



STAFF REPORT

Agenda Item: 10B

Report To: Open Space Advisory Committee

Meeting Date: February 28, 2022

Staff Contact: Lyndsey Boyer, Open Space Manager, lboyer@carson.org
Georgia Vasey, Senior Natural Resource Specialist, gvasey@carson.org

Agenda Title: For Discussion Only: Senior Natural Resource Specialist and Open Space Manager Report - Activities related to projects managed by the Open Space Division, including updates within the Carson River corridor.

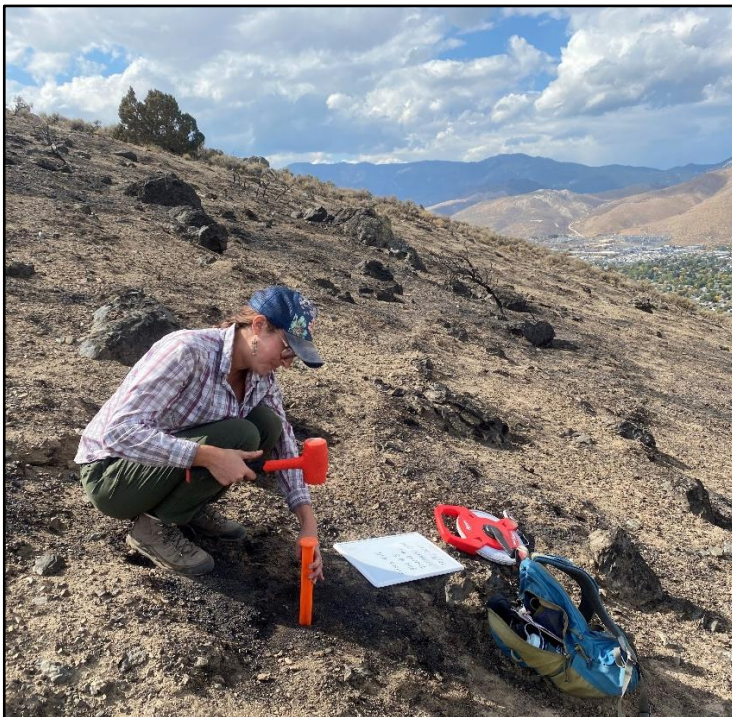
Staff Summary: See below.

Agenda Action: Other/Presentation

Time Requested: 15 minutes

Prison Hill Fire and Restoration

Following the fire on Prison Hill from July 2021, ten photo monitoring points and three vegetation transects per monitoring point were set up in October 2021 to document change over time at the Prison Hill burn scar. Repeat monitoring using the line point intercept protocol will take place later this spring, and annually thereafter, to determine native plant recruitment and invasion of non-native species.



Lyndsey Boyer, Open Space Manager installing permanent photo monitoring point.



Transect at the fourth photo monitoring point heading 0°North.

Additionally, aerial seeding of 4,000 pounds of perennial bunchgrass, forb, and shrub seeds was completed in early December 2021, which was followed by a series of winter storms through the New Year that likely enabled seed germination. So far, we are not seeing any erosion issues from the recent storms. Let's continue to hope for more precipitation to aide in successful revegetation of Prison Hill.



Helicopter taking off from staging area, next to the 4,000 pounds of seeds.



Helicopter aerially seeding the burn scar at Prison Hill in the late afternoon.

Carson River Updates

Pollinator Gardens

Staff are in the initial planning stages for increasing pollinator habitat along the Carson River corridor. Working with the head gardener for the Sagebrush in Prisons Project, funded by the Institute for Applied Ecology, locally adapted seeds from the Reno-Carson region were collected, including many wildflowers important for bees, butterflies, hummingbirds, and bats. These flowers and some perennial grasses will be grown at the nearby Northern Nevada Correctional Center (NNCC) with the help of a crew of inmates. This program is very unique in that it helps train those incarcerated important horticultural skills that can be transferable to jobs following their release and gives them a way to give back to their community by increasing the ecological health of our local Open Space and Park properties. During the project grow-out, Open Space staff will visit the prison at least once to lead an interpretive talk and activity with the inmates.

It is estimated that the total plants will be close to 1,100, which will be planted in four different pollinator gardens at easily accessible Open Space and Park properties along the 5-mile stretch of the Carson River Trail in Carson City. We are very excited to support the initiative to increase pollinator habitat as the 76th Bee City in the USA—setting a new precedent for the state of Nevada. Outplanting with volunteers is planned for this fall, and we hope to outreach to the community in other ways such as installing a bee hotel like the one at Foothill Trailhead. Updates on this project will continue as new developments occur.

Carson River Mercury Superfund Site (CRMSS) Proposed Interim Plan

The EPA is currently taking comment on a Proposed Interim Plan for reducing people's exposure to mercury from Operable Unit 2 of the Carson River Mercury Superfund Site. The site is located along the Carson River from Mexican Dam to the wetlands north, east, and south of Fallon, Nevada. Mercury contamination has the potential to impact the health of residents in Carson City and communities downstream through direct exposure, as well as consuming contaminated wildlife such as fish or wetland plants.

More information about the Proposed Plan is available by visiting EPA’s website: <https://epa.gov/superfund/carsonrivermercury> as well as in EXHIBIT A. This website includes the Proposed Plan and a summary brochure, a recorded video presentation on the Proposed Plan, an interactive Story Map, the full Administrative Record and additional site information. The EPA is accepting comments on this plan up until February 28, 2022. Carson City is working with the Carson Water Subconservancy District (CWSD) and the Carson River Coalition to submit comments on the proposed interim plan and its implications for managing the Carson River. Specifically, the Proposed Plan recommends several mitigation options, or alternatives, with the recommended alternative calling for continued soil monitoring for mercury, increased education and outreach to the public and restricting human consumption of contaminated wildlife and plants. This alternative will not fund bank stabilization or other mechanical mitigation measures. Lastly, the proposed alternative would impose stronger restrictions and permitting requirements for bank stabilization activities, making it more challenging for agencies to complete this important work.

Community Programs and Education

In October 2021, Open Space staff helped support Snapshot Day, an educational and community-science volunteer stream monitoring event in the Carson River watershed. We led interpretive walks into Clear Creek with high school students at Fuji Park, covering topics on how to address the conditions of a stream.



Georgia Vasey, Senior Natural Resource Specialist helping a student plant salt brush at Moffat Open Space.



Volunteer from community program at Moffat Open Space planting sulfur-flower buckwheat.

Later that month, staff helped River Wranglers host a workday and education event with Empire Elementary School at Moffat Open Space. Rotations of students helped outplant in a formerly burned area, while the other groups of students engaged in various educational activities. In total, the students planted 128 plants! The following day, nine community volunteers helped finish up the planting at Moffat Open Space, for a total of 130 plants. Staff and the students can’t wait to see how much the plants grow by this spring, as perfectly timed October rainstorms helped give sufficient moisture to the new plantings.

Lastly, in November, Open Space staff hosted a volunteer planting program along the new trail next to Buzzy's Ranch to restore the former staging area, for a total of 231 plants. Staff are excited to restore and diversify this area to enhance the aesthetic value of the trail and make it more desirable for wildlife.

Horsecreek Ranch Monitoring

See agenda item 6 for updates on the Horsecreek Ranch Conservation Easement Monitoring.

Cultural Review (Section-106 Projects)

Architectural Resource Monitoring Report (Silver Saddle Ranch)

Annual evaluation of historic buildings and infrastructure at Silver Saddle Ranch was completed at the end of December 2021 and sent to the Nevada State Historic Preservation Office. This report specifically addresses current needs and concerns regarding the cultural resources at Silver Saddle Ranch, which helps the Open Space Maintenance Coordinator prioritize achievable tasks for his work plan in 2022. Some of these tasks include replacing missing shingles, repainting the trim of certain buildings, and maintaining board and batten siding.

OPLMA Memo

Staff are working with a consultant to develop a memo and associated report that provides a comprehensive inventory of all Section 106 efforts associated with OPLMA conveyed lands. Since the transfer of approximately 5,452 acres of land from the federal government in 2015, the City has been responsible for completing cultural review efforts before undertaking any ground disturbing activities – including construction and routine maintenance. To better manage these lands, the City first needs a better understanding of the cultural review efforts that have been previously completed across the properties. This will help inform project priorities, professional service contract budgets, and ensure the City remains in compliance as it relates to the cultural resource review requirements associated with OPLMA conveyed lands. This project is a significant undertaking and is anticipated to be completed over the course of at least two years.

Kings Canyon Road and Trailhead

Kings Canyon Dirt Road

In 2019, Carson City was awarded \$142,000 from the Recreational Trails Program (RTP) to fund the repair of the first two miles of the dirt portion of Kings Canyon Road, from the Waterfall Trailhead up the saddle of Kings Canyon Road near Horsecreek Ranch. Construction began on this project in mid-November and should be complete by mid-February. Once complete the dirt road portion of Kings Canyon will be much safer and will allow for better access for both recreationalists and emergency vehicles.

Kings Canyon / Waterfall Trailhead

See update under Trails Coordinator Report.

Land Acquisitions

Clear Creek - The Clear Creek Trail and Trailhead has been an ongoing collaborative project with many different public, private, corporate, and non-profit partners since 2008. In 2019, in collaboration with Nevada Land Trust, Carson City hired an appraiser to identify potential value to engage further in discussions with Nevada Division of State Lands. Since then, the Tahoe Transportation District (TTD) has also engaged with Nevada Land Trust with the potential to acquire these lands and develop a ride share parking lot to decrease traffic congestion in the Basin. Based on this direction, the appraisal will likely be transferred to and paid by TTD. Carson City supports this avenue as it would achieve project goals of developing a larger trailhead and formalizing the final segment of the Clear Creek Trail that is on the property.

Old Woods Ranch

No updates since previous meeting. 10-18-2021

Personnel

Volunteer Coordinator - In early January, staff brought on Amy Bridgham to serve as the Department's AmeriCorps Volunteer Coordinator. She will be working with us through the end of June – assisting with project development and leading volunteer activities such as weekly weeding events and clean-ups, Adopt-a-Trail Program, Eagle Scout projects, Mutt Mitt programs and more. We look forward to scheduling a suite of routine volunteer events to assist staff with projects this spring!

Quality of Life Celebration

The Parks, Recreation & Open Space Department celebrated the 25th Anniversary of the passage of the Question 18, Quality of Life Initiative at a day at Silver Saddle Ranch in October. The passage of the ballot initiative led to countless improvements in our community including land preservation, creation of exciting trail routes with regional connectivity and construction of new recreation facilities. Staff were so proud and excited to celebrate this incredible accomplishment within our community. It was a beautiful fall day at the Ranch, featuring live music from Sierra Sweethearts and cowboy poetry from Johanna Foster and Larry Marinel. We also had information tables from Muscle Powered, Tahoe Mountain Milers, and vendors from Great Basin, the Bus Boy, and Deadtruck Graphics. We had a steady stream of visitors throughout the day, with more than 100 visitors at our peak!



Sierra Sweethearts play at the 25th Anniversary Celebration of Quality-of-Life in Carson City.



Carson City residents enjoying the Quality-of-Life Celebration.

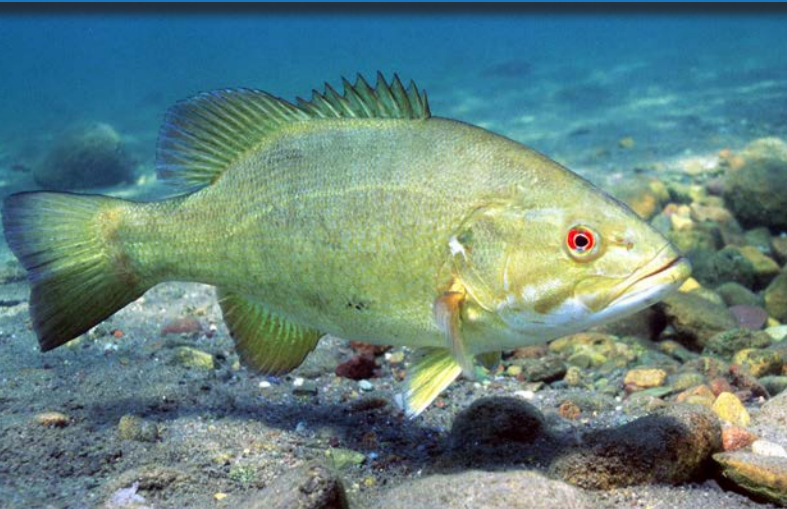
Events (Carson River area and elsewhere)

Please see below for events put on by our Department throughout Open Space and Parks. For more information on joining an event, please visit our Facebook page: <https://www.facebook.com/CCPRDept/>

Date	Event	Location	Primary Staff and/or Other Notes
Sat, January 1	Silver Saddle Ranch Historic Tour	Silver Saddle Ranch	Park Rangers
Sat, January 1	Winter Tot Trot	Carson River Park	Park Rangers
Sat, January 8	Ascent Winter Trail Run	Centennial Hills	Gregg Berggren
Sat, February 5	A Night Under the Stars	Silver Saddle Ranch	Park Rangers
Sat, February 12	Ascent Winter Trail Run	Prison Hill	Gregg Berggren
Wed, February 16	Winter Full Moon Hike	Prison Hill, 5 th Street	Park Rangers
Sat, February 26	Tails and Trails	Riverview Park	Park Rangers

Sat, March 5	Silver Saddle Ranch Historic Tour	Silver Saddle Ranch	Park Rangers
Sat, March 12	Women in the Wild	Wild Horse Trail	Park Rangers
Sat, March 26	Sunrise Forestry Hike	Kings Canyon Trailhead	Park Rangers
Sat, April 2	Escape from Prison Hill	Silver Saddle Ranch; Prison Hill	Gregg Berggren
Sat, April 16	Ascent Winter Trail Run	C-Hill, Ash Canyon, Long Ranch	Gregg Berggren
Fri, April 29	Arbor Day Tree Planting	TBD	Park Rangers
Sat, May 7	Kid's Community Fishing Day	Bailey's Pond	
Sat, May 14	Community Clean-up/Dropoff Location	Carson River Park	
Sat, May 14	Kids to Parks Day; Junior Ranger Adventure	Silver Saddle Ranch	Park Rangers
Sat, May 14	FOSSR Spring Open House	Silver Saddle Ranch	Lyndsey Boyer
Mon, May 16	Spring Full Moon Hike	TBD	Park Rangers
Wed, May 25	Choose Your Cruise Bike Ride	TBD	Gregg Berggren

Carson River Mercury Superfund Site



AT A GLANCE

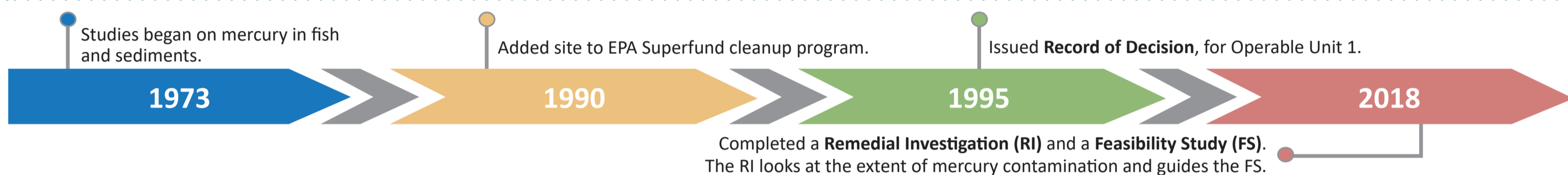
Summary of EPA's Preferred Plan for Addressing Contamination at the Carson River Mercury Site

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.



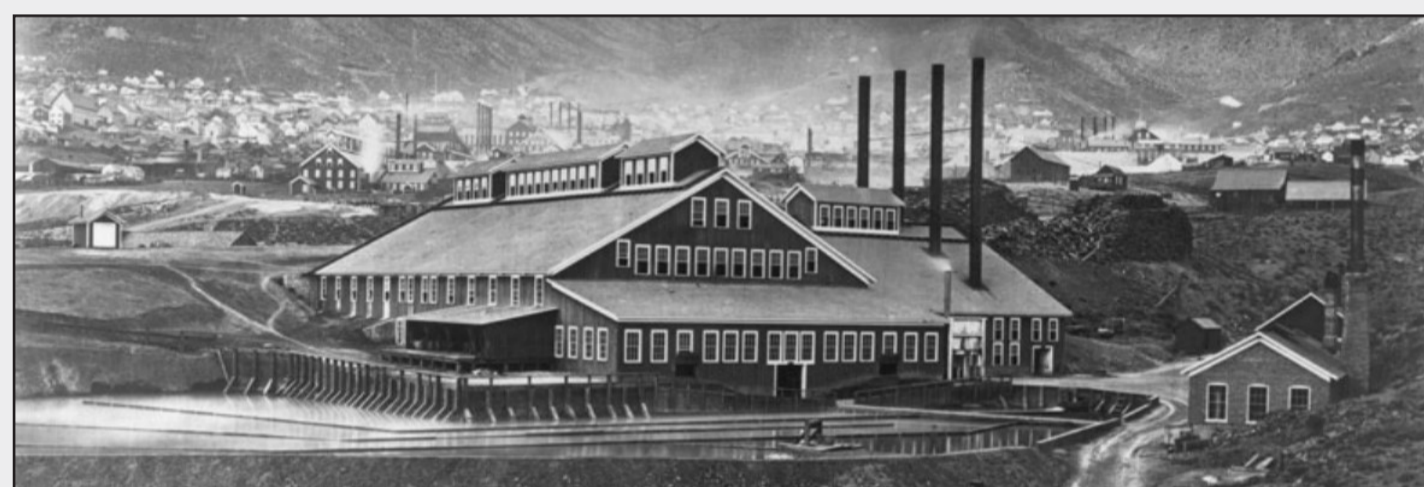
Site History

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**
- sediments** (earthen materials that settle to the bottom of a water body)
- waterways**
- 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:

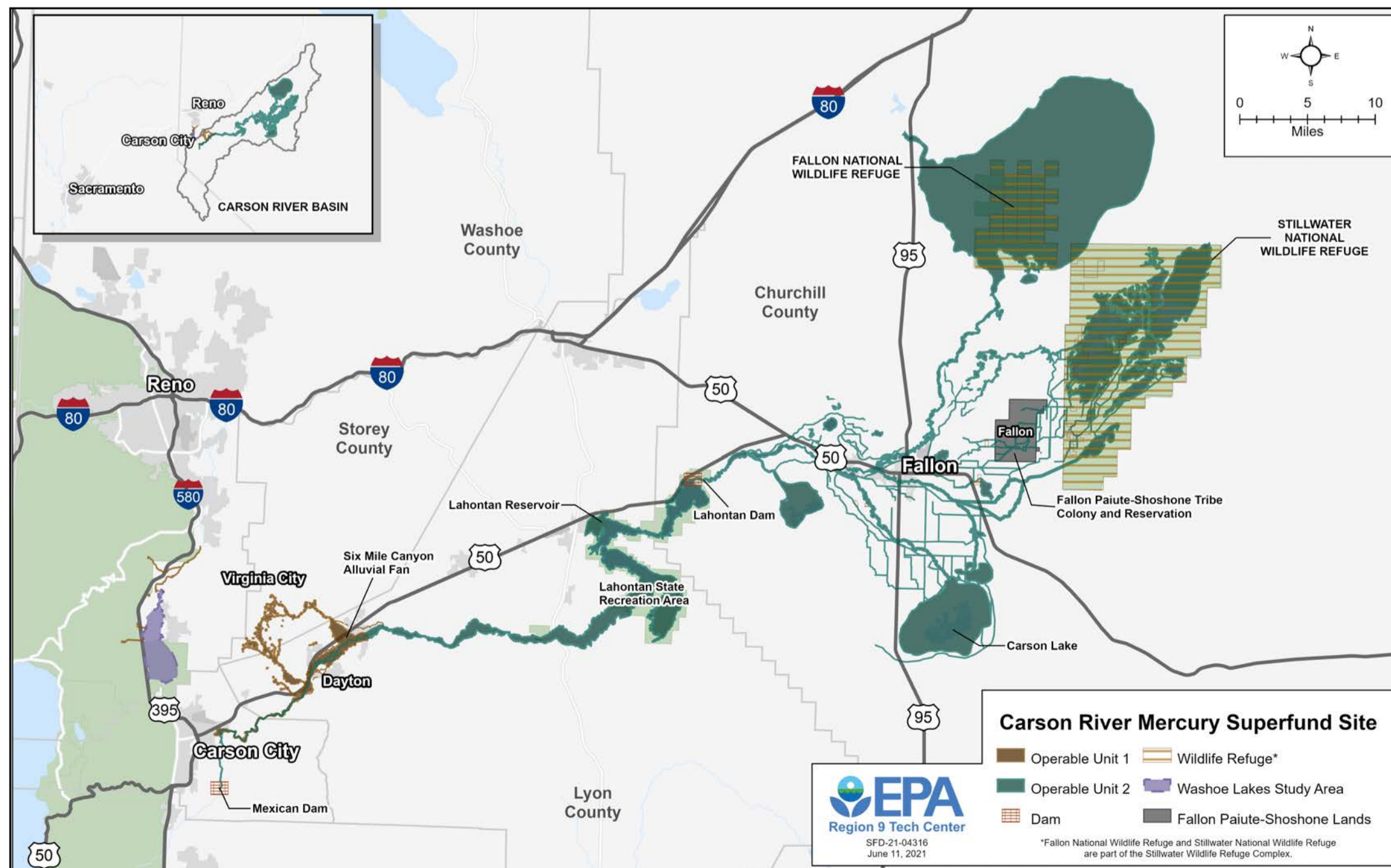
- recreation**
- conservation**
- farming**
- commercial and residential development**
- wildlife habitat**



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



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



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.

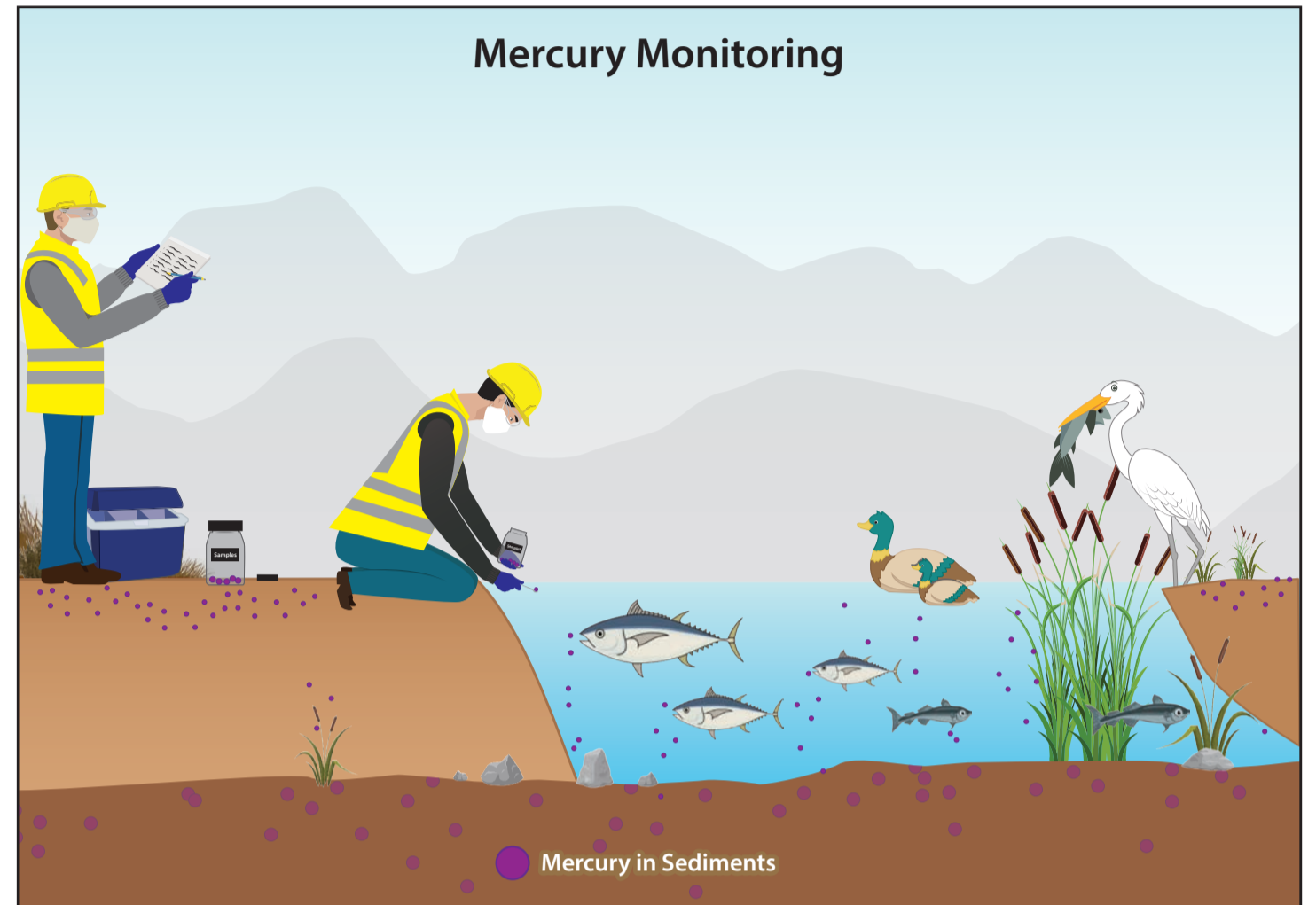
Methylmercury Bioaccumulation: Bacteria changes mercury into its more toxic form—methylmercury. Methylmercury builds up as it moves through the food chain beginning with the algae. As bigger fish eat smaller species, they absorb more methylmercury. As a result, game fish contain some of the highest mercury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



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

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.

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:

EPA Contacts

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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

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.

