

BASIN BULLETIN



Updates on the Coeur d'Alene River Basin Cleanup

December 2014

2014: A Big Year for the Cleanup

The year 2014 was a big one for the cleanup. We made major progress in protecting the health of families, communities, and the local ecology. We share these achievements with the Idaho Department of Environmental Quality and other partners. Most cleanup work is paid for with settlement funds, instead of taxpayer funds. Here are a few 2014 project highlights. We:

- Started major cleanup actions in Ninemile Creek to control sources of heavy metals.
- Began construction of a new repository in Lower Burke Canyon.
- Began building an add-on at the Big Creek Repository.
- Completed 95 property cleanups.
- Completed work on nearly 18 miles of paved roads, that serve as a barrier to contamination in community areas.
- Worked on designs for an upgrade to the Central Treatment Plant and Groundwater Collection System.
- Took on 4 projects to protect community areas that have already been cleaned up.
- Completed a river bank and beach cleanup project.

Read on for more information about some important projects. We look forward to another great year in 2015!

In This Issue

- Ninemile WCA Controls Pollution Sources 2
- Cleaning Up Interstate-Callahan Rock Dumps 2
- New Community Involvement Plan Available 2
- Fixing a River Bank in the Lower Basin 3
- Protecting Remedies Protects Local Communities 3
- Unpaved and Paved Roads Remediation 4
- Remediation Makes Headway in Canyons 5
- Repositories An Important Part of the Cleanup 5
- EPA to Review Coeur d'Alene Basin Cleanup 5
- Health Signs Get Needed Attention 5
- 2014 Blood Lead Screening Results 6
- Raising Community Awareness about Lead 6
- Special Feature: Cleanup Helping Water Quality 7
- Special Feature: Rose Lake School Remediation 8
- Keeping Our Cleanup Green 9
- Coming Full Circle 9
- Cleanup and Lead Education Public Outreach 10



Thanks to mild fall weather, the construction season ran long this year. A longer construction season means more work gets done and seasonal jobs last longer. Hooray!

During this holiday season, we send out a big Thank You to our partners, work crews and local residents. It's been a big year for the cleanup, and we couldn't have done it without you!

Ninemile WCA Controls Pollution Sources

One major success for the cleanup this year is the progress in Ninemile. This year, workers finished construction of the new Waste Consolidation Area in the East Fork of Ninemile. It is high up in the watershed. The WCA will take in waste from cleanups in the area over the next 10-12 years. It has been engineered to prevent infiltration and minimize runoff. Moving contamination from many sites into one smaller, managed site helps keep it from moving downstream. Once work at the two Interstate-Callahan rock dumps is complete (see below), crews will start on the Success Mine cleanup in 2016.

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206-553-6326 or 800-424-4372 ext. 6326



Cleaning Up Interstate-Callahan Rock Dumps



This year, crews removed about 160,000 cubic yards of contaminated waste rock and mine tailings from the upper and lower rock dumps from Interstate-Callahan Mine. That material has been placed in the WCA (see above). Workers have been adding clean soil and reshaping the land to its original topography. Amended cover-soil has been track-walked, hydro-seeded and covered with erosion control mat or brush. Work will continue there next year, mainly in the creek, to remove contaminated sediments and realign the creek to its natural channel. This work is taking place up in the East Fork of Ninemile.

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New Community Involvement Plan Available

With the help of many local people, the EPA has made a new community involvement plan for the Coeur d'Alene Basin Cleanup. The plan lays out how the EPA, with its partners, informs and involves the community. It also summarizes local views about the cleanup and community involvement. We welcome your ideas for improving our public outreach efforts any time. Thank you to all the people who helped shape this plan. See the plan at <http://go.usa.gov/vvgG>

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Fixing a River Bank in the Lower Basin

Reducing risks to people and wildlife is the goal of the recently-completed Kahnderosa project.

This pilot project in the Lower Basin used an innovative riverbank stabilization technique. Instead of riprap, workers installed “burritos” of soil wrapped in natural coconut-fiber fabric. Then they planted thousands of willows horizontally into the river bank.



The growing roots will hold the soil in place. The willows will help slow the water, to prevent erosion. The work protects the riverbank and helps keep contamination out of the river. It also helps prevent contact with soils in the riverbank that contain high concentrations of lead (up to 10,000 ppm). The project includes a new access pathway and is designed to be low maintenance.

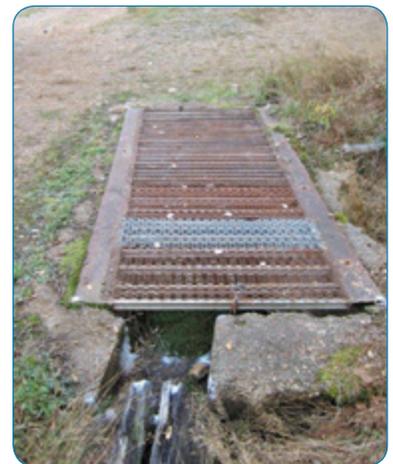
CONTACT: **Ed Moreen**
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 208-664-4588

Protecting Remedies Protects Local Communities

A large amount of remedy protection work got done this year. Work took place for Shields Gulch, Meyer Creek, Little Pine Creek, and Kellogg’s Portland Road. This work is designed to keep cleaned up areas clean. Preventing recontamination helps to protect the health of people and the environment. These projects also help protect private and public property from flooding and storm water damage.

The overall effort has been collaborative. A big thank you to everyone involved -- the local jurisdictions, mayors, work crews, property owners, impacted businesses and residents, and many others!

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Thank you to our partners at the Idaho Department of Environmental Quality for their many contributions of text and photos for the Basin Bulletin.

Unpaved Public Roads: Remediation Complete

DEQ and its contractors have completed the remediation of all heavy-metal contaminated public unpaved roads in the CDA Basin from Harrison to Lookout Pass. Outside of the original 21-square-mile Box, DEQ sampled 347 unpaved public road segments. DEQ found that 109 of those segments required remediation because of exceedances in heavy metal contamination levels. Those 109 segments were remediated either through the Basin Property Remediation Program, the Remedy Protection Program or the Unpaved Public Roads Remediation Program. The original estimated direct construction cost for the remediation was over \$14 million prior to sampling. The program was completed over four years. The final actual construction cost for the 22 segments completed under the Unpaved Public Roads Remediation Program was \$1.35 million. Nineteen segments were completed in 2014. The local road jurisdictions have assumed responsibility for operation and maintenance of all remediated public road segments.



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Paved Roads: A Successful Second Year for Communities



The Paved Roads remediation program completed a successful second year through the hard work of the local jurisdictions, their engineers and construction contractors. Box communities remediated 9.6 miles of roads in 2014, bringing the two-year Box total to almost 14 miles. About 8.3 miles were completed in the Basin this year, for a Basin total of nearly 14 miles. The budget for Box work in 2014 was about \$4.48 million and is about \$4.7 million for 2015. For the Basin, the 2014 budget was about \$3.88 million. For 2015 it is \$4.4 million. Most projects have involved complete rebuilds of the streets that are in the worst of conditions.

After each construction season, DEQ and EPA host “lessons learned” meetings: one with local governments, and another with their roads engineers and utilities. The jurisdictions have done a great job of cooperating with one another. Some communities have deferred projects to allow other communities to construct projects in concert with other infrastructure work, such as sewer and water systems. Also, the Silver Valley communities passed bond measures to improve water and sewer lines that can now be coordinated with roadway remediation. It is important that roads and infrastructure projects be synchronized so the streets only have to be torn up once.

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Remediation Makes Headway in Canyons

Idaho DEQ contractors North Wind Construction and Stewart Contracting cleaned up 95 properties this year. Many of them were located in side gulches and canyons near historic industrial activity. The Basin Property Remediation Program remediated over 1,100,000 square feet of property. That is equal to 25 ¼ acres or 19 ¼ football fields. This work generated just over 36,000 cubic yards of material, which is managed at both the Big Creek and East Mission Flats repositories. Find more information about repository development and management at www.deq.idaho.gov/bunkerhillsuperfundsite

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Repositories An Important Part of the Cleanup



In 2014, work began on a new repository in Lower Burke Canyon. Annexation at the Big Creek Repository, which is filling up, is also taking place. Operations continue at East Mission Flats and Page Repositories, as well. Superfund cleanup is being done in the Coeur d'Alene Basin to address health risks to people and the environment. Waste repositories are an important part of the cleanup. Soils from cleanups of residential and commercial properties contain metals, like lead and arsenic. These soils need a place to go to be safely contained. Waste repositories are carefully chosen and engineered to securely contain contaminated soils

over time, to reduce impacts to people and the environment. Repositories will be managed long after they are closed to be sure the contaminants remain contained and secure. Certain repositories also take in material from property owners who do their own work under the Basin Institutional Controls Program.

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EPA to Review Coeur d'Alene Basin Cleanup

The EPA has started its fourth Five-Year Review of the Bunker Hill Superfund Site, also known as the "Coeur d'Alene Basin Cleanup." The EPA reviews sites where contaminants remain in place at least every five years. The review ensures that cleanup actions are protecting people's health and the environment. Bunker Hill was listed as a Superfund site in 1983. Over the past 30 years, the EPA has made significant cleanup progress to make the area a healthier place for people to live, work, play, and raise their families. However, heavy metals from historical mining and smelting still present risks.

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Health Signs Get Needed Attention

PHD's health signs at boat launches and popular recreation areas along the CDA River are getting a bit of needed attention. Signs are being inventoried for their condition and to ensure they are located in high-use areas. Signage at the Cataldo Boat Launch received a new roof and was placed beside other signage in the picnic area. Signs give tips about 'playing clean' and recreating safely.

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Photo courtesy of Denna Grangaard



2014 Blood Lead Screening Results



Each summer, at the height of recreation season, the Kellogg Panhandle Health District hosts free blood lead screening for children and pregnant mothers living in the area. Children's blood lead averages in the Silver Valley and Chain of Lakes are trending closer to the national average, over time. Levels continue to be elevated enough that screenings and community awareness are encouraged.

Blood lead levels averaged 3.1 µg/dL for the 81 children tested during the 2014 screening event. The term "µg/dL" means micrograms per deciliter, and is a way of communicating the amount of lead present in a person's blood. The lower the number, the better.

- 4 children in the Box were tested and the average blood lead level was 2.7 µg/dL.
- 77 children were tested in the Basin and the average blood lead was 3.1 µg/dL.
- In the Basin, 5 children had levels over CDC's reference value of 5 µg/dL.

A \$30 cash incentive was offered to children between the ages of 6 months and 6 years in the Basin. No incentive was offered in the Box. The national average for children ages 1-5 is 1.3 µg/dL, based on data from the CDC (NHANES) 2007-2010. In the mid 1970's, children's blood lead levels in the area averaged 45 µg/dL, well above national average at the time.

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Did you know?

On average, a child will absorb 40% to 70% of ingested lead.

Less lead will be absorbed when the child has a full stomach and eats healthy food.

100% of the lead is absorbed when lead contaminated dust is breathed in.

Testing in the summer when children are more likely to be outdoors will give parents more relevant information about what activities elevate blood lead levels.

Recreating along the shorelines or floodplains of the CDA River (Chain of Lakes) and historic mining areas can contribute to high blood lead levels.



Raising Community Awareness about Lead

The Panhandle Health District has provided annual lead screening in the Box since 1985 and in the Basin since 1996. PHD sends direct-mail invitations, posts newspapers ads, and airs announcements on local a.m. radio. PHD and DEQ provide lead health presentations in eight schools each year to students in pre-K through 3rd grade. The EPA and DEQ public outreach coordinators attend community events and help raise awareness of healthy choices, healthy recreation areas, and the benefits of annual blood lead screening. PHD now offers *year-round* lead screening to children living and recreating within the CDA River Basin. If you live in the region and recreate in the Lower Basin, schedule an appointment by calling **PHD** at 208-783-0707.

Check out Panhandle Health District's updated web page about lead health information and the Institutional Controls Program.
<http://panhandlehealthdistrict.org/environmental-health/icp>

Special Feature**Cleanup Helping Water Quality**

A new report published by the U.S. Geological Survey shows that the EPA-led efforts to clean up historical mining contamination in the Coeur d'Alene and Spokane River basins are improving water quality. Concentrations of three trace metals of concern—cadmium, lead and zinc—have been significantly reduced since cleanup activities began in the 1990s.

From the late 19th century through 1987, more than 130 million tons of lead, zinc and silver sulfide ores were mined from the Coeur d'Alene mining district. Ore processing often included dumping large amounts of metal-rich tailings into and along area streams that then transported those metals downstream.

In 2004, the USGS, in cooperation with the EPA, established a water-quality monitoring network totaling 18 sites from Mullan to Post Falls, Idaho. USGS hydrologist Greg Clark analyzed water-quality data collected from October 2009 through September 2013. Clark also examined data dating back to the early 1990s to look for any long-term trends. Results of those analyses include:

- ▶ Concentrations of cadmium, lead and zinc have decreased significantly in streams throughout the Coeur d'Alene and Spokane River basins since the early 1990s. In the South Fork Coeur d'Alene River near Pinehurst, the concentrations of each of the three metals decreased by about 65 percent between 1992 and 2013. In most streams, however, concentrations of cadmium and zinc continue to exceed water-quality criteria established to protect aquatic organisms from toxic exposure to these metals.
- ▶ The rate of decrease in metal concentrations in streams has slowed since 2003. Continued decreases will require a reduction in the contributions of metals to the South Fork Coeur d'Alene River from Canyon and Ninemile Creeks and from groundwater underlying the Central Impoundment Area near Kellogg, Idaho. The EPA is implementing remedial actions in these locations.
- ▶ Coeur d'Alene Lake continues to receive large amounts of metals from upstream sources. From 2009 through 2013, the lake received an annual average of nearly 5 tons of cadmium, 400 tons of lead and 700 tons of zinc, about 99 percent of which were delivered from the Coeur d'Alene River. Of these totals, about 1.5 tons of cadmium, 380 tons of lead and 350 tons of zinc settled in the lake; the remainder flowed out of the lake to the Spokane River.

“This is good news for the people of the basin,” said Rick Albright, EPA Superfund cleanup director in Seattle. “We still have a long way to go in our cleanup efforts, but it’s nice to have scientific confirmation that we’ve made solid, measurable progress in reducing metal loads and improving area water quality. The USGS report underscores that we’re on our way to celebrating the basin’s recovery and ensuring that it remains a beautiful, healthy place to live, work and play.”

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208-387-1324

Special Feature**'It says a lot about a community when...'**

by Denna Grangaard, Idaho Department of Environmental Quality

On a sunny corner in Rose Lake, Idaho, remediation contractors spread healthy soil and raked new wood chips onto the grounds of the historic Rose Lake School. The school property is on the National Register of Historic Places in Idaho. The school is now a community center and museum tended by the Rose Lake Historical Society.

According to Idaho State Historical Society records, the school is significant for its historic association with the initial development of the Rose Lake community. The Rose Lake School was built around 1914, the gymnasium was built in the 1930s, and a lunchroom was added in the 1950s. The Board renovated the kindergarten classroom into a kitchen and spacious community center, complete with seasonal decorations and cookies.

Rose Lake Historical Society Board member, Carolyn (Coast) Stricklan, was a student of the school as were her father, Jack Coast, and her daughter. In Jack's time, the school held classes for all grade levels. Jack, as a 12th-grade student, also drove the school bus. "We had the best teachers," remarked Gail Chatfield, secretary of the Board, "they were dedicated and well appreciated."

The heart of the Rose Lake community runs as deeply now as it ever did. The Board continues to care for the property and museum and offers community services like weekly senior meals, monthly Idaho Fish and Game sportsmen's breakfasts, community yard sales, and annual picnics.

When soils on the property tested high for metals, the Board was involved in putting a plan in place to remediate the soil, pave the parking lot, and replace material in the playground. Board President Mike White provided a point of contact for the IDEQ and their contractor during property remediation this summer. Mr. White said, "The property representative Spenser Erlendson (North Wind Construction, Inc.) was good to work with through the process."

The improvements stemming from the remediation are appreciated by the community. Elderly members of the community can now walk from the newly paved parking lot to the community hall. One community member mentioned that the grounds would be a beautiful place to have a wedding. According to the board newsletter, Boy Scout projects are planned for the playground.

"The remediation was a great success. It turned out really nice," remarked board member Ray Chatfield, with Gail Chatfield commenting that "it wasn't as painful of a process as we thought it would be."



Keeping Our Cleanup Green

We're working to green our cleanup! The Coeur d'Alene Work Trust requires contractors to use green remediation practices in their cleanup work. At the direction of EPA, the Coeur d'Alene Trust performs about \$20M in cleanup work each year. Green remediation includes practices that:

1. Minimize energy use and maximize use of renewable energy (reduce idling of trucks and equipment and use local sources for materials/equipment).
2. Minimize air pollutants and greenhouse gas emissions (use on-site dust and noise control, use clean fuel incentives in contracts for trucks and heavy equipment, and wherever possible and in consideration of the capabilities of the local contractors maximize use of equipment and vehicles with advanced emission controls).
3. Minimize water use and impacts to water resources (phase construction to minimize water needs).
4. Reduce, reuse, and recycle material and waste (minimize waste generation and use recycled products; utilize supplier take-back and local materials).
5. Maximize electronic document usage (use e-mail, file electronic submittals in lieu of hard copies).

As the work continues in the Coeur d'Alene Basin, efforts will be made to identify more steps contractors could take to reduce emissions from heavy duty diesel construction equipment.

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Coming Full Circle

By Caj Matheson, Restoration Partnership



The Restoration Partnership (the Coeur d'Alene Basin Natural Resource Trustees) and EPA have begun efforts to coordinate restoration work with remediation. These efforts will ensure that the Basin environment has the best opportunity to come full circle to be as beautiful, abundant, and clean as possible. The result will be an environment that is not only safe, but will be able to provide valuable services, such as hunting and fishing, to the public.

“Coordination is preliminary at the moment but is instrumental in giving each group insight to the principles that are important to one another,” said Jo Christensen, of the Partnership (U.S. Forest Service).

The recent Khanderosa Riverbank Stabilization Pilot Project is an excellent example of current coordination efforts. Though it was an EPA-led cleanup project, the Partnership provided design-expertise important for providing habitat for aquatic species and provided on-site consultation during construction. “Projects like the Kahnderosa have demonstrated that when we all pull on the rope in the same direction, we make great strides in cleanup. That’s really the bottom line,” said Bill Adams of the EPA.

In the end, this coordination will allow both the EPA and Restoration Partnership to identify project priority areas as well as leverage their respective funds.

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Thanks for stopping by!

Many attendees at the November *Our Gem Symposium* and *Spokane River Forum* visited the DEQ/EPA exhibit booth. We chatted about cleanup progress, how beautiful the Silver Valley looks, and how to get info about playing clean at recreation areas. We enjoyed meeting residents of both Idaho and Washington, students, teachers, scientists, and others.

STEM Expo Event Covers Cleanup

The GearUP program in north Idaho schools held a STEM Expo at North Idaho College this year. STEM stands for Science, Technology, Engineering and Math. Terry Harwood, Basin Commission Executive Director, and Denna Grangaard, DEQ Public Outreach Analyst, featured information on the Basin Cleanup. They covered historical contamination, blood lead levels, and cleanup activities. They shared current examples of Superfund jobs that reflect careers in field science, construction, and engineering.



Lead Education at Local Health Fair

The DEQ/EPA Outreach Team staffed a booth at the Shoshone Medical Centers Kids' Health Fair this fall. This year's theme was "Healthy Idaho: The Great Outdoors." The team provided locally-relevant lead intervention education and environmental trivia for about 230 children and their parents.

For information about booth exhibits related to the cleanup, **contact:**

Rene Gilbert
208-659-5237

Denna Grangaard
208-783-5781

Want Timely Updates? Visit us on Facebook!



One of the best ways to stay up-to-date on the cleanup work is to sign up for our Facebook page. Watch for two or three short posts a week. We invite you to check it out!

Contact: **Andrea Lindsay**, 800-424-4372 ext. 1896, 206-553-1896 or lindsay.andrea@epa.gov

Visit: www.facebook.com/CDAbasin

Documents

North Idaho College Library

Molstead Library
1000 Garden Avenue – Coeur d'Alene, ID 83814
208-769-3355

Wallace Public Library

415 River Street – Wallace, ID 83873
208-752-4571

Spokane Public Library

906 West Main Avenue – Spokane, WA 99201
509-444-5336

EPA Field Office

1910 Northwest Boulevard, Suite 208
Coeur d'Alene, ID 83814
208-664-4588

EPA Seattle Office

Superfund Record Center
1200 Sixth Avenue – Seattle, WA 98101
206-553-4494 or 800-424-4372

St. Maries Library

822 W. College Avenue – St. Maries, ID 83861
208-245-3732

Learn More about the Coeur d'Alene Basin Cleanup



on the Web...

www.epa.gov/r10earth/bunkerhill

Opportunities to Get Involved

Basin Environmental Improvement Project Commission (BEIPC)

Executive Director:

Terry Harwood, 208-783-2528

www.basincommission.com

Citizens Coordinating Council (CCC)

Chair: **Jerry Boyd**, 509-220-1453

 www.basincommission.com/ccc.asp

The Basin Bulletin is published three times a year by the U.S. Environmental Protection Agency.

The Basin Bulletin offers updates on the Superfund cleanup in the Coeur d'Alene Basin. For mailing list changes, to send comments on this newsletter, contact the editors, or submit articles for consideration, call Andrea Lindsay as noted below. Mention of trade names, products, or services does not convey, and should not be interpreted as conveying, official EPA approval, endorsement, or recommendation.

Alternative formats are available.

For reasonable accommodation, please call

 *Andrea Lindsay at 206-553-1896*

 *TTY users, please call the Federal Relay Service at 800-877-8339.*



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Inside...

- Major Cleanup Progress in 2014
- 2014 Blood Lead Screening Results
- Roads, Remedy Protection, River Banks
- New Grounds at Historic Rose Lake School
- USGS Data Show EPA Cleanup is Helping Water Quality
- Much More!



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