

Confederated Tribes of the Umatilla Indian Reservation



Project Title:	Sustainable Groundwater Development and Management
Award Amount:	\$180,615
Type of Grant:	Environmental
Project Period:	Sept. 2007 – Sept. 2009
Grantee Type:	Tribe

PROJECT SNAPSHOT

- 3 jobs created
- 100 elders involved
- 200 youth involved
- \$33,750 in resources leveraged
- 18 partnerships formed

BACKGROUND

Located in eastern Oregon, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) are a union of the Cayuse, Umatilla, and Walla Walla tribes. The 172,000-acre reservation is located within the watershed of the Umatilla River and its tributaries. Of CTUIR’s 2,600 enrolled members, roughly 55% reside on or near reservation lands.

PURPOSE AND OBJECTIVES

The project’s purpose was to strengthen the tribe’s capacity to regulate its water resources and to develop a reservation-wide water management strategy to prevent aquifer overdraft and limit surface water depletion due to well pumping.

The project’s first objective was to gather, resolve, and format the reservation’s

groundwater data sets. To complete the objective, the tribe’s environmental staff collaborated with the Oregon Water Resources Department and US Geological Survey to gather groundwater data sets for the reservation’s 900 wells. As some data was inconsistent, staff instituted quality control measures for all information collected.

The project’s second objective was to create a standardized and centralized groundwater data collection, storage, and user system. Staff developed a centralized database to store and manage all groundwater data. Staff also created field documents to standardize the information collected for water permit requests, water chemistry checks, well drilling reports, and all other agency responsibilities. Staff uploaded all collected information into the database as needed.

The project’s third objective was to complete a reservation-wide groundwater study. Staff implemented a public awareness campaign to educate the tribal community about the survey, including publishing tribal newsletter articles, speaking at community gatherings, and initiating door-to-door contact. Staff also

developed informational brochures on caring for aquifers and wells and distributed them to all 900 reservation-based well owners. Staff then conducted 197 well measurements in the fall of 2008, and 150 well measurements in the spring of 2009.

The project's fourth objective was to characterize the groundwater flow from the synoptic water-level measurements. From the changes measured in the spring and fall collections, staff developed maps to characterize the groundwater flow, with an accuracy estimated at +/- five feet. Staff also created groundwater change maps to illustrate seasonal differences and rates of replenishment.

The project's fifth objective was to prepare and implement a groundwater monitoring plan for the Umatilla Reservation. Staff developed an outline for the monitoring plan and has finalized a recommendation to Tribal Council to update the Water Code to include qualitative and quantitative measurement criteria. However, due to a late start in the groundwater study, staff did not complete the monitoring plan within the project timeframe.

OUTCOMES AND COMMUNITY IMPACT

The deliverables completed during project activities, including the groundwater database, groundwater flow map, interactive well map, and field documents, have enabled the Umatilla Water Resources Department to achieve consistency in groundwater and well data collection, analysis, and reporting. Staff efforts have also strengthened the tribe's ability to manage a renewable groundwater supply for the Umatilla community. Staff collaboration with the Oregon Water Resources Department and US Geological Survey strengthened these partnerships, which encourage the continued sharing of resources.

Project activities created an opportunity for the Umatilla tribal community to meet their well regulators and to acquire valuable information on local groundwater availability and well maintenance. Project staff also presented their findings at community meetings and local schools, which educated the public on the interconnectedness between groundwater and surface water, illustrating the need to take care of the land.

To sustain the project's momentum, staff will complete the groundwater monitoring plan. The plan will cover the ongoing monitoring, measurement, and enforcement responsibilities of Umatilla's Water Resources Department, and will set a timeframe for the periodic review of the Tribe's Water Code.

"We know our wells and community members better, and we will be partners in moving forward."

Kate Ely, Hydrologist
