



Clean Water Indian Set-Aside Grant Program Annual Report 2015

The Clean Water Indian Set-Aside Program (CWISA) provides funding for wastewater infrastructure to American Indian tribes and Alaska Native Villages. Since the program's establishment in 1987, CWISA has provided \$457.6 million to help finance more than 1,300 independent projects, from establishing first-time wastewater connections to constructing sewers and rehabilitating systems. EPA administers the program in cooperation with the Indian Health Service's (IHS) Sanitation Facilities Construction Program.

Program Accomplishments

In 2015, EPA awarded \$29 million for wastewater treatment construction that will help to provide over 12,000 households with new or improved access to wastewater services. Approximately 40% of these homes will receive first-time access to safe wastewater services.

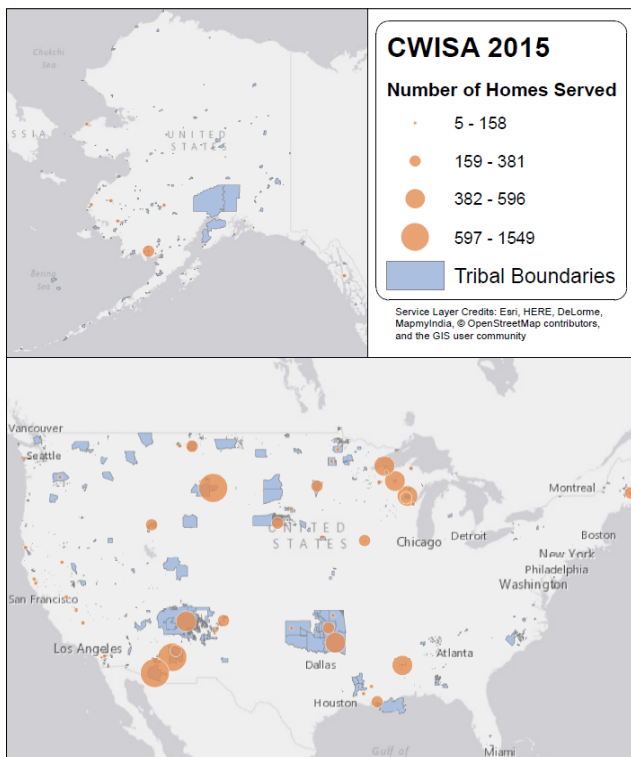
The last of 96 CWISA projects funded by the 2009 American Recovery and Reinvestment Act have now been completed. These projects included the construction or repair of septic tanks and drain fields, wastewater treatment plants, lagoons, lift stations and collection pipes. Between 2005 and 2015, the CWISA provided over 65,000 tribal homes with access to basic wastewater sanitation¹. The CWISA is making significant progress to reduce sanitary deficiencies in Indian country, though needs remain. One in 20 tribal and native households still lack complete working indoor plumbing². In Alaska alone, one in 16 tribal and native households lack such facilities². To address

these needs, EPA and its federal partners plan to provide an additional 14,300 American Indian and Alaskan Native homes with access to basic sanitation by 2018.

Communities Served

The CWISA serves tribal communities that often are located in low-income and rural areas facing significant challenges in addressing wastewater concerns. Issues such as a lack of funding, technical resources and community support can hinder tribal communities from gaining access to sanitation services. As the tribal population increases at a rate faster than the total U.S. population³, it is becoming especially difficult to meet critical sanitation needs.

To identify and quickly assist communities with the greatest need, EPA works closely with IHS to identify high-priority areas and projects for funding and technical assistance. The EPA and IHS CWISA coordinators rank eligible applications for funding based on the IHS Sanitation Deficiency System, a data system that identifies sanitary deficiencies for existing Indian homes based on annual IHS surveys. Ranking factors include health impact, existing deficiency level, previous service, capital cost, operations and maintenance capability, financial contributions from the community, local tribal priority, and local conditions. Once the CWISA coordinators select projects for funding, each tribal community can choose to manage its own project, or allow IHS to administer the project on the tribe's behalf.



2015 Case Studies

Providing Technical Assistance with Tribal Needs in Mind

The CWISA's primary goal is to protect public health and the environment by providing access to basic sanitation facilities for tribal residents, in alignment with the goals of tribal communities. CWISA funding is dedicated to the planning, design, and construction of wastewater collection and treatment systems for tribes so their individual needs are met. Through CWISA funding, communities are able to find solutions to wastewater infrastructure needs tailored to local circumstances. Investment in wastewater infrastructure protects the societal and cultural values of water resources and improves the health of ecosystems for both flora and fauna.

Case Study: Decentralized wastewater systems for homes in the Lac Vieux Desert Band in Watersmeet, Michigan



Mounded wastewater treatment system for a Lac Vieux Desert Band home

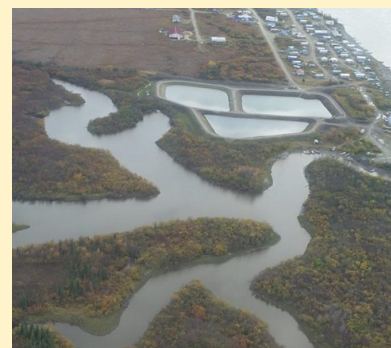
The decentralized systems serving several homes in the Lac Vieux Desert Band of the Chippewa Indian Community in Watersmeet, Michigan, had failed. The leaking mound systems and ponding effluent from drain fields resulted in pools of untreated wastewater, which could potentially contaminate drinking water sources. The project had originally called for abandoning existing failing systems and constructing a community sewage treatment system. However, due to the archeologically sensitive and sacred land, and unfit soils surrounding the project area, the project team revisited scope and decided individual home systems would work better. The CWISA funded \$290,000 towards the repair and replacement of the failed systems with updated individual wastewater systems, and the installation of a control panel for the existing lift station. The project was completed in August 2015 and the systems now serve 16 homes.

Human Health and Environmental Benefits

Improved wastewater infrastructure protects and restores water quality, thereby reducing the risk of infectious disease morbidity and mortality. The age-adjusted gastrointestinal disease death rate for American Indians and Alaska Natives is 4.3 times higher than that for all other races in the United States². Investment in wastewater services to supply safe waste disposal facilities has significantly reduced gastrointestinal disease death rates among American Indian and Alaska Native communities².

Case Study: Improving Wastewater Capacity in Marshall Alaskan Native Village

Marshall's community wastewater collection system consists of buried gravity arctic pipes serving a population of over 400 people. The accumulated wastewater gravity flows to a lift station where the effluent is pumped through a force main to the lagoon. The existing 2-cell percolating lagoon was quickly reaching its capacity after the most recent project hooked up additional homes. Shrubs and trees had overgrown and had begun to interrupt the functioning of the lagoon. The overloaded cells were leaking through the existing berms into the surrounding terrain and the nearby creek, causing risks to human health and the environment. To improve the holding capacity of the lagoon, the CWISA-funded project replaced the force main from the lift station and raised the outer berms 3 feet above design flood level. The construction of an additional holding cell increased the capacity of the lagoon system by almost 50%. The project cleaned up and reworked the vegetation overgrowth on the berms surrounding Cell 1 and Cell 2. It placed 170,000 square feet geosynthetic clay liners on all interior slopes, which eliminated all seepage and leaks from the lagoon berms. The project included installation of a manhole near the river with a buried pipeline from Cell 3 to allow for periodic discharge to the river if needed. In addition, the project installed a fence around the entire lagoon facility, improved drainage surrounding the facility, and installed three monitoring tubes to check groundwater annually. The new improved and expanded lagoon will be able to handle almost 10 million gallons of wastewater every year, thus protecting water quality and reducing health risks.



Aerial view of the repaired and upgraded wastewater lagoon system for the 400 residents in Marshall, Alaska

For more information: <http://www2.epa.gov/small-and-rural-wastewater-systems/clean-water-indian-set-aside-program>

1. IHS (2012), Public Law 86-121 Annual Report for 2012, available at http://www.ihs.gov/dsfc/includes/themes/newihstheme/display_objects/documents/reports/SFCAnnualReport2012.pdf

2. Stephen Gasteyer, Rahul T. Vaswani. *Still Living Without the Basics in the 21st Century*, 2004. Washington: Rural Community Assistance Partnership, 2003, available at <http://www.rcap.org/stillwithoutbasics>

3. 2010 U.S. Census Briefs, available online at <http://www.census.gov/prod/cen2010/briefs/c2010br-10.pdf>