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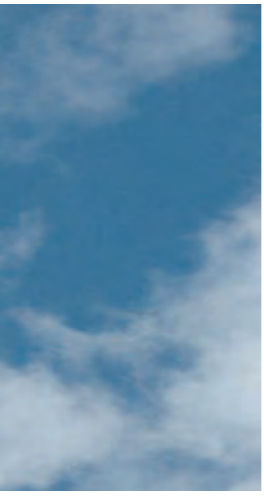
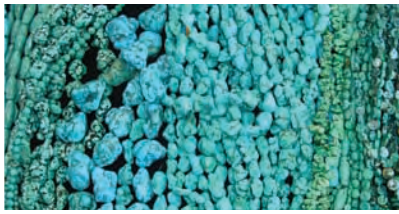


Tribal Water Quality Programs: Using Clean Water Act Section 106 Funding to Protect Water Resources

2009 Status Report



A NOTE FROM THE DIRECTOR

EPA's Clean Water Act Section 106 Tribal Program provides critical resources to assist tribes in establishing and implementing ongoing water pollution control programs. Over the program's 20-year history, the Agency is proud to have partnered with more than 200 tribes to expand awareness of the threats to tribal water quality and to develop and implement long-term goals, strategies, and standards for water quality monitoring and protection. Key among these partnerships has been the commitment of tribal governments to work together with the Agency to implement CWA programs on tribal lands, providing the leadership to ensure that our waters are protected for generations to come.

Together, we are furthering the goals of protecting, preserving, and restoring water resources in Indian Country and beyond. This report highlights the accomplishments that have been achieved by tribes in developing comprehensive, effective water quality programs to protect water resources as well as the challenges that remain. We will continue to build upon these successes as we work together to develop water quality programs that meet the unique water quality needs and priorities of tribal communities.

James A. Hanlon, Director for EPA's
Office of Wastewater Management

In Memory of Carol Jorgensen

The Office of Wastewater Management would like to acknowledge Carol Jorgensen's unwavering dedication to the rights of indigenous communities. Since she began with EPA in 2002, she worked as an advocate for the tribes and for the protection of water resources and the environment. Her long service in the federal government and her close ties to the people she worked with and for will be greatly missed.

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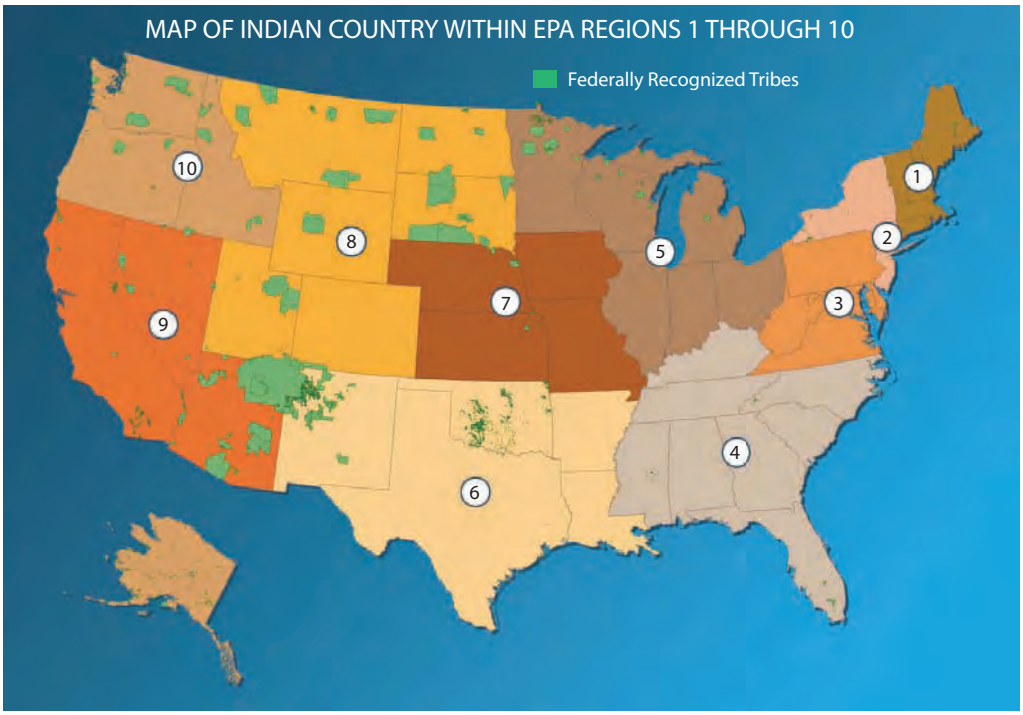


Note: There are no federally recognized tribes in Region 3.

I. EXECUTIVE SUMMARY

The lands of federally recognized tribes cover over 110,000 square miles of the United States—more than the total land area of Nevada, the nation's seventh largest state. Unlike a single state, however, these lands are held by 562[1] distinct Indian tribes, each with a unique set of water resources used for recreation, transportation, fishing, drinking water, ceremonial purposes, and more. Likewise, each tribe faces a separate set of challenges in protecting these resources. Together, Indian tribes are responsible for protecting and restoring tens of thousands of square miles of rivers, streams, and lakes, as well as ground water.

For over 20 years, the U.S. Environmental Protection Agency (EPA)[2] has provided funding under Section 106 of the Clean Water Act (CWA), Grants for Pollution Control Programs, to assist tribes to understand, assess, and preserve their water resources. This report highlights tribes' achievements in developing comprehensive, effective water quality programs and improving and protecting water quality on tribal lands. Specifically, this report:

- Provides a brief overview of tribal water quality programs.
- Describes the critical water quality activities that tribes fund with Section 106 grants.
- Highlights the rapid growth the program has experienced over the past 20 years.
- Outlines current and future challenges facing tribal water quality programs nationwide.
- Illustrates tribal water quality programs' use of Section 106 funds to protect water resources across the United States.

Section 106 Treatment in a Manner Similar to a State (TAS)

To be eligible for Section 106 funding, a tribe must meet the following requirements:

- Be federally recognized by the Secretary of the Interior.
- Have a governing body carrying out substantial governmental duties and powers.
- Have legal authority and jurisdiction over tribal lands.
- Have the capability to carry out functions to be exercised in the manner consistent with the terms and purposes of the Clean Water Act and all applicable regulations.
- Submit an application to EPA and obtain TAS approval.

[1] Number of federally recognized tribes current as of April 4, 2008 (Source: Department of the Interior, Bureau of Indian Affairs. "Indian Entities Recognized and Eligible To Receive Services From the United States Bureau of Indian Affairs." *Federal Register,* Vol. 73, No. 66, 18553).
[2] For reference, a list of acronyms is provided at the end of this report.

II. TRIBAL PROGRAMS TO PROTECT WATER QUALITY

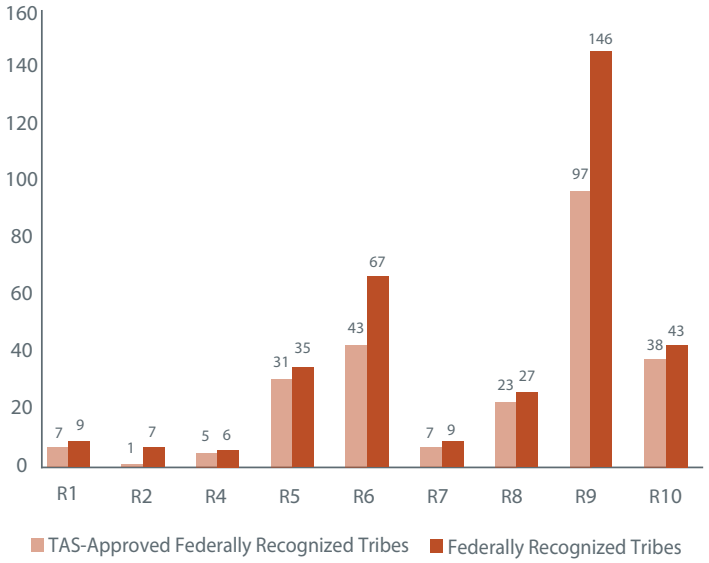
Currently, there are 562 federally recognized tribes; approximately 350 meet the criteria to request treatment in a manner similar to a state. As of 2009, 67% (252) of these tribes have received EPA approval and are eligible to receive Section 106 grants (Exhibit 1). For tribes, Section 106 grants are a crucial, dedicated source of funds for developing, maintaining, and expanding programs designed to control, prevent, and eliminate water pollution.

Tribes began receiving Section 106 funds in 1989. Since then the tribal set-aside has grown from less than $1 million a year to approximately $25 million a year. In the past eight years, the number of tribes eligible to receive Section 106 funds has increased by over 76%, while funding increased by 43% (Exhibit 2).

Tribes across the country are using Section 106 grants to identify and proactively address water quality priorities and concerns. Tribes use Section 106 grants for a wide range of water pollution control activities including:

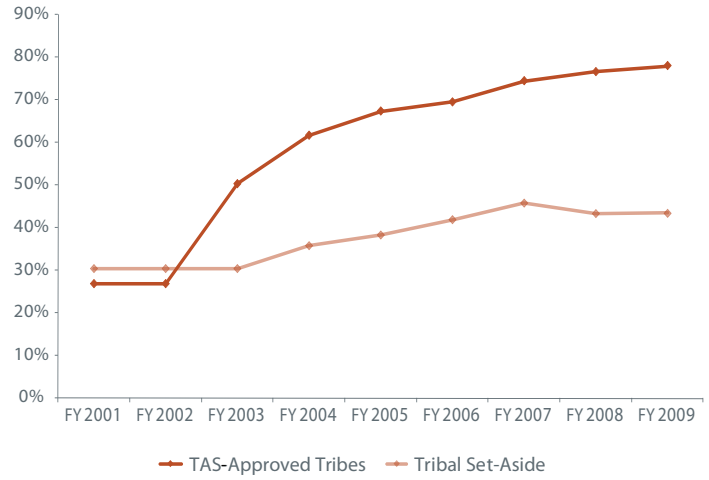
- Assessing water quality on tribal lands.
- Establishing water quality goals and objectives.
- Conducting regular monitoring and data reporting.
- Implementing quality assurance processes to ensure data reliability.

Exhibit 1: TAS-Approved Tribes and Federally Recognized Tribes, by Region



Note: Region 3 has no federally recognized tribes. Region 10 has 271 federally recognized tribes, but only 43 are eligible to receive TAS status for Section 106. TAS-approved tribe numbers current as of December 31, 2008.

Exhibit 2: Percent Increase in TAS-Approved Tribes and Section 106 Tribal Set-Aside Over the FY 2000 Funding Level, FY 2001 - FY 2009



Salt River Pima-Maricopa
Indian Community, Arizona.

III. CRITICAL ACTIVITIES TO PROTECT WATER QUALITY ON TRIBAL LANDS

Over the past 20 years, CWA Section 106 funding has supported tribal efforts to develop and implement long-term goals, strategies, and standards for water quality monitoring and protection. These efforts have furthered the goal of improving water quality both on and off tribal lands. Section 106 grants are one of the most important—and in some cases, the only—sources of funding for tribal water quality programs.

Each tribe identifies the activities and actions necessary to create and sustain a program that best meets their water quality needs. Over the years, tribes have undertaken activities such as:

- Developing and implementing comprehensive water quality monitoring programs.
- Hiring program staff and purchasing equipment and supplies.
- Conducting and reporting on water quality assessments.
- Developing and implementing water quality ordinances and tribal and EPA-approved water quality standards (WQSs).
- Developing water quality and Geographic Information System (GIS) databases to track changes in water quality and ensure consistency in data management.
- Attending trainings, workshops, and other events to build and share technical knowledge.
- Conducting training and providing educational outreach to tribal members.
- Identifying non-point sources (NPS) of pollution and developing NPS Assessment Reports and Management Plans.
- Determining the effectiveness of NPS projects and best management practices.
- Implementing wetlands protection programs.
- Coordinating water quality protection activities with state and federal agencies and community organizations.
- Providing technical support to state water quality monitoring initiatives.

IV. TRIBES AND EPA: PARTNERING FOR SUCCESS

EPA Regional staff support tribal water quality staff as they identify their individual approaches and priorities needed to meet their water quality goals. At the same time, all tribal grantees must comply with the minimum grant requirements. Regions confirm that the grants are used in a manner that reflects national, Regional, and tribal environmental and programmatic needs and priorities. Through formal evaluations and regular communication, EPA supports tribes in remaining on track to achieve their short-term and long-term goals.

EPA Regional staff also provide ongoing technical support. In addition to guiding tribes through the Section 106 grant application process each year, Regional staff:

- Provide on-site technical assistance and training.
- Coordinate regular meetings between tribal representatives and EPA staff to facilitate sharing of information, best practices, and common concerns.
- Assist tribes in identifying water quality needs and how funding sources can be used to address those needs.
- Encourage coordination between Section 106 and other water quality-related funding sources, providing tribes with access to more funding and increased administrative efficiency.
- Develop templates and tools that tribes can use to more efficiently analyze, manage, and report data, and meet federal grant requirements.

Pyramid Lake, Nevada.

In 2006, EPA published the "Final Guidance on Awards of Grants to Indian Tribes under Section 106 of the Clean Water Act" (Tribal Guidance). Developed with extensive input from tribes, the Tribal Guidance helps tribes to:

- Design and maintain tribal water quality programs.
- Establish a roadmap that can be used to enhance and expand existing water quality programs, as needed.
- Measure progress and define success.

Importantly, the Tribal Guidance recognizes the significant diversity in tribal water quality program needs, priorities, and resources. In addition, it serves as a resource to help tribes develop work plans and budgets and achieve environmental results.

Key Sections of the Clean Water Act (CWA)

The following sections of the CWA support the development and maintenance of tribal water quality programs.

Section 106 – Grant program to support states, interstate agencies, and tribes in administering programs for the prevention, reduction, and elimination of water pollution.

Section 319 – Grant program to help states and tribes control non-point sources of pollution through development of assessments and management programs.

Section 518 – Authorizes EPA to treat federally recognized Indian tribes in a manner similar to states, enabling eligible tribes to apply for Section 106 grants to develop and administer water quality programs.

Measuring Success

EPA's Office of Water and EPA Regions also track specific measures related to water quality on tribal lands. EPA is currently using two tracking measures related to the tribal Section 106 program:

- Number of tribes that currently receive funding under Section 106 that have developed and begun implementing monitoring strategies that are appropriate to their water quality program and consistent with EPA Tribal Guidance. Monitoring strategies provide a framework for a tribe's monitoring activities and are the basis for running a successful water program. As of 2009, over 130 tribes had achieved this goal.
- Number of tribes that are providing water quality data in a format accessible for storage in EPA's database. Providing data in an accessible format allows for nationally consistent data sharing and usage, encourages robust local data management, and leads to more effective data analysis. As of 2009, over 80 tribes had achieved this goal.

This information is reported annually in the EPA National Water Program Guidance. EPA is also working with tribes to implement a measure of actual improvement in water quality.

Challenges

As tribal water quality programs expand, tribes and EPA must address several critical challenges to guarantee that all federally recognized tribes have the opportunity to use Section 106 funding effectively to build upon their noteworthy successes to date.

Challenges facing tribes and EPA in the upcoming years include:

- Support for tribal programs. As noted previously, the number of tribes eligible to receive Section 106 funding continues to increase, while funding has remained at the same level. This results in decreases in funds for existing individual grants as new tribes establish water quality programs.
- Increasingly complex water quality concerns. Tribal programs are increasingly challenged by new water quality issues such as emerging contaminants, development pressure, and petroleum and mineral production on and off reservation lands. Tribes need access to technical and financial resources to address new sources of pollution.
- Meeting monitoring and reporting requirements. EPA's Tribal Guidance set out national monitoring and reporting requirements that will strengthen tribal and national understanding of tribal water quality and ensure accountability for the use of federal funds. While the long-term payoff will be great, meeting these requirements has resulted in additional work by tribal staff.
- Retaining and training tribal staff. Retaining experienced water quality program staff (and institutional knowledge) from year to year and providing staff with the training and resources they need to expand their water quality program will continue to be a challenge. To address this, EPA launched a tribal training Web site as a resource for tribal water programs.
- Addressing jurisdictional issues facing those tribes residing on checkerboarded reservations. Areas where land is privately owned within the reservation boundaries may impact a tribe's ability to protect the waters flowing through that land. EPA and tribes need to work cooperatively to ensure that all waters within the exterior boundaries of the reservation lands are protected.

EPA's Clean Water Act Tribal Training Web Site

In 2007, EPA launched a new Web site with a consolidated, centralized listing of all EPA training courses available to help Indian tribes develop and implement water quality programs (http://www.epa.gov/ow/tribaltraining/). Tribes can use this resource to identify all training courses relevant to their water quality programs and to obtain training descriptions, locations, and dates.

The Web site also serves as a central repository for all training materials, for tribal staff who are unable to attend on-site or Web-based trainings, or for staff who are simply looking to take a refresher course.

Blue Heron, Great Lakes.

V. LOOKING FORWARD

Tribes continue to build water quality programs that meet their unique water quality needs and priorities, ensuring the preservation, protection, and continued improvement of water quality on tribal lands. In the upcoming years, tribal programs will maintain and expand their environmental presence and authority to fully realize water quality programs on tribal lands. This may include:

- Developing tribal or EPA-approved WQSs to establish water quality goals for tribal waters. As of 2009, 35 tribes have developed EPA-approved WQSs, and many others are developing TAS packages or awaiting approval for WQSs.
- Obtaining authorization for the National Pollution Discharge Elimination System (NPDES) program, which would allow tribes to regulate point source pollution discharges based on their own WQSs.
- Setting total maximum daily loads for permits discharging into impaired waters.
- Developing partnerships with local, state, and federal agencies.
- Expanding public outreach efforts.
- Serving as mentors to other tribes that are building water quality programs.

In 2009 and beyond, the Section 106 program will continue to support tribes in meeting challenges and maintaining their record of success in protecting and improving water quality.

VI. TRIBAL HIGHLIGHTS

EPA Regional offices are tribes' primary point of contact with the Agency. Tribes work with Regional staff to identify water quality needs and priorities, build and expand their programs, and coordinate with other tribes within the Region to share their knowledge and experience. The following section presents tribal water quality program accomplishments by Region. These examples demonstrate the commitment to water quality protection that tribes have made with support from Section 106 funds and the successes they have had in implementing their programs. These examples represent only a snapshot of the work that over 250 tribes have done to protect and improve water quality on tribal lands.

REGION 1

Passamaquoddy Tribe (Maine)

EPA Region 1 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval*	7
% Tribal Section 106 Funding (FY 2009)	2.3%
Total Tribal Land Area**	297 sq. mi.
Total Tribal Surface Water Area**	34 sq. mi.

*As of December 1, 2008.
**As defined and reported in the *2000 Census of Population and Housing.* Includes all federally recognized tribes eligible for TAS approval for Section 106 funding.

After receiving TAS approval for Section 106 funding in 1999, the Passamaquoddy Tribe initiated a water quality monitoring program. The Tribe is developing WQS and monitoring the water quality of Boyden Lake, which is a drinking water source. The Tribe has conducted fish tissue testing in two adjacent bays for mercury and dioxins. The Tribe is also inspecting sewage lines for leaks (for point source assessment) and has requested Indian Health Service construction grants for expansion of the wastewater plant.

Penobscot Tribe (Maine)

The Penobscot Tribe has used Section 106 funds to make significant improvements to their model data management system and, with assistance from the U.S. Geological Survey (USGS), was able to refine data collection and use of the Penobscot Indian Nation environmental data management system. This has facilitated and streamlined electronic entry of field and lab data and improved processes and tools used to assess whether WQS were being met. The Tribe has also been hosting Water Quality Exchange (WQX) training with all Region 1 tribes.

The Penobscot Tribe has been nationally recognized for its outstanding work to restore endangered wild Atlantic salmon and other migratory sea-run fish while balancing the need for hydroelectric power on the Penobscot River. The Tribe worked with the Penobscot River Restoration Trust (PRRT) and the PPL Corp., an energy company that owns dams on the river. The PRRT will be removing dams to help restore native fisheries by increasing access to nearly 1,000 miles of habitat for Atlantic salmon and several other species of sea-run fish.

The Penobscot water resources program was identified as a tribal success story in the EPA and U.S. Department of Interior Offices of Inspector General report, "Tribal Successes in Protecting the Environment and Natural Resources" (May 2007).

The Penobscot Tribe has been nationally recognized for its outstanding work to restore endangered wild Atlantic salmon.

Mashantucket Pequot Tribe (Connecticut)

The Mashantucket Pequot Tribe received a merit award from the Soil and Water Conservation Society, Southern New England Chapter for their exemplary commitment to resource protection through innovative wetland development for stormwater control, funded in large part through Section 106.

Narangansett Tribe (Rhode Island)

The Narragansett Tribe is using Section 106 funding to examine NPS pollution problems through monitoring and assessment initiatives. The information collected will be used to develop best management practices for waters within the Reservation. The Tribe is also conducting ambient monitoring of the public water supply.

St. John River Headwaters, Maine.

REGION 2

Saint Regis Mohawk Tribe (New York)

EPA Region 2 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	1
% Tribal Section 106 Funding (FY 2009)	0.6%
Total Tribal Land Area	126 sq. mi.
Total Tribal Surface Water Area	10 sq. mi.

To provide information to community members regarding swimming suitability of Saint Regis Mohawk Tribe (SRMT) Reservation (Akwesasne) surface waters, the SRMT used Section 106 funding to assess the level of *Escherichia coli* (*E. coli*) at selected bathing areas. Fecal contamination of surface waters flowing through Akwesasne may originate or intensify from sources including: shoreline development, wastewater collection and treatment facilities, urban runoff, animal feeding operations, and pet and wildlife wastes, among others. The water quality data generated by this project are used in Akwesasne watershed characterizations and other water quality management initiatives including implementation of SRMT WQSs.

The SRMT worked closely with EPA and the New York State Department of Environmental Conservation (NYSDEC) to develop tribal WQSs, which were formally adopted and submitted to EPA for review and approval in 2007. The formal adoption of tribal WQS reflects an important step in the growth of the Tribe's Section 106-funded Water Resource Program. The WQSs are designed to protect the unique and sensitive tribal uses of water resources, including specific activities and habitats. In addition, the WQSs were developed to meet the requirements of the Great Lakes Water Quality Initiative. The SRMT, in cooperation with EPA and NYSDEC, is now initiating its triennial review and revision process of the WQSs, which is scheduled for completion in 2010.

Formal adoption of tribal water quality standards is an important step in the growth of the Saint Regis Mohawk Tribe's Section 106-funded Water Resource Program.

REGION 4

Poarch Creek Band of Indians (Alabama)

EPA Region 4 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	5
% Tribal Section 106 Funding (FY 2009)	1.6%
Total Tribal Land Area	386 sq. mi.
Total Tribal Surface Water Area	0.35 sq. mi.

In May 2007, the Poarch Band of Creek Indians (PBCI) cleaned up over 82 tons of illegally dumped garbage at the Bell Creek bridge site. The site was once a popular swimming and fishing location for tribal members, but illegal dumping had ruined the traditional uses of this stream. The Tribe partnered with the Escambia County Commissioners' office in Alabama, which provided trucks to haul the garbage to the landfill. PBCI Tribal Government provided additional funds to pay the tipping fees at the landfill.

This bridge cleanup builds on efforts the Tribe began with the U.S. Department of Agriculture's Natural Resources Conservation Service to fence off cattle from the same stream. Escambia County further improved the cleaned-up site by resurfacing the bridge. The Tribe uses Section 106 funds to actively monitor this site in cooperation with Escambia County to ensure it remains clean.

Eastern Band of Cherokee Indians (North Carolina)

The Eastern Band of Cherokee Indians (EBCI) places a high priority on solving environmental problems for the betterment of community health and protection of the aquatic environment. EBCI has used Section 106 funds to provide baseline information to identify areas of interest for stream restoration projects, measure water quality in a watershed for standards compliance, and develop educational tools for the community. Over the years, EBCI water quality program staff have responded to several complaints and, through sample collection and analysis, identified source water problems.

Recognizing that there will always be the possibility of an unexpected environmental problem affecting waterbodies, EBCI recently evaluated how to more proactively operate its water quality program. The Tribe knew that its sample points were well placed and that frequency of monitoring was sufficient to measure the effects of point source discharges on its waters. Indeed, water quality impacts identified through monitoring efforts prompted the diversion of three failing point source discharges into new federally funded sewer line extensions.

EBCI knew that the constructed sewer line extensions had likely eradicated some failing septic tank drain-fields, but recognized the need to more closely examine the area. The Tribe's land base is mostly contained within the Qualla Boundary, which has been the primary recipient of new wastewater infrastructure. However, there are still many tribal members (most of whom are located more than 50 miles away from the Town of Cherokee) whose wastewater needs are served by septic tanks.

To address the problem, the Tribe first built a monitoring dataset of surface water quality in remote areas not served by sewer lines. Next, the Tribe acquired the technical skills to identify and discuss remediation of failing septic tank systems, which are considered to be a NPS of pollution. Staff attended trainings at North Carolina State University and obtained state certification in septic system construction, inspection, and operation.

The Tribe's water quality program is now equipped to produce annual information that will alert the tribal engineer to any septic system failures. These failures may be included in the Sanitary Deficiency System list (the points-rated method of allocating new funding from the Indian Health Service) to correct these environmental problems.

The Eastern Band of Cherokee Indians used Section 106 funds to identify areas of interest for stream restoration projects, measure watershed water quality for standards compliance, and develop educational tools for the community.

REGION 5

Sokaogon Chippewa Community (Wisconsin)

EPA Region 5 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	31
% Tribal Section 106 Funding (FY 2009)	15.5%
Total Tribal Land Area	4,801 sq. mi.
Total Tribal Surface Water Area	888 sq. mi.

For the past several years, the Sokaogon Chippewa Community (Mole Lake Band) has been using Section 106 funding to study potential impacts to wild rice stands in Rice Lake, on their reservation in northeast Wisconsin. Wild rice is a valued resource to the Band for both cultural and economic reasons. The Band continues to monitor chemical, physical, and biological parameters within the Rice Lake watershed. The Band performs wild rice plant density and productivity surveys along set transects several times a year; conducts macro-invertebrate sampling, metals analysis of rice plants, and chemical analysis of surface water; and monitors lake stage and stream flow of lake tributaries. These activities help to determine optimal conditions for the productivity of wild rice and to identify any contamination threats. Results show that the surface waters on the Reservation meet all designated water uses but that invasive species and development within and outside the Reservation continue to threaten the wild rice stands. The Band will continue to actively monitor the stands.

Keweenaw Bay Indian Community (Michigan)

Using Section 106 funding, the Keweenaw Bay Indian Community (KBIC) continues to develop an inventory of their reservation's water resources. The primary objective of the inventory is to identify sources of pollution that could impact all water resources on the Reservation. This multi-year project will ultimately cover all watersheds of the Reservation, which is located in the Upper Peninsula. The watershed inventories include an assessment of each watershed's surface water and ground water quality, an inspection of on-site waste treatment systems,

Below: Hydrolab River Readings, Little Traverse Bay Band of Odawa Indians, Michigan. Right: Mole Lake, Sokaogon Chipewa Community, Wisconsin.

and a survey of homeowners to identify the location of abandoned wells and other sources of pollution. Thus far, KBIC has inventoried waters in the Silver River, Zeba Creek, and Falls River watersheds as well as parts of several smaller watersheds. The study is conducted annually and the scope of the survey changes on an individual watershed basis. The survey results are reported annually to EPA.

Shakopee Mdewakanton Sioux Community Mystic Lake (Minnesota)

The Shakopee Mdewakanton Sioux Community has been receiving Section 106 funding since 1999, and has targeted the funding at evaluating water quality in various water bodies and water body types across their reservation. Early on, the Tribe discovered that phosphorus and nitrogen levels were causing algae blooms and limited clarity in reservation waters. Using Section 106 funding, the Tribe has implemented an extensive education plan focusing on the impacts of NPS pollution on water quality. The outputs of the education plan included t-shirts, magnets, a pollution prevention bulletin, Earth Week activities, rain garden and rain barrel construction presentations, and educational tours. One of the success stories of these outreach activities is Mystic Lake.

Mystic Lake is a 65-acre basin in a watershed of 241 acres. Land use consists of 40% turf, 15% impervious surface, 15% woodland, 15% barren land, 10% cropland, and 5% wetland. Sampling results for total phosphorus, chlorophyll a, total kjeldahl nitrogen, and other constituents have shown that Mystic Lake water quality has improved over the nine-year sampling period. Since 2006, total phosphorus has been below 0.10 mg/L, a threshold concentration that EPA considers important in limiting algal production. Other improvements in water quality since the start of sampling include a reduction in chlorophyll a to one-twentieth of initial concentrations and a reduction in total suspended solids to one-third of initial concentrations.

Section 106 funding has not only enabled the Tribe to continually monitor Mystic Lake, but it is believed that behavioral changes of the public, achieved in part through education and outreach activities sponsored by Section 106 grants, have been instrumental in improving the water quality of the lake.

Ho-Chunk Nation (Wisconsin)

Over the past several years, Ho-Chunk's water quality program staff have provided technical support to tribal departments, tribal members, and outside agencies on Bureau of Indian Affairs Roads Program projects, development projects, stream bank stabilization and erosion control projects, and fee-to-trust applications. This technical support is provided in conjunction with the environmental assessments and planning required for each project. The costs associated with providing technical support and conducting environmental assessments

The Shakopee Mdewakanton Sioux Community used Section 106 funding to implement an extensive education plan focused on the impacts of non-point source pollution on water quality.

are covered by the project budget, funding agency, and the Ho-Chunk Nation. Technical support in the areas of stormwater management, surface water protection, and wetland identification and protection assures that the Nation is compliant with applicable tribal, local, state, and federal laws and helps to identify and protect streams and wetlands from degradation during projects.

For example, Section 106-funded staff consulted on a road project, providing input on a stormwater detention pond, culvert alignment, and outfall placement. This input resulted in modifications in the outfall structures and culvert placement designed to decrease bank erosion and sedimentation on nearby Valentine Creek. Likewise, technical support provided on the Ho-Chunk North Commercial Development Project resulted in a decrease in the amount of wetland area impacted by sewer main installation and road construction. This project also resulted in data collection on wetland location and classification.

Tribes Use 106 Funding to Expand Capability

In the past two years, seven tribes in Region 5 have used their Section 106 funds to develop NPS management plans. These plans are a required element for becoming eligible to run their own NPS Programs under CWA Section 319 and receive Section 319 funding. In FY 2007, the Bad River Band of Lake Superior Chippewa Indians, the Oneida Tribe of Wisconsin, and the Shakopee Mdewakanton Sioux Community were approved for CWA 319 eligibility, followed by Red Cliff Band, Lac du Flambeau Band, Red Lake Band and the Sokaogon Chippewa Community in FY 2008. Three additional tribes, the Grand Traverse Band, Grand Portage Band, and the Fond du Lac Band, received Section 319 eligibility prior to FY 2007.

In the past two years, seven tribes in Region 5 have used Section 106 funds to develop non-point source management plans.

KBIC sampling along Lake Superior beach front, Michigan.

REGION 6

Pueblo of Taos (New Mexico)

EPA Region 6 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	43
% Tribal Section 106 Funding (FY 2009)	13.7%
Total Tribal Land Area	8,958 sq. mi.
Total Tribal Surface Water Area	69 sq. mi.

Taos Pueblo has used Section 106 funding to develop WQSs, conduct year-round monitoring, and conduct an NPS Assessment, which allowed the Pueblo to compete for Section 319 funding. In addition to promulgating the WQS program, the Taos Pueblo Environmental Office has built capacity to advise tribal governments on specific issues, including total maximum daily loads for the lower reaches of the Rio Pueblo de Taos and the compliance history of the Town of Taos' wastewater treatment plant, which discharges into tribal waters.

Water is a sacred resource for Taos Pueblo in New Mexico. "Throughout history, our very life depended on the availability of clean water for agriculture, domestic uses, and for religious uses. Since our ancestors settled here more than 1,000 years ago, we have practiced traditional watershed management to ensure safe and clean water," says Robert Gomez, Environmental Manager.

Gomez also notes that "Protecting tribal waters is an important function of the Environmental Office. Rivers and water quality reflect what is happening on the landscape. We live in a complex world and every day we learn more about how modern life is impacting the environment. By adopting water quality standards and setting criteria based on our needs and backed by our own data, we believe we are exercising our rights as a sovereign [nation], and we will ensure traditional uses that have endured since Time Immemorial continue."

Wyandotte Nation (Oklahoma)

The Wyandotte Nation, located in northeastern Oklahoma, contains over 20,000 acres of jurisdictional land and is part of the Grand Lake of Cherokees watershed. The Nation's environmental department staff has been conducting water quality sampling since 1996, and currently conducts monthly sampling at six sites, quarterly bacteria sampling at three locations on one stream, and an annual metals analysis of the same sites.

"By adopting water quality standards and setting criteria based on our needs and…our own data, we…will ensure traditional uses that have endured since Time Immemorial continue."(Robert Gomez, Environmental Manager, Pueblo of Taos)

The department also uses Section 106 funding to conduct an annual bioassessment at one spring site (involving collection of fish and fresh water mussels for heavy metals analysis) and to support education programs and an outdoor classroom.

Using Section 106 funding, the Nation was able to develop a Section 319 NPS management plan and assessment plan and is now in its first year with an approved Section 319 program.

Pueblo of Santa Ana (New Mexico)

The Pueblo of Santa Ana's Water Resources Division used Section 106 funding to support the development of the Santa Ana Youth Hands-on Hydrology Outreach (SAY H2O) program in 2003. For six consecutive summers, the Pueblo has hosted a community outreach program to educate Pueblo youth about watershed and environmental issues, thereby building an informed and environmentally conscious group of future Pueblo leaders.

Each year, the Pueblo's water resources staff develops the SAY H2O program to highlight specific natural resource projects on the Pueblo and to generate an awareness of other watershed issues within the Middle Rio Grande. Topics within the SAY H2O program have included the following activities:

- Visiting river restoration and rangeland conservation projects on the Pueblo to see the results of active natural resource management.
- Discovering benthic macro invertebrates in Santa Ana Pond and local rivers to understand the importance of pond and wetland habitat conservation.
- Visiting selected sites along the Rio Grande and the Rio Jemez to develop a diverse understanding of hydrology and local watershed issues.
- Learning about the hydrologic cycle in the Pueblo's native language, Keres, and playing games that build vocabulary to promote culture and language preservation.
- Using maps and GPS equipment in a water scavenger hunt that incorporates cultural elements and watershed principals.
- Hiking, fishing, and camping in the local mountains to allow youth to develop outdoor skills and experience their watershed first hand.
- Floating the Santa Ana reach of the Rio Grande to study the habitat and the hydrology of their local river system.

The success of the SAY H2O program is tied to consistent financial support from the Pueblo of Santa Ana and EPA, and from the participation of the community's youth and elders. As one of the elements of the Pueblo's Section 106 work plan, the SAY H2O program has become a highlight of the Pueblo's community outreach and environmental education efforts. Students who return to the program each year gain technical skills and an understanding of tribal natural resources and watershed management. The SAY H2O program provides an excellent educational foundation for students that will help them in high school science courses and in college.

Next page: SAY H2O works to restore wetland habitat and involve youth in willow planting, New Mexico.

REGION 7

Santee Sioux Nation (Nebraska)

EPA Region 7 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	7
% Tribal Section 106 Funding (FY 2009)	2.0%
Total Tribal Land Area	1,065 sq. mi.
Total Tribal Surface Water Area	16 sq. mi.

The Santee Sioux Nation (Nation) has reservation lands encompassing approximately 184 square miles in Northeast Nebraska. The Reservation has four major watersheds (Bazile Creek, Howe Creek, Lost Creek, and the Missouri River). The Nation designed and began implementing a water quality program in 1995. The primary objectives of their program include the establishment of baseline data and the implementation of tribal monitoring and control system(s) for stream corridor, habitat, biological, water chemistry, wetlands, and riparian area conditions. The program's overall objective is "to provide adequate protection measures for the general health and well-being of the people and the environment."

In 1996, the Nation began an initial baseline assessment of selected surface water sites as well as ground water sites on the Reservation. A second study included selected surface and ground water sites from the 1996 study. In 2004, the Nation began a three-phase process for tribal water quality standards. The Nation anticipates approval by Santee Sioux Nation's Tribal Council early in 2010. The Nation has also developed a monitoring and assessment strategy to provide multi-year data capture of stream corridor, habitat, biological, water chemistry, wetlands, and riparian area conditions in the future.

The Santee Sioux Nation developed a monitoring and assessment strategy to provide multi-year data capture of stream corridor, habitat, biological, water chemistry, wetlands, and riparian area conditions.

Kickapoo Tribe (Kansas)

Water quality and quantity are important to the Kickapoo Tribe. The Reservation relies on surface water for drinking water; therefore, knowledge of the surface water quality is necessary to ensure optimal treatment of the drinking water supply. Primary water quality concerns include nutrients, sediment, herbicides, and fecal coliform indicator bacteria. The Kickapoo Tribe uses Section 106 funding to partner with USGS to conduct a three-year baseline assessment of their streams, which should be complete in 2010. The Tribe monitors water quality monthly and immediately after runoff events at selected stream sites near the borders and within the Reservation. The baseline results will help the Tribe make decisions regarding water quality in their community.

Winnebago Tribe of Nebraska

The Winnebago Tribe of Nebraska's overall goal is to determine the condition of the natural environment and protect the health and welfare of tribal members and other individuals residing within the boundaries of the Reservation. Winnebago Reservation lands are highly checkerboard in nature (i.e., land is divided into tribal trust land, tribal member land, and non-tribal privately owned land), and agriculture is the primary industry. The Tribe has major concerns about potential misuse of pesticides, proper operation and maintenance of concentrated animal feed operations, and nutrient runoff from fertilizer application.

The Winnebago Tribe used Section 106 funds to establish and continue building a water quality program. The Tribe has expanded the monitoring program to include: chemical monitoring of surface water bodies for baseline conditions and for concentrated animal feeding operation impacts, monitoring natural springs, and physical and biological monitoring to include macroinvertebrate capture and identification at ambient stream monitoring sites. Most recently, the Tribe began conducting physical monitoring of visual habitat assessments and fish tissue analysis at major recreational sites.

Macro invertebrate sampling being done in Region 7.

REGION 8

Ute Mountain Ute Community of White Mesa (Utah)

EPA Region 8 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	23
% Tribal Section 106 Funding (FY 2009)	18.5%
Total Tribal Land Area	43,484 sq. mi.
Total Tribal Surface Water Area	1,066 sq. mi.

The White Mesa Uranium Mill has been processing uranium from source rock and various recycled materials since 1979. The mill is located in southeastern Utah approximately three miles north of the Ute Mountain Ute Reservation Boundary and the tribal community of White Mesa.

The mill is up-gradient of the aquifers used by tribal members, which has caused the community to be concerned about possible ground water contamination by leakage from the tailings ponds. The proximity of the mill to the Ute Mountain Ute Reservation has also raised concern about possible health effects of any uranium released into the atmosphere from the day-to-day operations of the mill or blown from the materials being stored there prior to processing.

To address these concerns, the Tribe used Section 106 funds to study local environmental conditions in partnership with EPA and USGS and with additional assistance from Lawrence Livermore Laboratories, the U.S. Bureau of Reclamation, and Northern Arizona University. The ground water portion of the proposed project will enable the Ute Mountain Ute Tribe to develop:

- A better understanding of whether local ground water chemistry and geology enhance or retard the mobility of uranium in ground water.
- A better understanding of uranium, gross alpha, and gross beta emitting sources in springs and ground water in the study area and of the potential for uranium mobility in ground water. This may help identify the location of springs and shallow ground water that may present health risks to tribal members.
- A data set that can be used as a baseline to compare with future data collected as part of the ongoing monitoring of ground water in the study area. The study will also provide data for trend analysis. If increases in the concentration of uranium, gross alpha, or gross beta emitting sources are detected in the future, this most likely would be evidence of releases from the mill.

The field work piece of the study, which involved two years of quarterly sampling events, should be complete by October 2009, and a USGS Scientific Investigative Report detailing current environmental conditions in the vicinity of the White Mesa Uranium Mill will be published in the summer of 2010. This report will be independent of efforts by the mining company and the State of Utah, dispelling concerns of bias within the White Mesa Community. In addition, innovative techniques including pattern recognition modeling incorporating isotopic signatures, age dating, and trace element analysis will offer new insight to environmental conditions around the mill.

Tribal Participation in EPA's National Rivers and Streams Assessment

Four tribal governments within Region 8 (Cheyenne River Sioux Tribe, Blackfeet Tribe, Fort Peck Assiniboine and Sioux Tribes, and Northern Arapaho and Eastern Shoshone Tribes) participated in water quality monitoring and data collection for the National Rivers and Streams Assessment. This is a joint effort by EPA, states, and tribes. The two-year survey will help determine the extent to which U.S. streams and rivers support healthy ecosystems, recreation, and fish consumption. Sites were randomly selected, enabling EPA to make statistically valid statements about the condition of waters nationally and regionally. A report will be issued in 2012.

Tribes that had one or more of these randomly generated sampling sites within their reservation boundaries were invited to participate in water quality data collection. At each sampling site, tribal field crews collected samples for basic water chemistry, periphyton, chlorophyll, benthic macroinvertebrates, and fish. Field crews also assessed physical habitat condition such as bank stability, channel alteration, and invasive species. Samples were analyzed at national labs. EPA provided training to the tribal crews, and accompanied them in the field, as needed. As a result of the survey work, participating tribes increased their technical capacity to collect many different types of water quality data.

Tribes that participated in EPA's National Rivers and Streams Assessment increased their technical capacity to collect a wide range of water quality data.

Below: Tony Ranalli (USGS) records field parameters at a spring near the community of White Mesa, Utah. Right: Wind River Lake, Wind River Reservation, Wyoming.

WREQC's Native Waters Youth Leadership Camp, Wind River, Wyoming.

Wind River Environmental Quality Commission (Wyoming)

The Wind River Environmental Quality Commission (WREQC) has worked with the Native Waters Youth Leadership Camp, local elementary schools, charter schools, and high schools to educate students about the WREQC's efforts to improve and protect water quality. WREQC staff and students focus on environmental stewardship and protecting residents of the Wind River Reservation by caring for their water resources. Staff also give presentations on ground and surface water quality monitoring and teach classes on macroinvertebrates and fresh water clams.

WREQC staff members have led monthly field trips for local students to educate them about the unique features of the Wind River, which begins at 8,300 feet and travels through four drainage basins on the way to Wyoming's Red Desert at 4,000 feet. Students study the different habitats, eco-regions, and riparian zones found along the river's course.

REGION 9

Hualapai Nation (Arizona)

EPA Region 9 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	97
% Tribal Section 106 Funding (FY 2009)	32.2%
Total Tribal Land Area	42,474 sq. mi.
Total Tribal Surface Water Area	252 sq. mi.

The Hualapai Nation's Water Pollution Control Program is a testament to the critical importance of Section 106 funding in building tribal water quality programs from the ground up. The Hualapai Reservation covers approximately 1 million acres on the southern rim of the Grand Canyon, and approximately 2,300 tribal members live on the Reservation. Its surface waterbodies consist of small seeps, springs, and meandering creeks, which drain into 108 miles of the Colorado River.

In 1991, the Tribe established its water pollution control program using its first Section 106 grant. The Tribe used subsequent grants to implement the program and develop its first EPA-approved quality assurance project plan (QAPP). The Tribe has built a monitoring network that consists of 3 USGS stream-flow gauging stations, 11 miscellaneous surface water sites, and 52 springs. These sites are continually monitored for pH, total dissolved solids, salinity, conductivity, dissolved oxygen, turbidity, fecal coliform, and temperature. The Tribe also continuously monitors tributaries on the Reservation to ensure that they are not contributing to further impairment of the Colorado River.

The Tribe's Water Pollution Control Program has also developed management measures to restore or protect waterbodies impacted by NPS pollution, developed (in 1995) and updated (in 2005) a Water Quality Assessment (305(b)) report, and developed WQS and certification programs.

The updated Water Quality Assessment Report indicates that the Tribe's NPS and wetlands restoration projects decreased levels of fecal coliform, conductivity, total dissolved solids, turbidity, and soil erosion, and increases in wetland vegetation. The Tribe has also assessed all of its perennial river and stream miles and approximately 98% of its springs. These waters can now support recreation, wildlife, livestock, and municipal and domestic uses.

Left: Water quality monitoring at Warm Spring in the Grand Canyon, Hualapai Reservation, Arizona. Below: Water quality monitoring at Peyate Spring, Hualapai Reservation, Arizona.

Above: Coyote Valley, California. Left: Hualapai Nation, Arizona.

Coyote Valley Band of Pomo Indians (California)

The Coyote Valley Reservation covers 76 acres in northwestern California, and is bordered by the Russian River and one of its tributaries, Forsythe Creek. U.S. Highway 101, a heavily traveled route, traverses the Reservation. The Tribe's surface waters house a coldwater fishery, which has been declining over the years due to siltation from timber harvesting, agricultural runoff, gravel mining, cattle grazing, and upstream development by off-Reservation landowners.

The Tribe's water quality monitoring program began in 1991 as a summer program for tribal youth. Since that time, Section 106 funding has been instrumental in helping the Tribe to identify NPS of pollution, for restoration activities under the Tribe's NPS pollution control program, and to conduct regular surface water monitoring and data analysis. The Tribe has also augmented its Section 106 funding with grants from three other sources (Bureau of Indian Affairs, U.S. Fish and Wildlife, and California Fish and Game) to fund an ongoing watershed assessment through upstream stakeholder outreach, education, and cooperation.

The Tribe also used monitoring data to identify sources of polluted runoff on the Reservation. In 2003, the Tribe used Section 319 funding to install a riparian buffer zone and planted native plants and grasses to serve as a filter. These efforts have eliminated observable oil films in Reservation streams, following storm events.

Although the Tribe has achieved measurable improvements in water quality (i.e., cooler summertime water temperatures), as demonstrated through field monitoring and spawning surveys, technical and youth staff will continue to collect data to empirically demonstrate a temperature improvement.

The Coyote Valley Band of Pomo Indians eliminated observable oil films in Reservation streams following storm events by installing a riparian buffer zone and planting native plants and grasses.

REGION 10

Shoshone-Bannock Tribes (Idaho)

EPA Region 10 Overview: FY 2009	
Number of Tribes with Section 106 TAS Approval	38
% Tribal Section 106 Funding (FY 2009)	13.8%
Total Tribal Land Area	9,324 sq. mi.
Total Tribal Surface Water Area	287 sq. mi.

The Shoshone-Bannock Tribes reside on the Fort Hall Reservation in southeastern Idaho. The Reservation was established by the Fort Bridger Treaty of 1868 as a 1.8 million acre homeland for the Shoshone and Bannock Indian Tribes. Today, the Reservation population is approximately 5,759, with a land base of nearly 550,000 acres. The land use is dominated by agriculture, with approximately 120,000 acres in irrigated agriculture or dry-land farming and approximately 340,000 acres of rangelands.

The Reservation traverses the Snake River Plain and North Basin and Range and is also home to three primary rivers (Snake, Blackfoot and Portneuf) as well as a unique wetland complex named the "Bottoms." The Bottoms is comprised of rivers, wetlands, and springs that are used for subsistence hunting, fishing, and gathering, as well as ceremonial practices. The Bottoms also provide important wildlife habitat.

The Reservation ground water consists of several localized shallow unconsolidated aquifers. The aquifers are generally found 20 to 50 feet below ground level over a portion of the regional basalt aquifer (the Eastern Snake River Plain Aquifer) that has been likened to the size of Lake Erie.

The Shoshone-Bannock Tribes became eligible to receive Section 106 funding in 1990. Section 106 funds support 1.5 staff positions and critical activities such as water quality monitoring and addressing ground water contamination issues. The Tribes have also worked with the State of Idaho on total maximum daily load development. In September 2008, the Tribes were granted TAS to administer WQS. The Tribes are currently working with EPA to develop EPA-approved WQS.

Ethylene dibromide (EDB) was first detected in a drinking water source within the Reservation in 1990. Subsequent sampling revealed more than 130 wells contaminated with the pesticide, which is banned by EPA. Due to the nature of EDB as a dense non-aqueous phase liquid, the large spatial distribution, and the highly fractionated system of the regional aquifer, it is virtually impossible to actively eradicate EDB from the aquifer and EDB remains a public health threat to residents of the Reservation. The Water Quality Program is charged with monitoring the contamination for migration and occurrence. Program staff monitor a network of wells within the zone of contamination and down-gradient of the leading edge of known contamination. A sustained level of Section 106 funding is critical to this effort, as collection of adequate samples depends upon funds available.

Farming and ranching activities on the Reservation contribute to significant pollution inputs to tribal water bodies. In addition, all major waterbodies that flow through the Reservation are identified as impaired before

entering the Reservation. The Tribes, EPA, and the Idaho Department of Environmental Quality developed a memorandum of understanding (MOU) to lay the foundation for completing total maximum daily loads on waters shared by the Tribes and the State of Idaho. In August 2006, the MOU was extended until the total maximum daily loads are completed and implemented or for a period of three years, whichever comes first. The Tribes have successfully developed (and in some cases are revising) total maximum daily loads for all their waterbodies.

Yakama Nation (Washington)

In the treaty with the Yakama Nation (June 8, 1855) almost 11 million acres were ceded to the United States. The fourteen tribes and bands that signed the treaty retained usufruct rights (hunting, fishing, gathering, pasturing horses and cattle) in their original lands, and also reserved 1.4 million acres for their homeland. With the subsequent Dawes Act, the Reservation became checkerboarded, with most of the fertile agricultural lands in the lower valleys passing out of tribal ownership to fee lands. The Tribe has retained certain tracts, including a portion of the Reservation on the eastern flanks of the Cascade Mountains that is closed to non-tribal members. Today, approximately 80% of the Yakama Nation's 10,000 members live on or near the Reservation, and 32,000

A sustained level of Section 106 funding is critical to Shoshone-Bannock Tribes' monitoring effort, as collection of adequate samples depends upon funds available.

Lower Elwha River, Washington.

Lower Elwha River, Washington.

non-Yakama reside within the Yakama Reservation. The Yakama Reservation has a significant number of permitted facilities.

The Yakama Nation became eligible to receive Section 106 funding in 1990, and for Section 319 funding in 2008. The Tribe uses Section 106 funding to support two staff positions and a multi-faceted program that addresses point source and NPS pollution issues and multi-state watershed concerns (i.e., the Columbia River Basin). Program areas include:

- WQS: The Tribe submitted a TAS application for EPA-approved WQSs and 401 certification authorization in November 1994. Due to the complexity of issues surrounding the Reservation (boundary and checkerboard land status among them), the authorization is still pending. The Yakama Tribal Council adopted the Yakama Nation WQSs in November 2005.
- Permitting Programs: The Tribe has expressed interest in federal inspector credentials for the NPDES program, and staff have participated in inspector training opportunities. Credentials have been issued for pesticides and for hazardous waste program areas.
- Water Quality Monitoring: The Tribe's QAPP was renewed and approved in 2005. The Tribe has since developed and received approval for a supplemental QAPP for watershed assessments including nutrients (nitrogen, phosphorous) and biological integrity (habitat information, bacteria, macroinvertebrates). The information from the watershed assessments were used to generate a NPS Assessment Report and Management Plan, which were essential for acquiring TAS approval for the Section 319 program.
- Education and Outreach: Changes in agricultural practice can lead to significant improvements in water quality. The Tribal Water Quality Program hosts an annual workshop for the agricultural community on the Reservation to promote conservation, sustainable agriculture, and protection of water quality. The workshop showcases demonstration projects such as grass filter strips and surge irrigation.

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Acronyms

CWA - Clean Water Act

EPA - U.S. Environmental Protection Agency

FY - Fiscal Year

GIS - Geographic Information System

MOU - Memorandum of Understanding

NPDES - National Pollution Discharge Elimination System

QAPP - Quality Assurance Project Plan

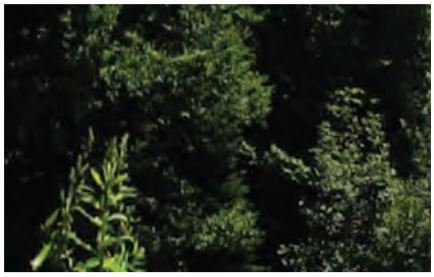
NPS - Non-point Source

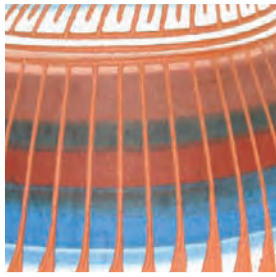
TAS - Treatment in a Manner Similar to a State

USGS - U.S. Geological Survey

WQS - Water Quality Standard

WQX - Water Quality Exchange





For More Information Visit:
www.epa.gov/owm/cwfinance/pollutioncontrol.htm

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