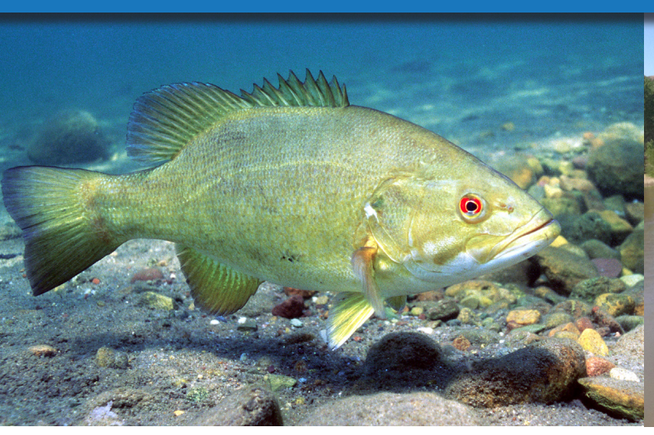
SEMS-RM DOCID # 100025614

Carson River Mercury Superfund Site




AT A GLANCE

Summary of EPA's Preferred Plan for Addressing Contamination at the Carson River Mercury Site

Overview

Mercury from historic gold mining polluted the Carson River Mercury Site in northwestern Nevada. The U.S. Environmental Protection Agency (EPA) has released its Proposed Plan to address mercury in a segment of the site referred to as Operable Unit 2, which includes:

- the Carson River;
- nearby floodplains; and
- wildlife.

This interim remedy for dealing with pollution at the site is our preferred alternative. It would help us better protect people in the short-term. Later, we will evaluate alternatives for a final, long-term remedy. Depending on our future findings, we would determine whether new measures could help us physically clean up mercury throughout the entire site footprint. The Proposed Plan and a video description are posted on: epa.gov/superfund/carsonrivermercury. *We can also mail you a hard copy of the Proposed Plan.*

1973 — Studies began on mercury in fish and sediments.

1990 — Added site to EPA Superfund cleanup program.

1995 — Issued **Record of Decision**, for Operable Unit 1.

2018 — Completed a **Remedial Investigation (RI)** and a **Feasibility Study (FS)**. The RI looks at the extent of mercury contamination and guides the FS.

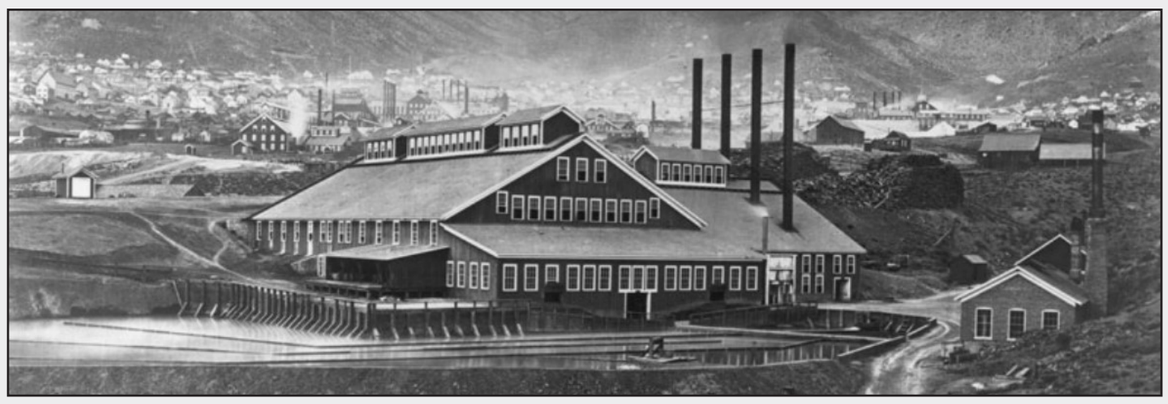
Site History

In 1859, miners discovered gold and silver in Virginia City and Dayton, Nevada. From about 1860-1890, miners used mercury to separate gold and silver from ore. This process released 14 million pounds of mercury, which got into:

- **soil**
- **waterways**
- **sediments** (earthen materials that settle to the bottom of a water body)
- **fish and wildlife**

The Operable Unit 2 portion of the site starts from the Mexican Dam in Carson City and leads to the lakes and wetlands south, northeast and east of Fallon. This part of the site covers over 130 miles of the Carson River and three counties. The area is used for:

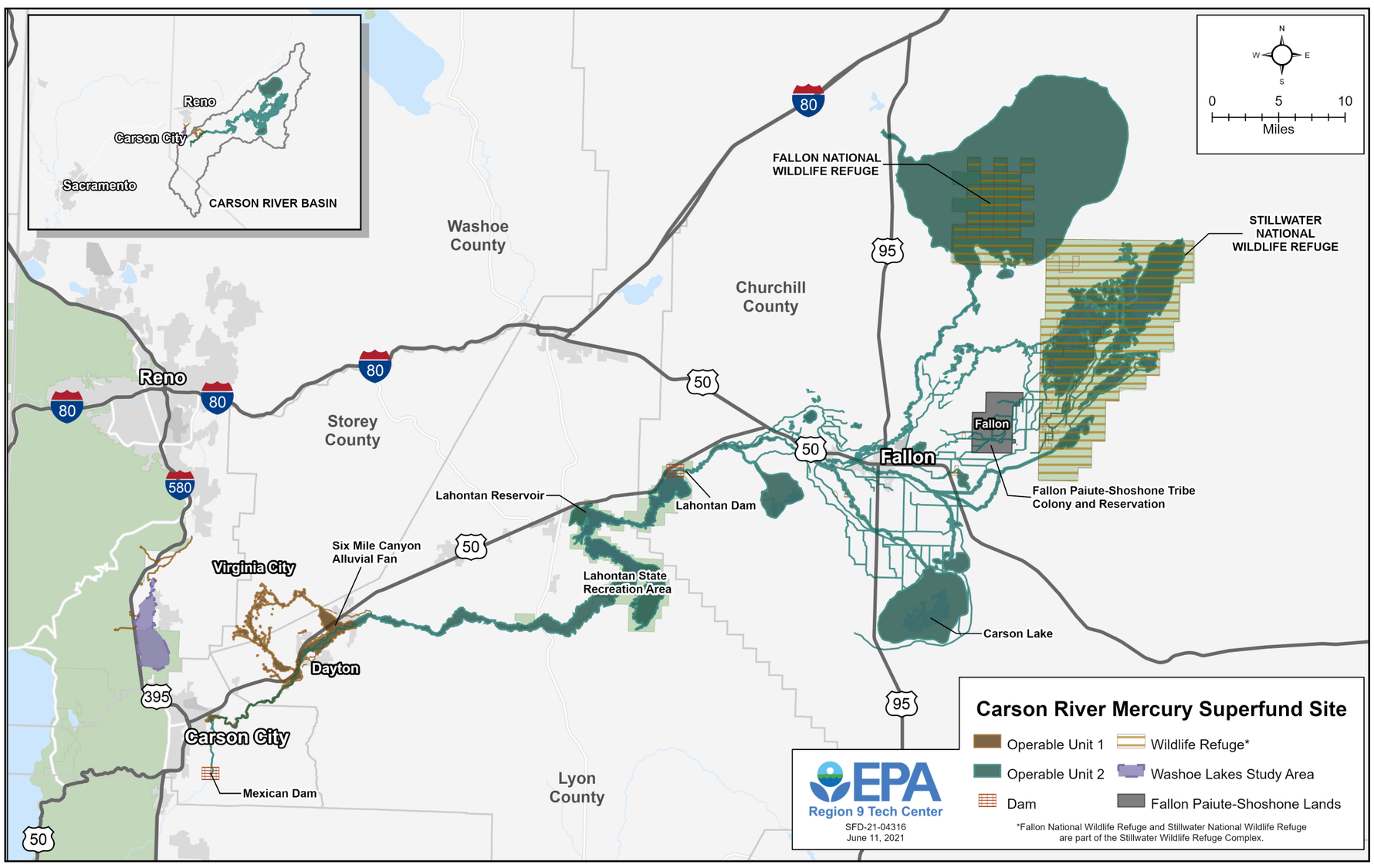
- **recreation**
- **commercial and residential development**
- **conservation**
- **wildlife habitat**
- **farming**



California Pan Mill in Virginia City

Most people live near the site in Dayton, Silver Springs, Fallon and the Fallon Paiute Shoshone Reservation. Development near historic mill sites can release mercury into the floodplain (*see green areas on the map*). Most of the polluted soil and sediments are in Carson River, in and between Six Mile Canyon and the Lahontan Reservoir Dam.

Banks and deep channels trap polluted soil. Erosion of the soil releases mercury into the Carson River. In 1997, a flood released more polluted sediments into the Lahontan Reservoir and the Carson River. The Lahontan Reservoir traps up to 92 percent of the mercury that gets into the reservoir. Below Lahontan Reservoir, surface water and soil have less mercury.



Carson River Mercury Site Map

Photos above: Soil sampling activities at the site

EPA's mission is to protect human health and the environment.

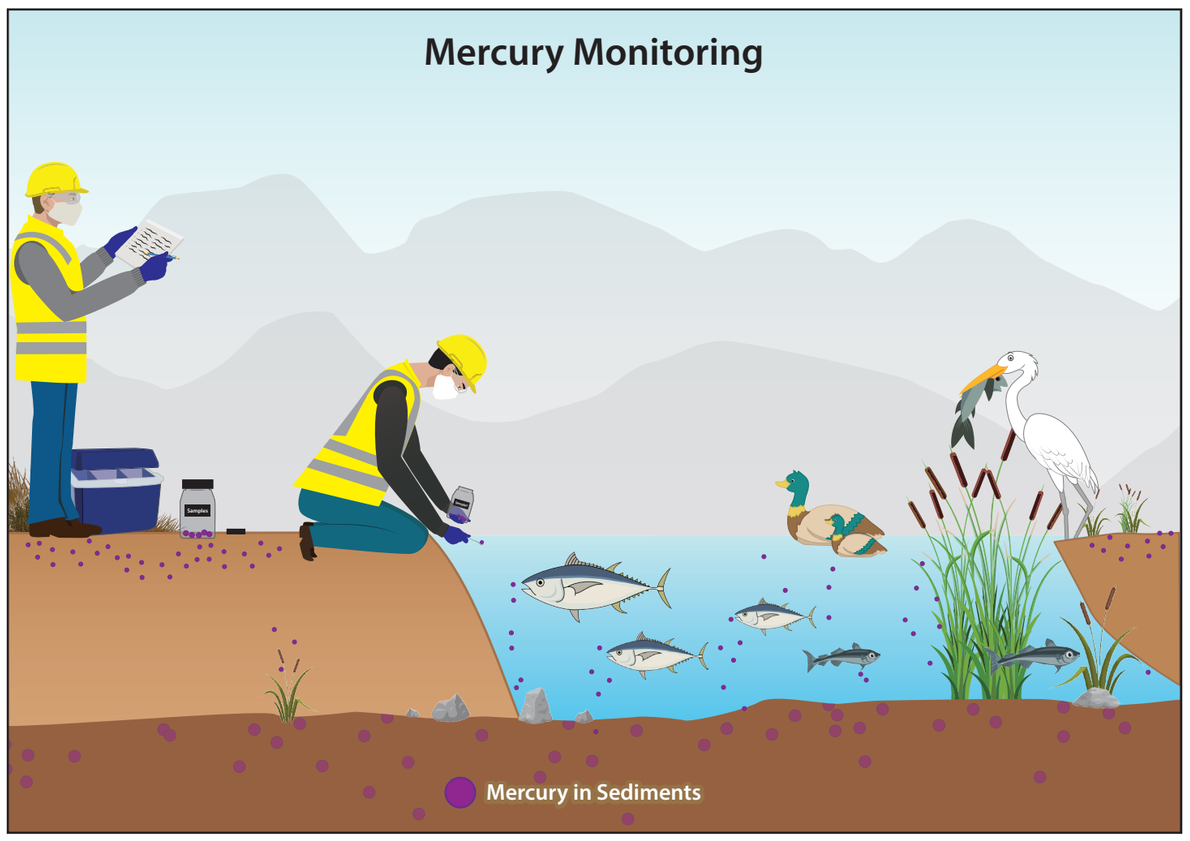
Carson River Mercury Superfund Site

Health Risks from Pollution

Designing an effective plan meant understanding the nature of the risks from mercury. Community members' cultural practices are one of the most important considerations for health risks. For instance, some tribal members eat fish, wild plants, small game and waterfowl as part of their traditional practices. We found potential health risks for tribal members who ate fish, wild plants and waterfowl outside of reservation land. Eating fish with unsafe mercury levels can cause permanent damage to the nervous system. It may also result in permanent disabilities to developing fetuses and children.

No harmful effects were found in these groups of people:

- Recreational users who do not eat the fish, but practice catch and release fishing, swimming and other activities
- Agricultural workers
- City of Fallon and Churchill County residents who use irrigated water for growing and eating plants locally, such as fruits and vegetables
- People who eat steers (beef) and cows (dairy) that have grazed on plants



We will monitor mercury levels in surface water, soil, sediments and wildlife.

Glossary Definitions

Land Use Controls: These controls require builders to test soil for mercury before starting construction. They also let people know if a property has mercury contaminated soil when buying a house. We will use public outreach, including our web mapping tool, to make sure word gets out about these controls.

Long-Term Sampling and Response Plan: A plan to sample soil and test mercury levels before permitting construction activities in the floodplain and the river.

Methylmercury Bioaccumulation: Bacteria changes mercury into its more toxic form—methylmercury. Methylmercury builds up as it moves through the food chain beginning with the algae. As bigger fish eat smaller species, they absorb more methylmercury. As a result, game fish contain some of the highest mercury levels.

Record of Decision: A report that documents how EPA and other agencies will clean up or address contamination at a Superfund site.

Remedial Investigation/Feasibility Study: Studies that determine the extent of contamination, ways to remove it and potential health risks.

Sediments: Earthen materials that settle to the bottom of a water body.

Tailings: Tailings are produced in the ore milling process.

Our Preferred Alternative

The interim remedy that EPA is now proposing is important because it will help protect the community from mercury exposure. We will do more studies on mercury contamination at the site. If new technologies become available, we may choose a different remedy.

Our Preferred Alternative to address mercury contamination uses Land Use Controls. These controls may require builders to test soil for mercury before starting construction. They also let people know if a property has mercury contaminated soil when buying a house. We will use community outreach and education programs to make sure word gets out about these controls.

The State of Nevada will:

- Post more signs in English and Spanish about not eating certain mercury contaminated fish.
- Conduct targeted outreach and public education about the health risks of eating certain fish waterfowl and wild plants.
- Survey fishing practices to determine if and how people might be eating the fish waterfowl and wild plants.
- Monitor environmental mercury levels in targeted areas.
- Use a **Long-Term Sampling and Response Plan** to manage construction in areas where there are unsafe mercury levels. This plan helps prevent mercury from spreading and works well in Operable Unit 1.

EPA, the U.S. Fish and Wildlife Service and the U.S. Geological Survey did studies on wildlife. We found:

- no major risks to wildlife from mercury exposure; and
- inconclusive information about risks to birds that eat fish.

As such, our plan to reduce exposure will focus on protecting human health.

How Much Will EPA's Preferred Alternative Cost?

The estimated cost of this interim plan is $23.6 million over 30 years. For details, please refer to the Proposed Plan: epa.gov/superfund/carsonrivermercury.

WE WANT TO HEAR FROM YOU!

Community meeting

Comment on Our Proposed Plan

You can learn more by:

- watching our recorded presentation on the Proposed Plan; and
- reading the plan and the Administrative Record, which has key site documents by going to: epa.gov/superfund/carsonrivermercury or at libraries listed in the Proposed Plan.

Due to Covid-19, EPA staff are unable to travel to the Carson River Mercury Site communities for an in-person public meeting and will use the recorded presentation on this website instead to summarize.

Send written comments by email to: bain.andrew@epa.gov or mail, **postmarked no later than November 15, 2021**, to the address below, or comment orally by leaving a voicemail at the toll-free number below:

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Scan the QR code with your phone camera.

Para ver la presentación resumida del Plan propuesto con subtítulos en español, visite nuestra página web: epa.gov/superfund/carsonrivermercury