



RealWaterTA Project Profile

Location: Shiprock Farm Area, Navajo Nation, New Mexico

Initiative: Closing America's Wastewater Access Gap

Shiprock is an unincorporated community on the Navajo reservation in San Juan County, New Mexico. The Shiprock Farm Area has long relied on individual septic systems for wastewater treatment. From April to October, agricultural irrigation creates a shallow groundwater system, which can impair septic system performance.

In 2004, the Shiprock Chapter of the Navajo Nation requested support from the Indian Health Service (IHS) to evaluate septic system needs and sewer connection capacity for over 400 homes. IHS then divided the project into five phases as part of a plan to connect homes to a centralized wastewater system. Phase I was funded and constructed through the original 2004 request, and Phase II was completed in 2014. Subsequent phases III, IV, and V failed to progress in IHS' Sanitation Deficiency System (SDS) as the initial request was based upon future issues rather than existing deficiencies. However, as time has passed, the homes remain reliant on aging septic systems and in some cases have experienced system failures and standing sewage.

Engineering Support

In December 2024, IHS requested technical assistance through the Closing America's Wastewater Access Gap (CAWAG) Initiative to evaluate homesites in the Phases III–V areas, confirm wastewater system deficiencies, and develop a Preliminary Engineering Report (PER) outlining practical solutions.

Over a two-week site visit, EPA, its contractors, and the Navajo Engineering and Construction Authority identified 250 onsite wastewater systems, inspected 142 homes for septic system deficiencies, and collected soil data.

Inspections showed that drainfields are submerged by shallow groundwater created by the crop irrigation system. In Phases III and IV, clay soils further reduce drainfield performance. These conditions pose a public health risk, as shallow groundwater can carry untreated wastewater into irrigation ditches during irrigation season, potentially contaminating crops and exposing farmers and consumers to sewage.

Project Benefits

IHS and the Navajo Tribal Utility Authority now have a roadmap for addressing the sanitation needs of the Shiprock Farm Area. The PER provides a comprehensive assessment of the community's existing wastewater facilities and evaluates alternatives for improving service based on effectiveness and cost. The PER reduces uncertainty and clarifies design and costs, accelerating the project on the path to funding through the SDS and EPA's Clean Water Indian Set-Aside program.

Conclusion

The collaboration between IHS and EPA highlights how federal agencies can work together to strengthen wastewater infrastructure in Tribal communities. By rapidly applying engineering expertise, the CAWAG Initiative enabled EPA to deliver the documents IHS needs to elevate the project for funding. With the PER now complete, IHS is well-positioned to advance critical wastewater infrastructure improvements in the Shiprock Farm Area.