

Digging Safely at the Libby Groundwater Superfund Site

Lincoln County, Montana

April 2024



Libby Groundwater Superfund Site

The Libby Groundwater Site was listed on the National Priority List in 1983 due to wood treating operations. Soil and groundwater were contaminated with pentachlorophenol (PCP) and polynuclear aromatic hydrocarbons (PAHs).

What is the Status of the Libby Groundwater Site?

The site is divided into two areas, called operable units (OUs). OU1 includes contaminated drinking water wells and the alternative drinking water supply for the City of Libby. OU2 includes contaminated soils and groundwater in the upper and lower aquifers.

Operable Unit 1 does not need any additional remediation. The remedy provides an alternative drinking water supply to Libby residents.

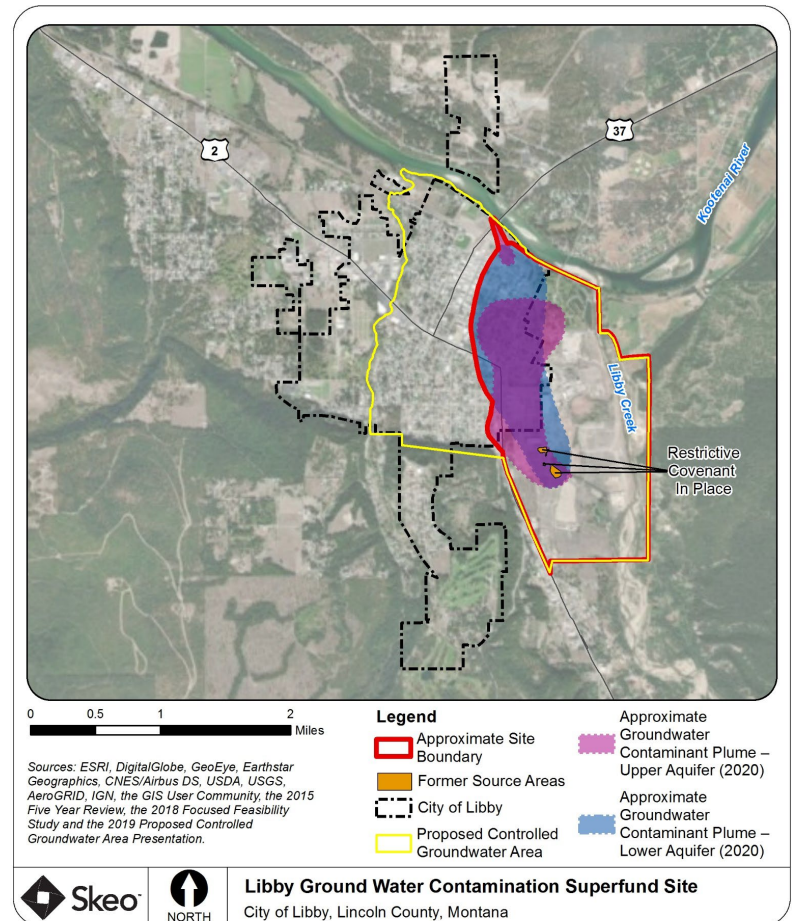
- In 1986, The City of Libby passed an ordinance to prohibit installation of new water wells in city limits.
- The 1986 “Buy Water Program” compensated Libby residents for switching from contaminated private wells to municipal water to cover the gap in pricing.
- The similarly named 1997 “Buy Well Program” compensated property owners for allowing their wells to be abandoned, ending the use of wells with contaminated groundwater by participants.

Operable Unit 2 is still undergoing cleanup in the upper aquifer.

- In 1993, a technical impracticability waiver was signed for lower aquifer treatment. The technologies available were not able to treat the groundwater contamination more effectively than natural breakdown (natural attenuation). Contaminants in the lower aquifer are continuously monitored to ensure the plume does not expand and to prevent human exposures to deeper contaminated groundwater.
- In 2020, the site remedy was amended to integrate more aggressive treatment in the upper aquifer. This process stimulates the natural breakdown process by injecting compressed air (oxygen) into the contaminated plume (known as in-situ biosparging). Over the next two years, International Paper will install in-situ biosparging systems in two areas of the site, followed by regular groundwater monitoring.
- Contaminated soil was removed and remediated from known source areas and environmental covenants are in place to ensure these areas are not disturbed. In addition to the excavated sites, site contamination may exist in other areas or near the groundwater plume where it interacts with soil.

Institutional Controls

Institutional controls are non-physical tools that help protect the remedy by limiting land or resource use and guiding human behavior. For example, a deed restriction can restrict the ability to drill new wells in an area with contaminated groundwater. Future work at the site will include implementing additional institutional controls to prevent future human exposure to Site contaminants and to further restrict land use and activities that may interfere with remedial activities.



Institutional Controls in Libby include:

- A city ordinance prohibiting new water well installations within City limits (OU1)
- Deed restrictions (also called environmental covenants) are in place on the Lincoln County Port Authority property, which is also the former lumber mill property (OU2). Future land use is restricted to industrial or commercial uses. Restrictions are also in place to prevent any activity that might negatively impact ongoing remedial efforts to clean up the site.
- When Montana 811 call center is notified of ground-disturbing activities in or near the Libby Groundwater site, International Paper (IP) is notified. IP will review the activities and provide guidance or information on site infrastructure.

What You Need to Know about Digging in the Superfund Site

Before You Dig

- Call 811 to see where Libby Groundwater remediation infrastructure may exist.
- Prepare a plan for handling contaminated soil if encountered. Contaminated soil may exist throughout the former mill property.
- Due to historic chemical handling at the former mill, soil contaminated with wood preserving chemicals becomes a F032 and F034 listed hazardous waste when excavated so a plan to contain and dispose of bulk hazardous wastes is necessary. Burying hazardous waste is a violation of the Resource Conservation and Recovery Act.

While Digging

- If digging in areas near the Libby groundwater plume, be careful to dig to depths above the groundwater table to avoid exposure to contamination. Be sure you have up-to-date information on groundwater depths in your area before you dig.
- Encountering contaminated groundwater should be avoided, however, if it is encountered, do not dispose of it on the ground or to any other body of water. Do not release water into a sanitary sewer or storm water drain.
- Water must be contained, sampled, and properly disposed of or treated. Sampling and analysis is required prior to proper disposal. Disposal must be completed in accordance with applicable State and federal regulations. Contact EPA and the Montana Department of Environmental Quality to coordinate sampling and disposal activities.
- Make sure you've contacted 811 so remediation infrastructure or other obstacles are identified.

After Digging

- Due to the potential for encountering contamination from wood treating chemicals in managing soil from the site, it is very important to decontaminate personal protective equipment, boots, clothing, tools, and equipment before they leave the site.
- Review the Occupational Safety and Health Administration's hazardous waste decontamination guidelines to aid decontamination practices: <https://www.osha.gov/hazardous-waste/decontamination>

Learn More

- Visit <https://www.epa.gov/superfund/libby-groundwater> or the Lincoln County Library (Libby), 220 W Sixth Street, Libby
- Contact EPA's Beth Archer at 720-512-1917 or archer.elizabeth@epa.gov
- Contact Montana Department of Environmental Quality's Melody Wunderlin at 406-594-4017 or melody.wunderlin@mt.gov



Former Stimson Mill Property Deed Restriction Map