

Flood Recovery in Webbers Falls, Oklahoma:

A FEMA and DWSRF Funding Success

The East Central Oklahoma Water Authority (ECOWA) serves drinking water to approximately 1,200 customers including the Town of Webbers Falls and the surrounding area. The town is located in Muskogee County and the water source is Lake Tenkiller. The lake and water treatment plant (WTP) are both located on the east side of the Arkansas River.

Town of Webbers Falls Demographics:

Population: 616

Native American Race: 25%

Median Household Income: \$37,500

OK MHI: \$53,840

Poverty: 34%

Issues Facing the Water System

Due to a major flooding event in May 2019, the Webbers Falls community had a mandatory emergency evacuation and ECOWA closed the water valves. When the flood waters receded and residents returned, ECOWA opened the water valves but residents on the west side of the river were not receiving drinking water. Upon investigation, they discovered that the 6-inch water line that was supposed to be located on the bottom of the river bed had washed away in the flood.



Image from Oklahoma DEQ Drinking Water Program

What was the temporary solution?

An emergency temporary water line was laid on top of the Highway 64 Bridge to connect with Gore Public Works Authority to serve the northern residents of Webbers Falls. A second emergency temporary water line was laid to connect with Porum Public Water Authority to serve the southern residents of Webbers Falls. While these temporary measures were able to provide water to Webbers Falls, the lines were unable to maintain the DEQ required minimum pressure of 25 pounds per square inch (psi).

The chronic low pressures could lead to the contamination of the distribution system, and a boil water advisory was issued. Therefore, the public schools were unable to open and there was inadequate pressure to provide fire protection to the community.

What approach was ultimately selected to solve the problem(s)?

The full project included boring and installing casing for the distribution pipe below the river navigational channel to ensure its safety from future flooding impacts. The casing is permanent, but the pipe inside can be removed for future maintenance. The boring was at the location of the original river bottom crossing and was connected to the existing water lines on each side of the river. The following repairs were also made to the existing distribution system:

- 2,500 linear feet of boring with casing and 8-inch HDPE pipe.
- Two 8-inch gate valves and valve boxes.
- Manhole and sample ports on the supply side of the river per DEQ regulations for water crossings.
- Connection to existing 6-inch water mains on each side of the river.



Image from Oklahoma DEQ Drinking Water Program

What funding and/or technical assistance was provided?

The funds for this project were provided as a DWSRF bridge loan using the Environmental Protection Agency (EPA) and Federal Emergency Management Agency (FEMA) [Memo of Understanding \(MOU\)](#) for combining project funding. The Oklahoma Emergency Management Agency (OEMA) also assisted with putting together funds for this project. The bridge loan allowed the project to be completed faster so that the Town of Webbers Falls had safe drinking water that met federal and state drinking water standards, while waiting for the funds from FEMA that would take longer. The DWSRF also provided principal forgiveness/subsidy funds for a portion of this project. Some funding above the amount DWSRF provided in principal forgiveness was in a DWSRF loan.

Lessons Learned:

- Using the DWSRF bridge loan in accordance with the EPA and FEMA MOU provided for this project to be completed 18 months earlier than it would have been using the regular timeline for the FEMA funding process.