Riverton, Wyoming, Processing Site: Where Does My Drinking Water Come From?

This fact sheet provides information about the Alternative Water Supply System and domestic wells at the Uranium Mill Tailings Radiation Control Act of 1978 Title I processing site at Riverton, Wyoming. The Riverton site is managed by the U.S. Department of Energy Office of Legacy Management.

Where Is the Riverton Site?

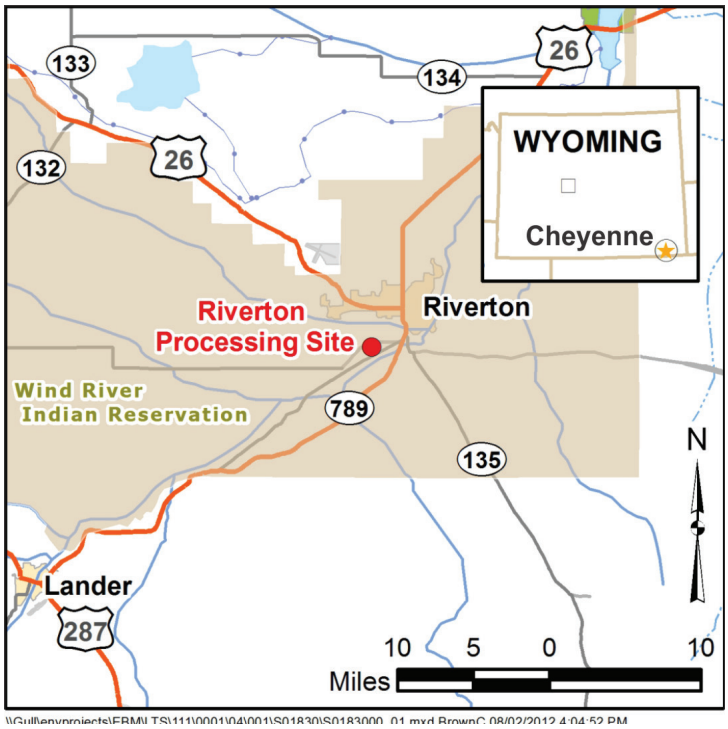
The former Riverton, Wyoming, Processing Site is in Fremont County, 2 miles southwest of the town of Riverton and within the boundaries of the Wind River Indian Reservation (Northern Arapaho and Eastern Shoshone).

Why Is It a "Site"?

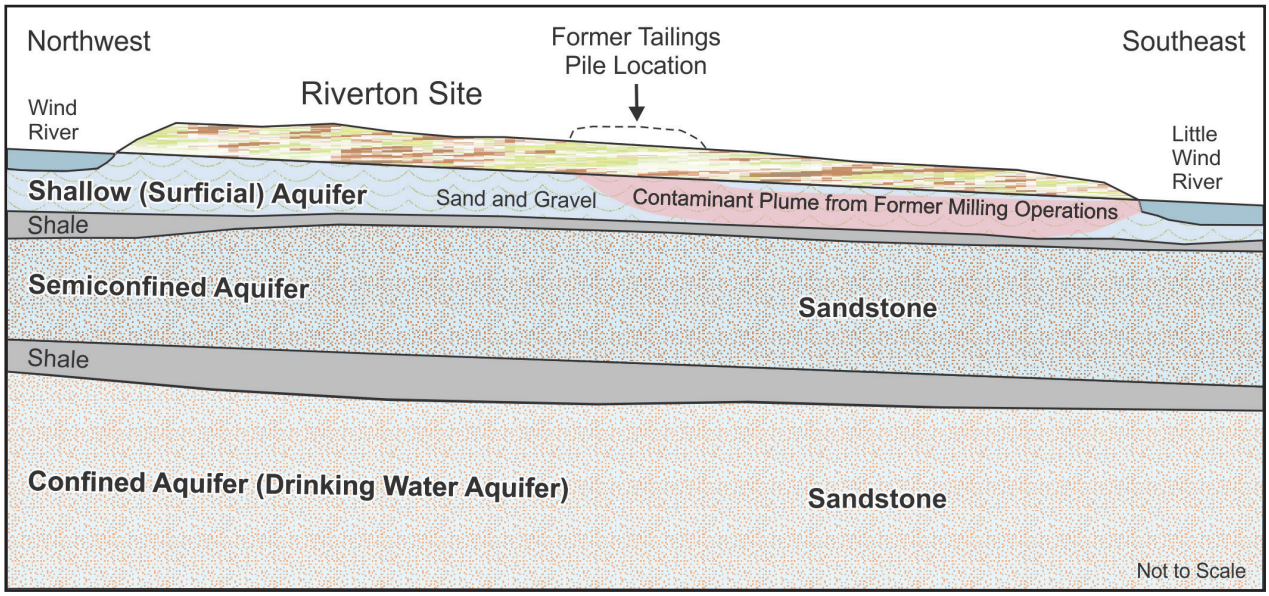
A uranium- and vanadium-ore processing mill operated on the property from 1958 to 1963. Milling operations created both soil and groundwater contamination. The U.S. Department of Energy (DOE) removed contaminated soil in 1988 and 1989, but contamination remains in the shallow groundwater beneath the site. More information about the Riverton site history is available on the Internet at http://www.lm.doe.gov/riverton/Sites.aspx.

Is Contaminated Groundwater Used for Drinking Water?

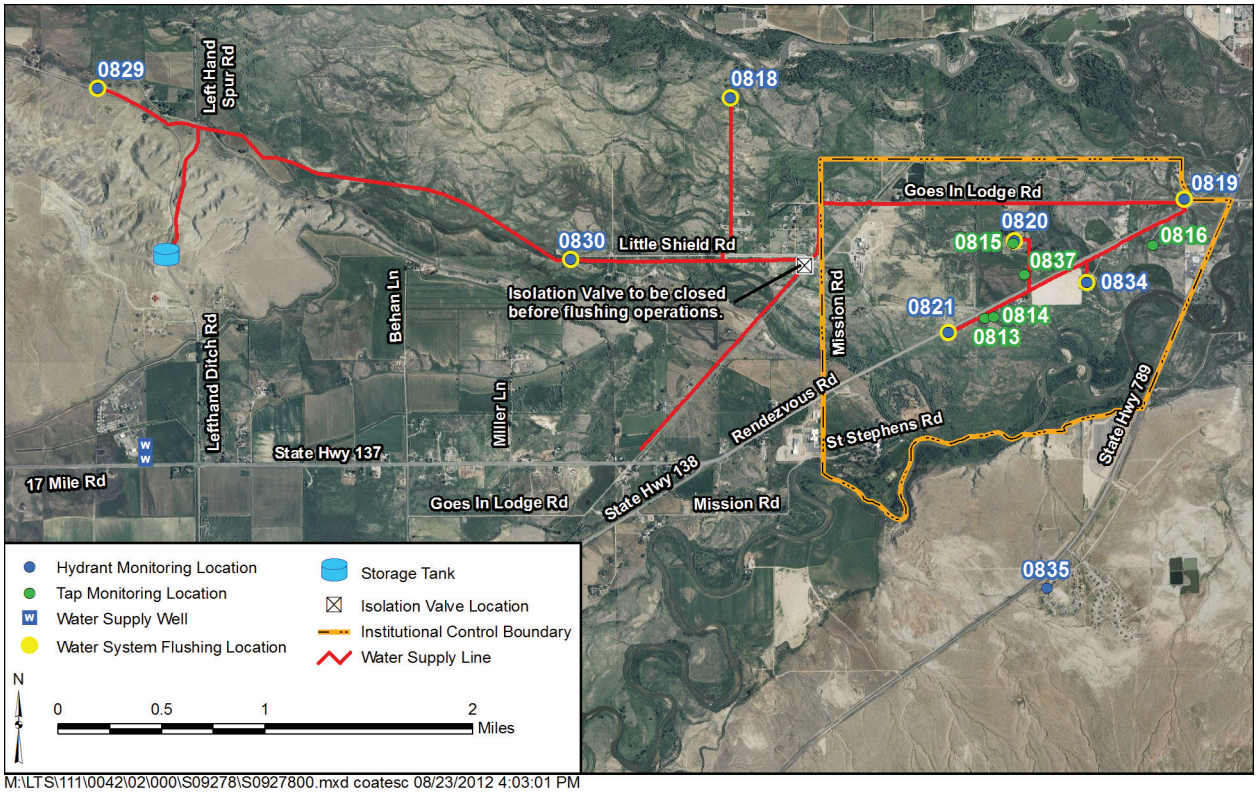
Contaminated groundwater is not used for drinking water. Three aquifers are present beneath the site: a shallow aquifer (called the "surficial aquifer"); an intermediate, semiconfined aquifer; and a deeper, confined aquifer. Groundwater



Location of the Riverton, Wyoming, Processing Site



Cross Section of the Aquifer System Beneath the Riverton Site



Alternate Water Supply System for the Riverton Site

contamination is in the surficial aquifer, a small amount of contamination is possibly in the semiconfined aquifer, and the confined aquifer has no contamination. Only groundwater in the confined aquifer is used for drinking water.

Will contamination in the shallow (surficial) aquifer migrate into the confined aquifer and contaminate drinking water?

It is extremely unlikely that contaminated groundwater could migrate downward into the confined aquifer. The shallow, surficial aquifer extends from about 3 feet to about 20 feet below ground surface. A layer of shale 5 to 10 feet in thickness separates the surficial aquifer from the semiconfined aquifer beneath most of the site. A layer of shale from 10 to 25 feet in thickness separates the confined aquifer from the overlying aquifers in all areas of the site. The shale forms an effective barrier that prevents contaminants from moving downward into underlying aquifers. In addition, groundwater in the confined aquifer exerts an upward pressure against the shale layer; the upward pressure would also prevent contaminants from moving downward into the confined aquifer.

The source of contamination (the former tailings piles) was removed from the Riverton site and relocated to a disposal cell 45 miles away. With no continuing source of contamination, natural movement of groundwater in the surficial aquifer will eventually carry the contaminants offsite, and they will become diluted to levels that present no risk to human health or the environment.

How Do Residents in the Riverton Site Area Get Drinking Water?

Drinking water for residents within and near the Riverton site comes from an alternate water supply system and several domestic wells.

What is the alternate water supply system?

Indian Health Services installed the alternate water supply system in 1998 to provide local residents with an alternative to using potentially contaminated groundwater from shallow wells in the former mill site area. DOE funded the system and provided partial funding for a 1-million gallon storage tank to supply water for the area. The alternate water supply system is an addition to an existing system operated by the Northern Arapaho Water and Sewer Organization. The 1-million gallon tank connects to approximately 8.5 miles of water line and is filled from three wells located about 5 miles away. Two of these wells are approximately 650 feet deep and one well is greater than 1,000 feet deep. All three wells withdraw water from the confined aquifer.

Is Water from Domestic Wells at the Riverton Site Safe to Drink?

Groundwater from domestic wells in the site area is safe to drink. The domestic wells are typically greater than 50 feet deep, and water from these wells is withdrawn from the confined aquifer. DOE collects water samples from domestic wells within and near the Riverton site boundary to verify that the wells are unaffected by contaminants in the surficial aquifer.

Contacts

Documents related to the Riverton site are available on the DOE Office of Legacy Management (LM) website at: http://www.lm.doe.gov/riverton/Sites.aspx.

For more information about LM activities at the Riverton site, contact:

U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way, Grand Junction, CO 81503

(970) 248-6070 (monitored continuously), or
(877) 695-5322 (toll-free)

Public.Affairs@lm.doe.gov

Who Can I Contact If I Have Questions or Concerns About My Water Supply?

The following people can provide information about the water supply system at the Riverton site:

Name/Email	Organization	Address/Phone
Ryan Ortiz rortiz@northerarapaho.com	Northern Arapaho Environmental Office	P.O. Box 396 Fort Washakie, WY 82514 (307) 332-6120, ext. 180
Bill Frazier william.frazier@lm.doe.gov	Riverton Site Manager U.S. Department of Energy Office of Legacy Management	2597 Legacy Way Grand Junction, CO 81503 (970) 248-6041