS

Goal 1: Consistently map and protect wetlands on the Reservation, preventing loss of proper functioning and restoring degraded wetlands to support their designated uses and values.

Goal 4: Improve coordination among all YN programs and other governmental agencies involved in wetlands-impacting activities on the Reservation to ensure high efficiency, consistency, and desirable outcomes for wetland protection.

Goal 6: Enhance cultural resources on Yakama wetlands, promote continued traditional uses, improve the local public's appreciation of wetlands, and increase voluntary protection measures.

Goal 7: To mitigate local and regional losses, enhance (improve function beyond historic condition) and create wetlands where feasible, where wetland functions can be most beneficial.

PAST AND CURRENT ACTIVITIES

Wetland restoration and protection efforts on the Reservation are extensive and varied. Before actions affecting wetlands occur, protection measures are generally negotiated by an Interdisciplinary Team (IDT) comprised of BIA and YN representatives from the natural and cultural resources programs. Additional involvement of the EPA is more frequent in the valley, where more point-sources of pollution occur.

Figure 2. YKFP Castle Springs constructed riffle restoration before and one year after construction.

Wetland restoration activities also involve multiple resource programs and funding sources. The Fisheries Program's BPA-funded Yakama Reservation Watersheds Project and Yakima Klickitat Fisheries Projects are particularly active in stream and wetlands restoration in the Yakama Reservation and Ceded Area, with salmonid habitat restoration as a primary goal. Efforts in the forested area have included large projects to reverse the effects of overgrazing and detrimental road construction on streams and wetlands (e.g. raising stream channels and reconnecting with floodplains), as well as less expensive small grant projects to remove encroaching conifers and weeds, fence out grazers, and restore beaver colonies. Under EPA WPDG funding, we recently formed a Meadow Action Team to coordinate efforts between programs, completed assessments of a large portion of montane wetlands, and created a database and GIS layers improving our ability to identify prevalence of threats and locations of the most biologically valuable resources, and to prioritize restoration efforts.

In the valley portion of the Reservation, the Wildlife Program's Valley Wetlands and Riparian Restoration Project is actively restoring 21,000 acres to more natural wetland conditions (Figure 3). The management emphasis for these lands is on restoration of floodplain habitats, restoration of healthy populations of fish and wildlife (particularly waterfowl), and continued traditional and recreational use of plant and wildlife resources. The Toppenish Creek Corridor Enhancement Plan currently under development will aid in continuation of these restoration efforts.

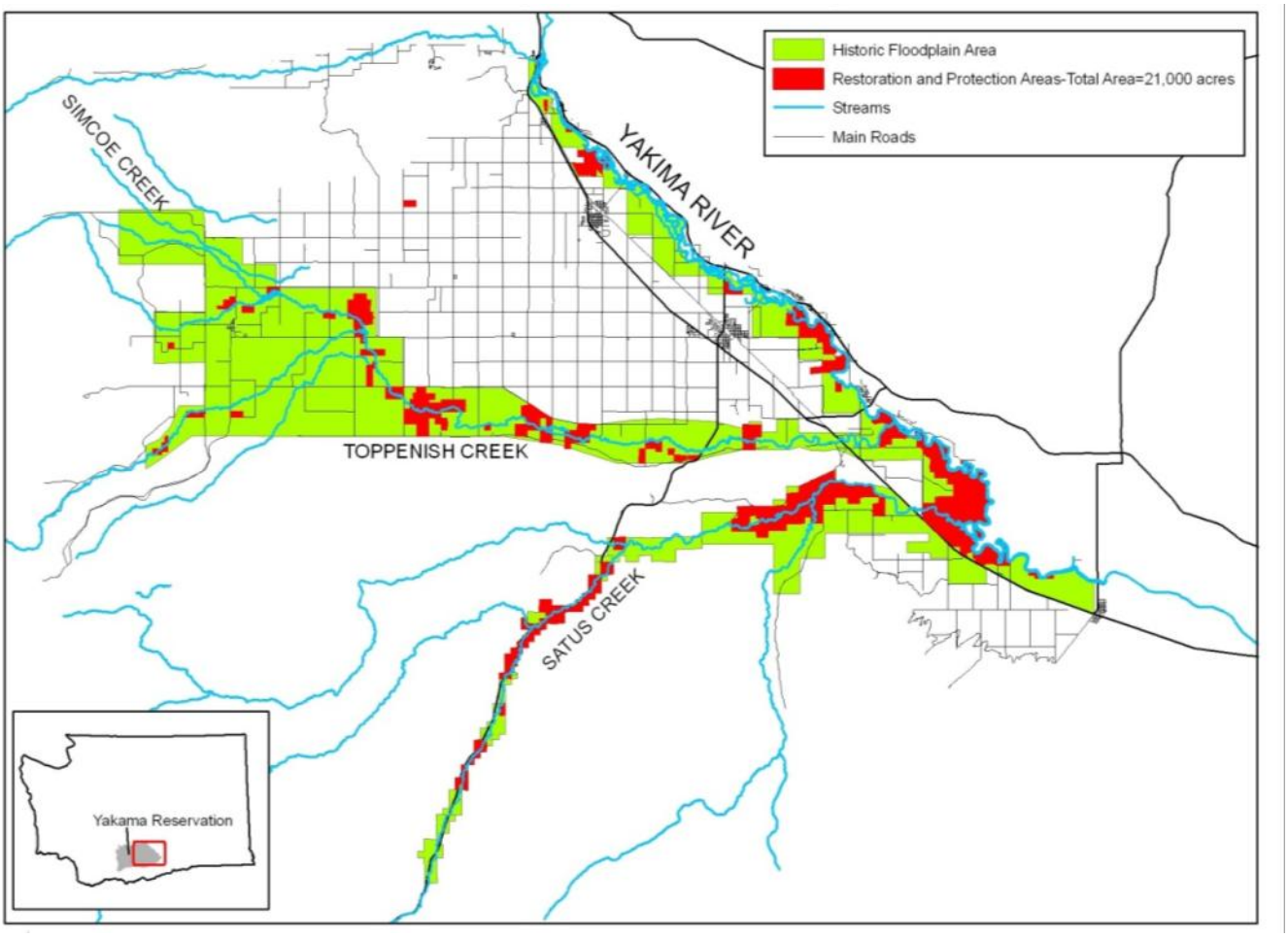

Figure 3. Yakama Nation Valley Wetlands and Riparian Restoration Project area.

5-YEAR PLAN OF ACTIVITIES

Objective 1: Identify clear, consistent restoration and protection goals

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Clearly and consistently state goals throughout agency	Compatible goals stated in LNRPP, FMP, Water RMP, and other planning documents	Ensure goals are compatible across future planning documents and actions.	X	X	X	X	X
		Tier project restoration objectives to broader goals.	X	X	X	X	X
	NWI not always accurate and does not include condition or functions important to YN	Gather information on wetland location, class and condition/functions	X	X	X		
		Where there are conflicts between resource goals, use transparent process to select course of action.	X	X	X	X	X
b. Consider watershed scale and all key resources in prioritizing restoration	Prioritization by individual programs utilizing various methods, but all take multiple-resource approach	Utilize the inter-disciplinary Meadow Action Team to coordinate and improve restoration efforts and expand use of this team in the valley portion of the Reservation	X	X	X	X	X
	Montane meadow assessments and database/mapping of identified resource values	Continue efforts to identify and map rare, vulnerable, or important wetlands and prioritize them for restoration/protection.	X	X	X	X	X
	Existing aerial photography, NWI mapping, and project-based mapping efforts	Apply tools (color-infrared photography, field inspections of soils and vegetation, etc.) to accurately map wetlands for protection and restoration	X	X	X		
	Coordination of multiple programs' efforts through IDT and individual contacts; subbasin plans; Yakima Valley Wetland Restoration Plan	Increase integration of restoration efforts on landscape scales	X	X	X	X	X
	Satus Watershed Analysis, White Creek Watershed Assessment	Prioritize watersheds and complete watershed analyses	X	X	X	X	X
		In valley area, share priorities with other involved agencies and landowners involved in wetland management	X	X	X	X	X

Objective 2:Protect and restore wetlands

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Increase use of voluntary measures to prevent further degradation	Ongoing	In areas under direct YN management: road improvements, fencing, grazing management, invasive plant management	X	X	X	X	X
	Ongoing	Continue use of easements, leases, etc. to protect high-priority areas	X	X	X	X	X
		Enhance educational efforts and materials for the public and landowners on wetland values and protection measures	X	X	X	X	X
		Develop ways to publicly recognize partners and landowners for protection efforts		X	X		
b. Restore wetland functions	See narrative	Continue developing and implementing Meadow Action Plans, Wildlife Property Plans, and other restoration plans consistent with prioritization	X	X	X	X	X
	Several grants (BPA, FWS, EPA) coordinated through multiple YN programs	Cooperate between programs and partner with other organizations to leverage funding and increase effectiveness	X	X	X	X	X
	Ongoing, but rarely a stated goal	Contact valley land owners to understand current barriers to improving wetland management and ascertain their technical assistance needs	X	X	X		
	Ongoing, but rarely a stated goal	As opportunities arise, provide technical assistance to valley land owners and managers for their restoration efforts	X	X	X	X	X
	Ongoing	Restore culturally important resources and assist public in continuing traditional uses	X	X	X	X	X
	Ongoing. Some beaver restoration completed under short-term grants	Continue restoration practices (e.g. beaver reintroduction) that most closely mimic natural processes and require low future inputs	X	X	X	X	X
	Integrated Weed Management Plan adopted in 2011	Implement Integrated Weed Management Plan by utilizing principles in ongoing control efforts and seeking funding for expansion of efforts	X	X	X	X	X
		Incorporate potential climate change effects (e.g. less precip. falling as snow) into restoration planning	X	X	X	X	X

CORE ELEMENT: MONITORING AND ASSESSMENT

GOALS

Goal 2: Create consistent, repeatable wetland and water quality assessment and monitoring methods and maintain georeferenced databases for assessment data and for tracking losses and gains in wetland quality and acreages.

Goal 3: Use data gathered to continually increase understanding of baseline conditions of the Reservation's wetlands, sources of degradation, and most effective protection and restoration actions.

PAST AND CURRENT ACTIVITIES

The Water Resources, Fisheries, Environmental, Water Code Administration, and Wildlife Programs all conduct water quality and quantity monitoring. Monitoring emphasizes the Wapato Irrigation Project system, major Reservation fish-bearing creeks, and restoration project areas. The Programs monitor over 150 stream gauging stations and surface water monitoring sites. Monitoring may also include measures of streambed structure (Timber, Fish, and Wildlife Surveys), fish spawning success (Viable Salmonid Population Monitoring), and vegetation changes in wetlands. In addition, the Wildlife Program has conducted sporadic surveys for sensitive wetland-associated species, such as western toads and sandhill cranes, but has no long-term funding to monitor populations.

Numerous Quality Assurance Project Plans have been developed on the Reservation, particularly for monitoring of surface water quality (p. 8). The Yakama Nation Water Resources Management Plan recognizes the lack of standardization of stream gauging data collection as an issue, and proposes development of a Reservation-wide Quality Assurance Plan and a centralized database for stream gauging. This would be part of a Reservation Water Information Network (RWIN) for collection and storage of all water data, the components of which are specified in the Water Resources Plan.

Continued development of the RWIN would address many, but not all, of the Reservation's wetlands monitoring and assessment needs. Not all wetlands have year-round surface water, and water properties reflect only a fraction of the important values of wetlands. Clarification of key indicators of those aspects of wetland health most important to the Yakama Nation and standardization of methods to effectively monitor these would be highly beneficial to protection and restoration efforts. These need to be developed for logical classes of wetlands, given the extreme diversity of wetland types (and associated benefits) ranging from valley riverine floodplains up to montane bogs and alpine pools.

Although the Yakama Nation has not sought approval as a wetlands mitigation bank, this may be a future initiative. Areas serving as mitigation banks would carry very specific requirements that would need to be incorporated into an overall monitoring plan.

5-YEAR PLAN OF ACTIVITIES

Objective 1: Develop a monitoring and assessment strategy consistent with Elements of a State Water Monitoring and Assessment Program for Wetlands (EPA 2006)

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Identify program decisions relying on monitoring data and desired long-term environmental outcomes	Identify and collaborate with all programs that will use data	Identify all programs' data needs, applications, and ongoing monitoring work	X				
		Document comprehensive long-term goals for wetlands and key associated species	X	X			
		Identify how wetlands data can be used in watershed planning	X	X			
b. Define wetlands monitoring objectives and strategies	Coordination through the IDT and Meadow Action Team	Work across YN Programs to define monitoring objectives and integrate efforts	X	X			
	Components of a Reservation Water Information Network defined (WRMP 2011)	Examine other sources within and outside YN for monitoring information	X	X			
		Document the wetlands and key species monitoring strategy	X	X			
c. Develop monitoring design, with an approach to site selection that best serves monitoring objectives		Determine classification scheme in order to logically group wetlands	X				
		Describe site selection process		X			
	Existing water quality standards and meadow assessment methods	Select core indicators relevant to monitoring objectives and confirm scientific defensibility	X				
	Existing water quality, meadow assessment, and fish response protocols	Standardize field methods	X	X			
		Revise indicators/methods as needed	X	X	X	X	X

Objective 2. Implementing the YN Wetlands Monitoring Strategy

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Ensure scientific validity of methods	Existing QAPPs for components of water, fish, and meadow work	Draft and peer review Quality Assurance Project Plan and Quality Control Plan		X			
		Draft and peer review Field Operations Manual		X			
b. Monitor wetlands		Train staff to conduct monitoring		X	X	X	X
		Conduct pilot monitoring projects to test methods		X	X		
		Develop schedule for monitoring		X	X		
		Track sites monitored		X	X	X	X
c. Establish reference conditions	Existing water quality data, benthic macroinvertebrate sampling, meadow data	Define gradient of unimpaired to impaired for each wetland class	X	X	X	X	X
		Define reference standard conditions (e.g. Best Attainable, Historic, Least Disturbed)	X	X	X		
		Determine process and sites for measuring reference standard condition	X	X	X		
d. Track monitoring data in a system that is accessible, updated regularly, and integrated with other YN water quality data	Existing water, fish, and meadows databases	Design a data management system that integrates efforts and supports objectives		X	X		
		Administer and update data system and provide support to users needing analyses		X	X	X	X
		Integrate with other water quality data systems		X			
		Georeference data as it is gathered and ensure compatibility with ArcGIS		X	X	X	X
		Identify sites to sample repeatedly for a trend network	X	X	X		

Action	Completed components	Future activities	2014	2015	2016	2017	2018
e. Analyze monitoring data to evaluate functioning and inform decision making		Develop standard data analysis and assessment procedures		X	X	X	X
		Analyze changes in wetland extent or condition relative to reference conditions and identify probable causal agents			X	X	X
		Regularly report wetlands status and trends			X	X	X

Objective 3: Incorporate monitoring data into decision making

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Evaluate potential impacts of proposed actions and modify as needed		Use monitoring data to inform federal and tribal permit decisions	X	X	X	X	X
		Recommend modifications as needed based on BMPs and local monitoring and assessment data	X	X	X	X	X
b. Improve site-specific management of wetlands	New designs incorporate lessons from past	Utilize monitoring data in restoration design	X	X	X	X	X
	Most projects incorporate measures of success	Establish ecologically-meaningful benchmarks for measuring restoration success		X	X	X	
c. Develop geographically-defined wetland protection, restoration, and management plans	Variety of prioritization methods used by different programs	Identify and prioritize wetland areas for protection and restoration	X	X	X	X	X
		Incorporate wetlands and water quality needs into comprehensive watershed plans			X	X	X
	Ongoing effectiveness monitoring of restoration projects	Evaluate progress toward meeting wetland objectives identified by other projects and plans			X	X	X

Action	Completed components	Future activities	2014	2015	2016	2017	2018
		Inform broader watershed activities (e.g. reducing erosion, providing floodplain storage, reducing nutrient loading, etc.)			X	X	X
d. Evaluate monitoring program to determine how well objectives are being met		Develop schedule to evaluate monitoring program		X			
		Ensure methods are providing the necessary information and make any needed changes		X	X	X	X
		Review other wetland program elements (restoration, WQSs, etc) and modify as needed based on monitoring data		X	X	X	X

CORE ELEMENT: REGULATION

GOALS

Goal 1: Consistently map and protect wetlands on the Reservation, preventing loss of proper functioning and restoring degraded wetlands to support their designated uses and values.

Goal 5: Improve coordination among agencies, programs, and resource users to ensure compliance with regulatory permitting agencies and provide an efficient and effective regulatory system for protection of wetland and water resources.

PAST AND CURRENT ACTIVITIES

The Yakama Nation has inherent authority over all waters of the Yakama Reservation, and has established Water and Hydraulics Codes, and adopted water quality standards. The EPA has primary responsibility for enforcement of the Federal Clean Water Act on the Yakama Reservation for point sources of pollution and works cooperatively with the Yakama Nation in enforcing the Act. The YN's Water Resources, Environmental Management, and Fisheries Programs have primary responsibility for monitoring water quality (partly through EPA S106 funding), while the Water Code Administration Program (WCA) issues YN permits and citations.

More specifically, under the Yakama Nation Water Code the WCA regulates all waters that arise on, border, traverse, or underlie the Yakama Reservation. Under the Hydraulic Code the WCA regulates a) diversion of water from any body of water, including groundwater, within the Yakama Reservation; and b) activities affecting water bodies, their channels, banks, shorelines, and riparian zones. Water use and work in or near water are regulated by the WCA and requires specific permits based on work activities.

5-YEAR PLAN OF ACTIVITIES

Objective 1: Clearly define jurisdictional extent of program

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Clearly define jurisdictional coverage	Wetland definitions as inclusive as CWA in Water Code and WQS	Evaluate adequacy of current regulation to protect wetlands (including isolated wetlands) and revise if necessary	X	X			
	Definitions of currently regulated activities	Ensure that clearly identified scope of regulated activities reflects WCA jurisdiction over all waters that arise on, border, traverse, or underlie the Yakama Reservation	X	X			
		Continue investigation of CWA §404 Program and §401 Certification and pursue if advantageous		X	X	X	X
b. Provide clear guidance to public on how to identify jurisdictional waters and activities		Develop maps and documents and make readily available online and by hard copy		X	X		
		Outreach to affected public to increase awareness of permit requirements and available resources		X	X	X	X
c. Evaluation		Periodically evaluate if scope of jurisdiction is adequate for protecting wetland and water resources and revise as necessary				X	X
		Periodic consultation with tribal regulatory agencies to ensure all potentially regulated activates are addressed and appropriate programmatic action is taken		X		X	

Objective 2: Administer regulatory activities efficiently and consistently

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Ensure continued operation under clear, publicly disseminated criteria for reviewing and responding to applicants		Provide clear guidance to Programs on implementation practices	X	X			
		Develop and post publicly accessible instructions for application process		X			
		Develop, post timelines for permit review steps		X			
		Review actions in compliance with established procedures	X	X	X	X	X
		Develop standard practices or general permits for similar actions	X	X	X	X	X
b. Coordinate actions among agencies and programs to prevent duplicative actions		Develop clear guidelines for responsibilities and procedures for activities requiring permits from multiple programs or agencies	X	X	X		
		Clarify roles and authority between BIA and YN programs regarding protection measures for timber harvest operations		X	X		
c. Require effective mitigation for authorized actions		Establish minimum standards and review and monitoring procedures to ensure effective mitigation occurs		X	X		
		Coordinate regulatory program meeting with other entities conducting restoration to share best practices, mitigation/restoration priorities, and/or assessment methodologies.		X			X
		Investigate opportunities to serve as a wetland mitigation bank for off-Reservation actions		X	X		

Objective 3: Track and enforce permits and required protections

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Track permitted actions	Tracking by various programs, w/o consistent practices	Maintain database and GIS shapefiles of permitted actions and requirements	X	X	X	X	X
		Maintain all of the above for NEPA-authorized actions affecting wetlands	X	X	X	X	X
b. Monitor completion of permitted and required actions		Enact clear reporting requirements of permit recipients and action agencies, including BIA	X	X	X		
		Specify actions to be actively monitored for compliance and track implementation of monitoring and % compliance	X	X	X	X	X
c. Ensure effective enforcement	Ongoing	Continue enforcement efforts to deter unpermitted actions and violations of permit requirements	X	X	X	X	X
	Ongoing	Continue collaboration with multiple programs and/or regulatory agencies to establish mechanisms to monitor compliance.	X	X	X	X	X
		Collaborate with regulatory agencies to establish timeframes for sites to come into compliance.	X	X	X	X	X
		Improve compliance mechanisms for permits, Forest Management Plan, and EAs	X	X	X	X	X

CORE ELEMENT: WATER QUALITY STANDARDS FOR WETLANDS

GOALS

Goal 2: Create consistent, repeatable wetland and water quality assessment and monitoring methods and maintain georeferenced databases for assessment data and for tracking losses and gains in wetland quality and acreages.

Goal 3: Use data gathered to continually increase understanding of baseline conditions of the Reservation's wetlands, sources of degradation, and most effective protection and restoration actions.

PAST AND CURRENT ACTIVITIES

As further detailed under Regulations (p. 9), the 2005 Yakama Nation Water Quality Standards designates beneficial uses of water, establishes the quality of water as narrative and quantitative standards, and includes an antidegradation policy for protection of water quality and existing beneficial uses. Some of these standards do not reflect the natural range of reference conditions on the Reservation well, and at present they do not include biological response indicators (such as benthic macroinvertebrate community indices). Under 2010 EPA Wetland Program Development Grant funding, the YN Environmental Management Program and Wildlife Program worked with ABR Inc. to analyze macroinvertebrate samples to begin development of a biological integrity model.

5-YEAR PLAN OF ACTIVITIES

Objective 1: Ensure that wetlands are treated as waters within tribal water quality programs

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Review definitions of wetlands for consistency	YN's existing Water Quality Standards utilize Cowardin 1979 definition	Review Tribal definitions of waters to ensure wetlands are included and defined consistently	X				
		Review water quality standards and ensure appropriate standards are established for wetlands		X	X		
b. Ensure appropriate wetlands definition is included in WQS	Included in current YN Water Quality Standards	Ensure inclusion in all future YN policies and regulations authorizing water quality standards program	X	X	X	X	X

Objective 2: Develop wetland-specific water quality standards

Action	Completed components	Future activities	2014	2015	2016	2017	2018
a. Compile local data that will inform water quality standards		As per classifications defined under Monitoring/Assessment Actions 1c, using reference conditions developed in M/A Action 2c.	X	X			
b. Establish and adopt appropriate wetland-specific designated uses to be achieved and protected	Water Code establishes general beneficial uses for YN Water Resources. WQS lists uses by water body class.	Review designated uses (e.g. support of aquatic life, wildlife habitat, low-flow augmentation) by wetland type and revise and map where these apply as necessary		X	X		
c. Adopt narrative criteria describing the condition or suite of functions that must be achieved to support designated uses	YN WQS's and Water Code include broad narrative descriptions applicable to all waters	Establish narrative physical criteria (e.g. no significant adverse impacts on erosion regime) specific to wetland classes as appropriate		X	X		

Action	Completed components	Future activities	2014	2015	2016	2017	2018
		Establish narrative biologic criteria (e.g. no significant adverse impacts to vegetative community, or fish habitat quality) specific to wetland class as appropriate		X	X		
d. Adopt numeric criteria for values that may not be (or must be) exceeded for chemical, physical, and biological parameters by wetland class to protect or restore designated uses	Existing WQS criteria are by water body class. Some criteria are not applicable in all areas (e.g. areas with naturally high phosphorus)	As necessary and if feasible, establish numeric criteria for chemical constituents based on wetland type and location		X	X		
	Current WQS includes some physical parameters, such as turbidity and temperature	As necessary and if feasible, establish numeric criteria for physical parameters based on wetland type and location, and consider addition of attributes such as shading and in-stream microhabitats		X	X		
	Biological criteria largely missing from current WQS	If feasible, establish numeric criteria for biological attributes (e.g. macroinvertebrate index value) based on wetland type, location		X	X		
e. Better define antidegradation policies to require protection of current uses, and maintenance of conditions in high-quality wetlands, and prohibition against degrading outstanding resource waters	WQS specifies that standards apply to surface and ground waters	Include wetlands and restoration potential of wetlands in antidegradation policies	X	X			
	Provisions are included in WQS for tribally-designated Outstanding Resource Waters	Identify candidate Outstanding Resource Waters for Tribal Council consideration	X	X	X		
	Ongoing	Administer and enforce antidegradation policies for wetlands	X	X	X	X	X
		Develop measures to ensure antidegradation is being applied successfully to wetlands		X	X	X	X