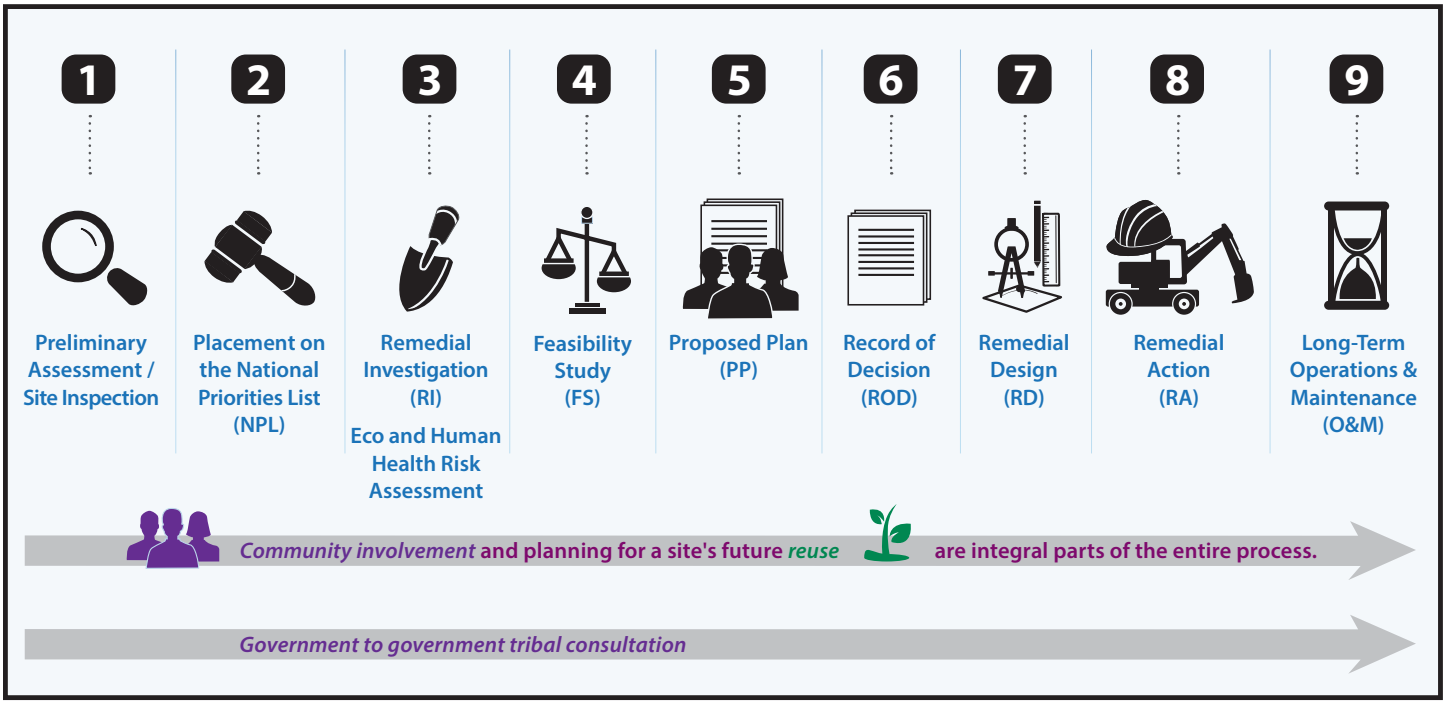
Carson River Mercury Superfund Site at a Glance

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • November 2023

What is a Superfund site? What is EPA's role in cleaning it up?

The Environmental Protection Agency's (EPA's) mission is to protect human health and the environment. Public concerns about pollution led to the establishment of EPA on December 2, 1970. In the 1970s, EPA identified hazardous waste sites across the country. These sites posed public health risks and environmental threats. In response, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act or the "Superfund law." Under this law, EPA holds companies accountable for pollution at the most toxic waste sites. It also provides a way to clean up sites with no responsible parties. The law requires community involvement throughout the process.

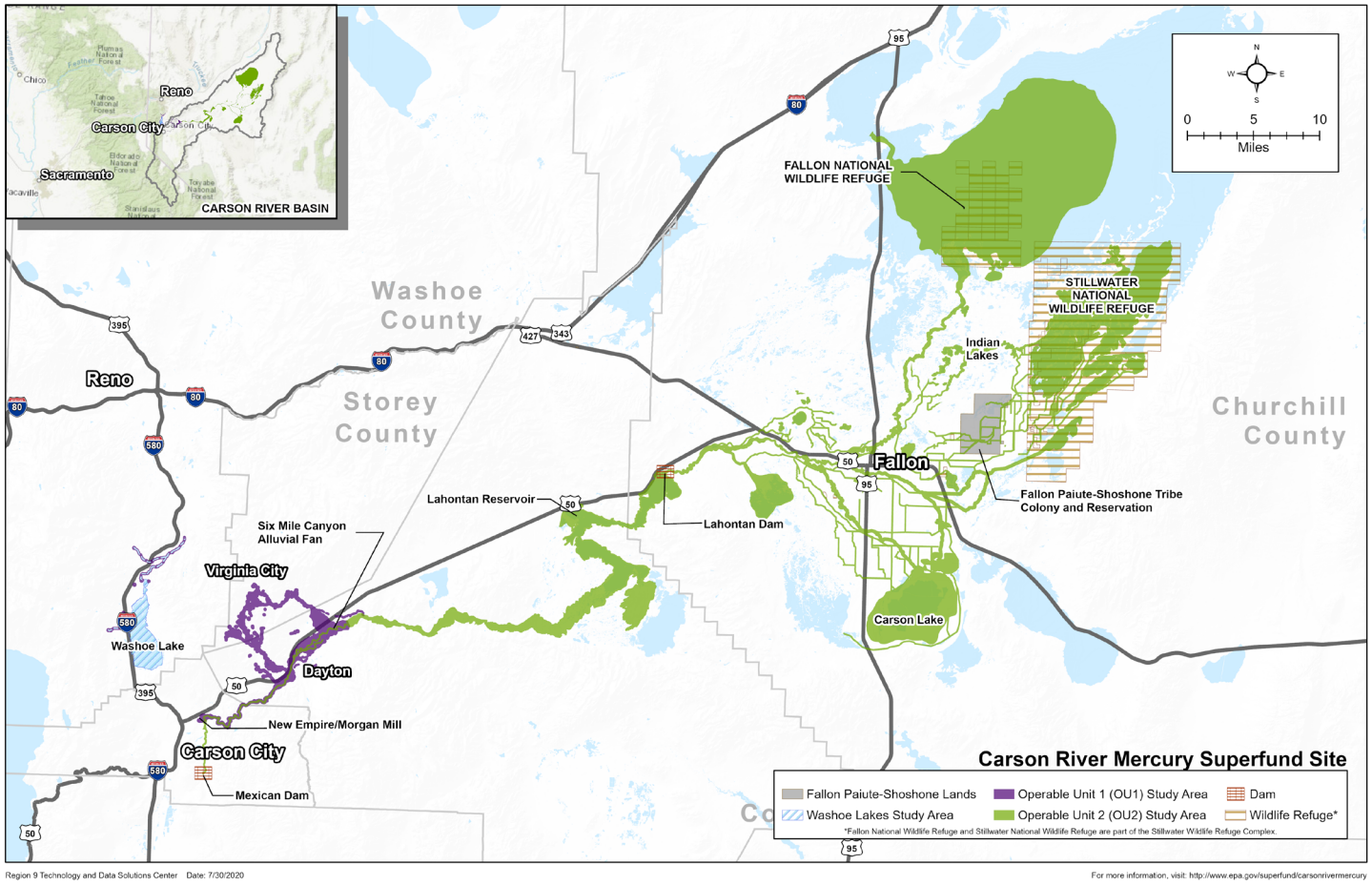
The Superfund Process



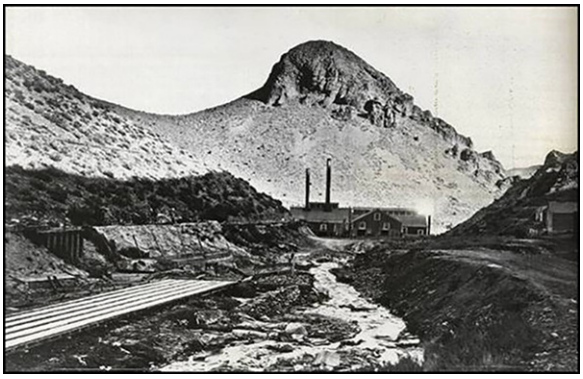
What is the Carson River Mercury Superfund Site?

In 1859, miners discovered large natural deposits of gold and silver, also known as the Comstock Lode, in Carson City, Virginia City and Dayton, Nevada. Miners used mercury to process gold and silver ore. Two hundred and thirty-six mills processed the ore. Over several years, this mining process released 14 million pounds of mercury into the environment.

Due to mercury contamination, the Carson River Mercury Superfund Site (CRMS) was added to the National Priorities List in 1990. This list consists of highly toxic waste sites called Superfund sites. The site spans five counties and more than 130 river miles in northwestern Nevada. Historic mill sites in Carson City, Virginia City, Dayton, Washoe Valley and Pleasant Valley have mercury contamination. Waterways located next to mill sites spread mercury from the 100-year floodplain of Carson River to its ends (see page 2). EPA's site investigation found mercury in soil, sediments (earthen materials that settle to the bottom of a water body), fish and wildlife.



Are there health risks associated with eating mercury-contaminated fish?



EPA has found dangerously-high levels of mercury in fish tissue at the CRMS. Mercury contamination presents a serious health risk to those who eat the fish. It can cause permanent damage to the nervous system and might result in disabilities for developing fetuses and children.

Why is CRMS divided into Operable Units 1 and 2?

EPA divided the site into two cleanup areas called "operable units" (OUs). This helps EPA better manage the site investigation and cleanup. The first OU (OU1) includes the former mill sites, related mine tailings and contaminated soils. The second OU (OU2) includes the Carson River and adjacent floodplains from the Mexican Dam in Carson City to the lakes and wetlands south, northeast and east of Fallon. The community uses both OUs for recreation, conservation, agriculture, and commercial and residential development.

What is the status of OU1?

In 1995, EPA finalized the cleanup plan for OU1. Since then, EPA and the Nevada Division of Environmental Protection (NDEP) have excavated (dug up), capped, backfilled, and/or removed contaminated soils from the site. EPA's OU1 assessment found the only potential significant health risks are to children under six whose home is located on mercury-contaminated soil (arsenic and lead are also of concern). These children may accidentally eat the soil when playing outdoors.

If you think you live in the footprint of OU1, EPA and NDEP may be available to sample the soil in your residential yard. If your yard soil exceeds mercury, arsenic and/or lead levels that may cause health risks and you agree to us doing the work, we can take further action.

What about OU2?

EPA did a Remedial Investigation and Feasibility Study for OU2. This investigation looks at where contamination from the mining process went and in what concentrations (or amounts). Based on these findings, EPA determines possible risks to human health and the environment.

Through this investigation, EPA found high levels of mercury (but not arsenic and lead) in sediment and aquatic life along Carson River and connected waterways. The FS used the investigation information to develop cleanup options (or alternatives) for OU2. In September 2021, EPA notified the public about the Proposed Plan through three local papers and emailed copies of the fact sheet and summary to its email list. EPA recorded a presentation and held a public meeting online on February 1, 2022. The public comment period was extended to February 28, 2022 following public requests.

Why is it taking so long to clean up the CRMS?

CRMS is complex and one of the largest Superfund sites in the country. EPA is currently considering measures to address immediate threats to human health and the environment in OU2. Due to technology limitations, EPA cannot clean up the mercury contamination in soil, fish, and water bodies. EPA plans to monitor contamination and prevent further spreading.

What is EPA doing next?

Operating Unit 1: In the area of OU1, EPA is conducting free sampling to learn if levels of mercury or other metals in people's yards may pose a risk due to exposure (contact) with the metals.

Operating Unit 2: EPA is drafting an interim Record of Decision and Responsiveness Summary to comments received on the Proposed Plan. EPA is considering public comments in selecting a cleanup option. EPA intends to issue the interim Record of Decision in 2024.

What about the fish?

State governments have the primary responsibility for protecting their communities from possible risks from eating contaminated fish. Fish and shellfish concentrate mercury in their bodies in the form of methylmercury. Due to high methylmercury levels in fish, the Nevada State Health Division has issued a health advisory. The health advisory recommends no consumption of fish in the Carson River from Dayton to Lahontan Dam and all waters in the Lahontan Valley.

Photo to the left:
One of the bilingual signs EPA posted along the Carson River access points and around Lahontan Reservoir in 2014.

EPA discourages people from eating all fish (except trout), wild plants, and waterfowl in areas where mercury levels may be high within the site boundaries (see map on page 2 for location). Catch and release fishing, swimming, and other recreational activities are safe. For more information go to: www.ndow.org/fish

Minimize your exposure (contact) to mercury, lead, and arsenic in soil

- Discourage children, especially those six and under, from playing in bare dirt areas. Soil and dust can stick to hands and toys and can be swallowed when they put them in their mouths.
- Encourage children to wash their hands after playing in bare dirt areas.
- Wash children's toys after they play with them outside.
- Keep fingernails short to prevent accumulation of dirt under the nails.
- Wash family pets often.
- Place mats at front and back doors to prevent soil from being tracked inside.
- Remove shoes before entering your home.
- Mop and dust your home frequently.
- Rinse home-grown fruits and vegetables well.

Carson River Mercury Superfund Site

Who can I contact for more information?

You can contact EPA Community Involvement Coordinator **Laura Hall** *(hall.laura@epa.gov)* at (415) 947-4143. You can also contact Remedial Project Managers **Mohamed Ibrahim** (*ibrahim.mohamed.n@epa.gov*) at (415) 212-2253, **Patricia Bowlin** (*bowlin.patricia@epa.gov*) at (415) 972-3177, or **Kristen Isom** *(isom.kristen@epa.gov)* at (415) 972-3305. You can also contact **Dave Friedman** (*dfriedman@ndep.nv.gov*) with NDEP at (775) 687-9385.

Website Links:

Superfund law: **www.epa.gov/superfund/what-superfund**
Community Involvement: **semspub.epa.gov/work/09/100001839.pdf**
Carson River Mercury Superfund Site: **www.epa.gov/superfund/carsonrivermercury**
National Priorities List: **www.epa.gov/superfund/superfund-national-priorities-list-npl**
Comstock Lode: **www.nps.gov/places/virginia-city-historic-district.htm**
NDOW: **www.ndow.org/fish/**

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