



EPA Region 8 Superfund and Land Revitalization
Annual Report | FY 2010

*Advancing Environmental Protection,
Strengthening Healthy Communities*







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“The future for further environmental progress and innovation in EPA Region 8 is bright.”



WELCOME

Welcome to the Fiscal Year (FY) 2010 Annual Report for the Region 8 Superfund program; this report provides a summary of EPA's activities and achievements in the Rocky Mountains and Plains Region over the past year. In 2010, we celebrated the 30th anniversary of the Superfund program and the 40th anniversaries of Earth Day and the founding of EPA.

Since 1980, the Superfund program has played a vital role in protecting human health and the environment across the United States. In our rural communities and cities, suburbs and industrial areas, the program responds rapidly to uncontrolled hazardous waste releases and cleans up the nation's most contaminated lands. In Region 8, EPA has been working hard to fulfill the program's mission, relying on scientific excellence, updated technologies, a network of dedicated partners and innovative approaches like our "enforcement first" policy to comprehensively and cost-effectively achieve the program's mission to protect human health and the environment.

Over the past three decades, Region 8 Superfund has listened and learned from the citizens, business owners and partners in other agencies and organizations across our six states and 27 tribal nations. The program has developed new tools and updated approaches that have effectively protected public health and restored the environment while also supporting the efforts of sustainable, resilient and livable communities to revitalize formerly contaminated, stigmatized areas. Today, Region 8's commitment to transparent, meaningful community engagement, sound science, robust enforcement and innovation remains at the core of our pursuit of excellence.

This report illustrates Region 8 Superfund in action. In 2010, we responded to emergencies of national significance, including the ongoing cleanup of the Libby Asbestos site in Montana. We invested resources from the American Recovery and Reinvestment Act to expedite environmental restoration, sustain employment and improve the health of communities. We enabled new opportunities for vulnerable communities through EPA's Community Engagement Initiative and related efforts.

Building on three decades of experience and expertise, Region 8 now looks ahead to the program's fourth decade. Through collaboration, scientific and enforcement excellence, fiscal responsibility, and the dedication and integrity of our staff, we will focus on achieving EPA's priorities for the future, including cleaning up our communities, expanding the conversation on environmentalism, and building strong state and tribal partnerships. The future for further environmental progress and innovation in EPA Region 8 is bright.

Carol L. Campbell

Carol L. Campbell
Assistant Regional Administrator
Office of Ecosystems Protection
and Remediation



Region 8 Superfund: An Overview

The Region 8 Superfund cleanup program plays a vital role in protecting human health and the environment. Region 8 responds to the release and potential release of hazardous wastes and cleans up sites in the Rocky Mountains and Plains Region. Region 8 serves Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 sovereign tribal nations.

Region 8 Superfund's activities include both short-term and emergency cleanups as well as long-term remedial actions at National Priorities List (NPL) and Superfund Alternative Approach sites. The emergency response program responds quickly to fires, train derailments, floods and other events involving the release of hazardous substances. The emergency response program also undertakes removal actions, short-term cleanups to address hazardous substances that pose an immediate health threat. The remedial program oversees long-term cleanup of the most complex contaminated sites.

From our offices in Denver, Colorado and Helena, Montana, Region 8 works closely with many partners – state, local and tribal governments, non-governmental organizations, businesses, communities and individuals – to ensure the protection of human health and the environment at these sites. EPA also plays a role at federal facilities like Department of Energy and Department of Defense sites.



Superfund 101

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), better known as Superfund, mandates that EPA respond to uncontrolled releases of hazardous substances that pose an immediate or future threat to human health and the environment. Superfund provides guidelines for locating, investigating and cleaning up the worst hazardous waste sites across the nation.

Photos: Region 8's offices in Denver, Colorado. Gold-level certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program, the facility is sustainably designed, includes a 20,000-square-foot green roof, and is EnergyStar-certified for energy conservation.



Finally, Region 8 is focused on ensuring that, following cleanup, Superfund sites are ready to be returned to beneficial use by communities. Region 8 works across EPA programs and with diverse partners to assess the extent of environmental problems more

comprehensively and ensure that future use considerations are integrated in cleanup decisions. This also leverages a wider range of resources and solutions to achieve cleanup and restoration goals. In the long term, it is our goal that all environmental cleanup and restoration activities will focus on the productive reuse and sustained protection of land and water resources.



Region 8 Superfund: The Big Picture

- *Superfund sites are scattered across Region 8.* Sites are located in rural and urban areas, require a variety of cleanup approaches, and include former and active mines, landfills, military bases, factories and other facilities. Many rural sites are large, encompassing thousands of acres in some cases.
- *Significant cleanup progress has been achieved.* Cleanup has been completed at 35 of the 73 Superfund sites in Region 8.
- *Superfund sites continue to be identified.* In addition to Region 8's final NPL sites, seven sites in the region have been proposed for listing on the NPL. Most recently, the ACM Smelter and Refinery site in Black Eagle, Montana was proposed for listing on the NPL in March 2010.



Historical aerial photograph of the ACM Smelter and Refinery.





FY 2010: *Measuring Outcomes*

The project descriptions in this report illustrate Region 8 Superfund’s innovative, collaborative efforts to protect human health and the environment over the past year. Our annual performance measure goals and program targets, presented below, provide a way to measure the program’s overall achievements and outcomes in FY 2010.

Government Performance and Results Act (GPRA) Performance Accomplishments

Final Site Assessment Decisions	39
Superfund-Lead Removal Action Completions	14
Voluntary Removal Actions Overseen by Region 8	6
Responsible Party-Lead Removal Completions	3
Site-Wide Ready for Anticipated Use	3

Superfund Program Federal Facility Measure Accomplishments

Decision Documents	6
Remedial Design Starts	1
Remedial Design Completions	1
Remedial Action Starts	2
Remedial Action Completions	5
Five-Year Reviews	2

Superfund Program Measure Accomplishments

Remedial Investigation / Feasibility Study (RI/FS) Starts	9
Record of Decision (ROD) Completions	3
ROD Amendment Completions	2
Final Remedy Selected	1
Remedial Design Starts	1
Remedial Design Completions	4
Remedial Action Starts	7
Remedial Action Completions	3
Five-Year Reviews	9
Partial Site Deletion Notices	2
Partial Site Deletions	1

Superfund Program Enforcement Measure Accomplishments

% of non-federal Superfund sites with viable, liable parties where enforcement action was taken prior to the start of remedial action	100%
Private party commitments for site study and cleanup (including cash outs)	\$16,033,000
Private party commitments for cost recovery	\$15,176,356
% of cost recovery cases greater than or equal to \$200,000 addressed before the statute of limitations expired	100%



Assessing Risks, Prioritizing Next Steps: Site Assessment

The Site Assessment program is the first door into the Superfund process. Region 8's Site Assessment program works with states and tribes to assess and prioritize hazardous waste sites for cleanup. The program evaluates sites to determine whether they qualify for listing on the NPL and consult with states and affected tribes to determine which sites should be listed. Site Assessment Managers evaluate sites for potential threats to public health and the environment. If it is determined that another program could better address site conditions, Site Assessment Managers direct sites to different programs, such as the Superfund emergency response program, the Resource Conservation and Recovery Act (RCRA) program or state voluntary cleanup programs.

Ongoing Groundwater Investigations in Pavillion, Wyoming

Responding to residents' water quality concerns, Region 8 is conducting ongoing groundwater investigations in Pavillion, a town of about 160 people in central Wyoming. Sampling results to date indicate the presence of hydrocarbons and other chemical compounds in groundwater. "EPA will work as long as necessary to ensure that Pavillion residents have safe water," said Region 8 Regional Administrator Jim Martin.

Region 8 staff hosted public meetings and met with private residents to provide health information and recommendations. Region 8 is working closely with government partners and EnCana, the primary gas operator in the area, to ensure that affected residents receive water and to address potential sources. This work includes securing access to alternate water sources and evaluating potential long-term solutions such as water treatment systems and infrastructure.

1980

President Carter signs Superfund law, creating the federal government's program to clean up the nation's uncontrolled hazardous waste sites and making polluters liable for toxic cleanups.



Superfund sampling team preparing a domestic well in Pavillion for sampling.



The American Recovery and Reinvestment Act: *Making a Difference*

The mission of the 2009 American Recovery and Reinvestment Act has been to create and sustain jobs, invest in economic growth, and foster accountability and transparency in government spending. The Recovery Act allocated \$7.22 billion for projects and programs administered by EPA, including \$600 million in new funding for Superfund site cleanup and \$100 million in new Brownfields program funding for the cleanup, revitalization and sustainable reuse of contaminated properties.

Through 2010, EPA Recovery Act resources have funded activities at 61 projects nationwide, boosting local economies by creating and maintaining more than 15,850 jobs while also protecting human health and the environment. In Region 8, the Superfund program has provided more than \$75 million in Recovery Act funding for seven Superfund sites in Colorado, Montana, North Dakota, South Dakota and Utah. Region 8's Brownfields program has provided more than \$5 million in loans and grants to communities in four states. The Recovery Act resources are helping to sustain employment, expedite environmental restoration and improve the health of communities.

The Recovery Act and Region 8 Superfund



At the **Arsenic Trioxide** site in southeastern North Dakota, Region 8 used Recovery Act funds to expand the rural water system to provide safe drinking water to rural residents with arsenic-contaminated groundwater. More than 180 households in Richland and Sargent counties have been connected to new water distribution lines with improved water treatment and distribution infrastructure.



Recovery Act funding has accelerated cleanup activities and restored aquatic health at the **Central City/Clear Creek** site, thirty miles west of Denver, Colorado. The site's remedy includes the capping of mine waste piles, revegetation and restoration of disturbed areas, and enhanced water treatment to protect human health and restore the health of the North Fork of Clear Creek.



In Utah, Region 8 expedited and completed the cleanup of the **Eureka Mills** site a year earlier than planned and under budget. Recovery Act funds were used to complete the stabilization and capping of mine waste areas, construction of drainage controls and the cleanup of lead-contaminated soils in residential areas. A total of 722 residential properties were cleaned up during the remedial action.



Near the historic towns of Deadwood and Lead in South Dakota, acidic and heavy-metal-laced water generated from mine wastes at the **Gilt Edge Mine** site impaired surface water quality in Strawberry and Bear Butte Creeks. Using Recovery Act funding, Region 8 is grouting the drainage ditches to minimize leakage of acid mine drainage and to accelerate the long-term cleanup of portions of the site, thereby addressing community concerns and protecting human health.



Recovery Act funding has expedited cleanup of heavy metals contamination across the 53-square mile **Upper Tenmile Creek** site in western Montana. To prevent human exposure to contaminants including lead, copper, zinc and arsenic, Region 8 is removing waste from residential yards and the Lee Mountain Mine and placing them in a repository. These efforts are also preventing future erosion and the distribution of wastes via Tenmile Creek, in order to protect the City of Helena’s water supply.



In the cities of Bountiful and Woods Cross, Utah, Region 8 is working to eliminate human exposure to tetrachloroethene and trichloroethene at the 400-acre **Bountiful/Woods Cross 5th South PCE Plume** site. Recovery Act funding is supporting the installation of groundwater extraction wells, monitoring wells and a water treatment system.



At the 1,200-acre **Summitville Mine** site in southern Colorado, Recovery Act money has funded the construction of a water treatment plant, enabling the early completion of the site’s remedy. Region 8 and the Colorado Department of Public Health and Environment collaborated on this final long-term cleanup activity to protect the Alamosa River ecosystem from heavy metals.

The Recovery Act and Region 8 Brownfields



In South Dakota, the **Sisseton-Wahpeton Oyate Tribe** used a \$200,000 grant to clean up hazardous substances at the Tekakwitha Old Orphanage and Boarding School Complex. The Tribe is now reusing the area as a recreational facility with ballparks and open space.



The **Colorado Department of Public Health and the Environment** is using \$1.35 million in Recovery Act funding to provide cleanup grants throughout the state. Projects to date include the cleanup of the former Martha/Rose Walsh Smelter in Silverton, the former General Chemical site in the City and County of Denver (see image), the Pueblo Ice House in Pueblo, and cleanup of Elysian Park in Jamestown.



Recovery Act funding is enabling the **City of Aurora, Colorado**, to provide low-interest loans for cleanup projects in the urban renewal area surrounding the Fitzsimons medical and technology campus and other redevelopment target areas.



The **City of Missoula, Montana**, is using its Recovery Act funds to provide cleanup grants at two important properties in the city, the Sawmill site (see image) and Burns Street Square.



The **Town of Kit Carson, Colorado**, used a \$200,000 Recovery Act Brownfields grant to clean up the Paxson Building site. The centrally located property was home to a variety of operations, including an automobile dealership, repair shop and a fuel station. With cleanup now complete, the property is ready for commercial use.



In February 2010, the **Town of Eaton, Colorado**, completed the acquisition of a long-vacant 43-acre sugar beet mill. The town’s goal is to return this large piece of property to productive use as soon as possible. Recovery Act funds were used to conduct a Phase I environmental assessment prior to acquiring the mill, and to conduct a Phase II assessment of the property to characterize contaminants that will need to be cleaned up prior to redevelopment.



The **Utah Department of Environmental Quality** is using a \$200,000 Recovery Act-funded grant to conduct environmental assessments at sites contaminated by petroleum throughout the state.



Recovery Act funding is enabling the **Bear Paw Development Corporation of Northern Montana** to inventory and prioritize brownfields and conduct environmental site assessments for hazardous substances and petroleum contamination.



In addition to grants, the EPA Brownfields program also provides contractual assistance to communities to conduct Targeted Brownfields Assessments. Through the Recovery Act, Region 8 is providing approximately \$700,000 for environmental assessments and cleanup planning.



Libby, Montana

Libby is a small town located in the northwest corner of Montana, 35 miles east of Idaho and 65 miles south of Canada. The town lies in a picturesque valley carved by the Kootenai River and framed by the Cabinet Mountains to the south.

The mine near Libby was the source of more than 70 percent of all vermiculite sold in the United States from 1919 to 1990. Vermiculite from the Libby mine was contaminated with a toxic form of naturally-occurring amphibole asbestos fibers (Libby Amphibole asbestos, or “LA”). Vermiculite from Libby was used in the majority of vermiculite insulation in the United States.



Protecting Human Health and the Environment: Superfund Cleanup

Region 8 Superfund is committed to protecting communities and the environment. The program’s dedication to this effort includes a comprehensive process that not only provides short-term relief for emergency needs, but also determines long-term solutions to attain and maintain human health and environmental restoration at complex sites like Federal Facilities and NPL sites. Since 1999, the program has been working aggressively to protect public health and restore the environment in Libby, Montana. In 2009, EPA announced a Public Health Emergency in the community.

Additional Remedies Selected for Asbestos Contamination in Northwestern Montana

EPA’s work in Libby began in 1999, when an Emergency Response Team was sent to investigate local concerns about asbestos-contaminated vermiculite. Since that time, EPA has been working closely with the community to clean up contamination and reduce risks to human health.

Region 8 selected remedies for two areas at the Libby Asbestos Superfund site in 2010, signing Records of Decision for the former Export Plant and Screening Plant areas. Asbestos-contaminated vermiculite in these former processing and distribution areas will be contained, excavated and disposed of off site. The remedies will also pave the way for these properties to be returned to productive use.

Other major site milestones include:

- In 2008, EPA negotiated the largest cash settlement in Superfund history (\$250 million) to recover cleanup costs from the W.R. Grace Corporation.
- In 2009, for the first time in the history of the Agency, EPA declared a Public Health Emergency in Libby to provide federal health care assistance for victims of asbestos-related disease.



1986
 Congress passes the Superfund Amendments and Reauthorization Act (SARA), strengthening Superfund program authorities.

As of October 2010, EPA and the Montana Department of Environmental Quality (MDEQ) have remediated nearly 1,460 commercial and residential properties, significantly reducing risks to area families. The agencies have removed about 825,000 cubic yards of contaminated soil, 21,879 cubic yards of asbestos-contaminated vermiculite attic insulation and 43,164 cubic yards of asbestos-containing debris. EPA has also conducted response actions to reduce risks at former processing facilities, school yards and various abandoned waste piles. EPA and MDEQ are removing asbestos from approximately 150 properties per year.

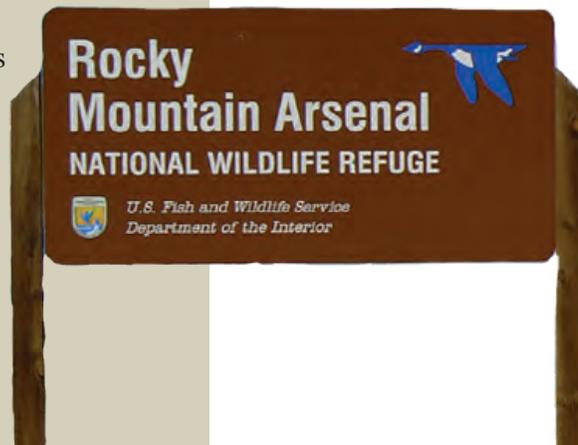


Wildlife coexists with ongoing remediation at the Rocky Mountain Arsenal. A coyote runs alongside a scraper during excavation of contaminated soil in the South Plants project.

Cleanup Progress and Transfer of Acreage to Wildlife Refuge at Rocky Mountain Arsenal

The cleanup of this former military and pesticide manufacturing facility near Denver is almost finished. All required cleanup activities will be completed by mid-2011. In 2010, site activities included the completion of the site's unique integrated covers designed to protect waste left in place in landfills and consolidation areas.

In fall 2010, EPA also deleted an additional 2,500 acres (3.9 square miles) of the Arsenal from the NPL. To date, 94 percent of the Arsenal – nearly 16,000 acres – has met cleanup requirements and been deleted from the NPL. The deletion allowed the U.S. Army to transfer this property to the U.S. Fish and Wildlife Service, expanding the Rocky Mountain Arsenal Wildlife Refuge, one of the largest urban wildlife refuges in the United States.





30 Years of the Superfund Program: Healthier Families. Cleaner Communities. A Stronger America.

National Outcomes: EPA's Superfund Program

Since 1980, EPA has cleaned up 67 percent of contaminated Superfund sites nationwide, and has helped create jobs for more than 3,300 Americans – with an average starting hourly wage of \$14.26 – to help clean up contaminated sites, enabling their reuse as bustling neighborhoods, parks and commercial centers.

With passage of the American Recovery and Reinvestment Act, the Superfund program has applied \$600 million in Recovery Act funds to accelerate cleanups at 31 ongoing construction projects and to start new construction projects at 26 sites. Since 1980, the Agency has readied nearly 1.3 million acres of land for return to productive use, and more than 455,800 acres are ready for anticipated use.



History

It is easy to forget that there was a time in the United States when EPA lacked the legal authority to clean up hazardous waste sites like Libby Asbestos in Montana or to respond to emergencies such as train derailments involving dangerous chemicals. On December 11, 1980, President Jimmy Carter signed into law the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, also known as Superfund). This historic new statute gave EPA the authority to clean up uncontrolled hazardous waste sites and spills.

Scope of Activities

For the past 30 years, EPA's Superfund program has helped protect human health and the environment by managing the cleanup of the nation's worst hazardous waste sites and responding to local and nationally significant environmental emergencies.

EPA has used its Superfund authority to address national crises like the Columbia space shuttle disaster, hurricanes Katrina and Rita, and most recently, the response to the Deepwater Horizon oil spill. Equally important, EPA has used its long-term cleanup authority to remediate sites where hazardous waste releases occurred through years of poor and sometimes illegal waste management practices. Many of these sites are large and complex, involving hundreds of chemicals and spanning hundreds of acres. Addressing these sites can take years.

Progress

Since 1980, the Superfund program has made substantial progress, protecting thousands of communities by cleaning up the nation's most serious hazardous waste sites and by responding to thousands of oil and chemical spills. Across the program's activities, EPA is committed to ensuring safe, healthy communities and environmental protection.

Looking Forward

As the program enters its fourth decade, EPA renews its commitment to protect the health of our communities and the environment. EPA is committed to enhancing Superfund's efficiency and management, as well as that of EPA's other cleanup programs. To that end, EPA has begun implementation of an initiative to better use the Agency's land cleanup authorities to accelerate cleanups where possible, address a greater number of contaminated sites, and help return these sites to productive use while protecting human health and the environment.



Colorado	21
Montana	15
North Dakota	2
South Dakota	4
Utah	20
Wyoming	3

Region 8 Superfund Site Universe, 2010

- 65 NPL sites
- 33 construction complete NPL sites
- 12 deleted NPL sites
- 8 proposed NPL sites

- 10 Federal Facilities
- 5 construction complete Federal Facilities
- 1 deleted Federal Facility

Early 1990s

Program reforms designed to make Superfund “faster, fairer and more efficient” include provisions that encourage redevelopment and expand public involvement.

Tribal Assistance

Region 8’s Emergency Response Unit provided assistance to several tribes during 2010, including cleanup of vandalized buildings containing friable asbestos that endangered nearby residents; cleanup of abandoned drums; investigation and sampling at a school where flash flooding caused a release of stored chemicals and oil; and investigation and sampling of downstream impacts where spring flooding caused a wastewater treatment plant to overflow.



Initial assessment of leaking and improperly stored chemicals.



Responding Rapidly to Emergencies

Region 8’s Emergency Response Unit responds rapidly to releases of hazardous substances and oil to protect human health and the environment. Emergencies range from small-scale spills to large events requiring prompt action and evacuation of nearby populations. EPA’s On-Scene Coordinators work with local, state and tribal responders to investigate and clean up environmental contamination.

Emergency Response Addresses Explosive Materials in North-Central Utah

Region 8 responded to an emergency involving thousands of pounds of potentially deadly rocket fuel stored at a residence and in two rented storage units. Experts estimated that a fire in one of the storage units could have resulted in a mass evacuation over a two-mile radius and disruption of all major transportation routes in the area. EPA responders quickly began identifying the stored chemicals and working with local officials to ensure their safe removal from the residence and storage units.

Potential Drinking Water Emergencies in Colorado and Wyoming

Following reports of a solvent odor coming from the water intake at a water treatment plant south of Denver, Colorado, Region 8’s Emergency Response Unit responded rapidly, taking samples for real-time field analysis and expedited laboratory analysis. EPA facilitated cleanup of the primary treatment system and provided follow-up investigation of potential contamination sources upstream. In Wyoming, vandalism of a 200,000-gallon water storage tank prompted the Emergency Response Unit to provide bottled water to the community and dispatch a sampling team to provide for expedited laboratory analysis of potential drinking water hazards.



1994
EPA launches
the Brownfields
program.

Enhancing Preparedness

As part of efforts to improve preparedness and the ability to respond to emergencies, natural disasters and terrorist attacks, EPA has been called upon to play a strategic role in homeland security. EPA's responsibilities include safeguarding the nation's drinking water supplies and delivery systems and responding to chemical, biological, radiological, nuclear and explosives risks posed by potential terrorist attacks, natural disasters and other emergencies.

In 2010, Region 8 continued to strengthen the communications network it has established with federal, state and local response authorities; enhanced expertise and readiness through training and coordinated exercises; and took additional steps to secure infrastructure and hazardous materials. In the long term, these efforts will minimize the likelihood of terrorist incidents and ensure time-critical and coordinated responses to any incidents.

Operation Neptune Helps Region Prepare for Terrorism Scenario

Region 8 collaborated with local, state and federal partners in 2010 to develop and stage a full-scale exercise testing emergency operation plans in Douglas County, Colorado. Led by the county's Emergency Management Department, the exercise scenario focused on the terrorist hijacking of a chlorine tanker truck. Conducted in real time, the exercise tested local, state and federal response capabilities following a law enforcement altercation, an explosion and the release of 20 tons of chlorine from the tanker.

The development and staging of the exercise represented the culmination of years of collaboration. Region 8, for example, has long partnered with Douglas County through the county's Local Emergency Planning Committee. The exercise provided a valuable opportunity for Region 8 to work with other local, state and federal agencies and illustrate EPA's role in addressing hazardous materials and assisting local responders. Region 8 was also able to test its own plans and procedures and identify opportunities to enhance response processes and capabilities.

Did You Know?

Region 8 is the "Lead EPA Region for Homeland Security" for 2011 and 2012.

In 2010, Region 8 also continued to provide support and training for the Response Support Corps (RSC) program. The program is staffed by volunteers from all programs who are willing to respond to major regional and national emergencies. Region 8 currently has 102 fully trained RSC members and 154 total volunteers.



Region 8 emergency response vehicle at the Operation Neptune exercise, 2010.



Leadville, Colorado: A Brief History

At an elevation of 10,152 feet, Leadville (pop. 2,800) is the highest incorporated city in the country. In the 1860s and 1870s, Leadville was the place to go in the American West. People were attracted by one of the world's largest concentrations of base and precious metals.

Mining, mineral processing and smelting activities in the area produced gold, silver, lead and zinc for more than 130 years. Wastes generated during the mining and ore processing activities contained metals such as arsenic and lead at levels posing a threat to human health and the environment.



Strengthening Engagement, Protecting Vulnerable Communities

Authentic, meaningful community outreach and engagement are core components of Region 8's commitment to safe, healthy communities and environmental protection. EPA works with communities across urban areas like Colorado's Front Range and Utah's Wasatch Front, suburban areas, and some of the most rural counties in the nation. Region 8 works closely with the diverse voices in each community to ensure that they have the resources needed to participate early and meaningfully in the Superfund process.

In 2010, Region 8's community outreach and engagement efforts were strengthened by coordination with EPA's national Community Engagement Initiative. As part of the initiative, Region 8 will continue to work closely with its partners to ensure transparent and accessible decision-making processes, to deliver information that communities can use to participate meaningfully, to strengthen EPA responsiveness to community perspectives and to ensure timely cleanup decisions.

EPA Works Closely with Historic Colorado Mining Community, Enabling Cleanup and Reuse

The California Gulch site is located in Leadville, Colorado. Region 8 has been working with the local community for more than two decades. Extensive community outreach and engagement has been a core component of EPA's approach. Activities have included one-on-one meetings, public meetings, newspaper articles, fact sheets and meetings with local officials.

In 2010, Region 8 worked closely with the community to change a controversial remedy that addresses several historic mine waste piles. Given strong local opposition to capping these piles in the past, the Region 8 site team recognized the importance of early and meaningful community involvement. Through informal input sessions and feedback from a "Virtual Community Advisory Group," EPA learned that the community might support a capping option if the piles could retain the look of mine waste piles. The team launched a pilot study demonstrating four potential approaches. EPA sought community input through site tours (see image above), the Virtual CAG and local meetings. The team also worked closely with a group representing local historic preservation and recreation interests. EPA signed a new Record of Decision for a capping-based remedy in September 2010.



1996
Cumulative
Superfund
cost recovery
settlements
exceed \$2 billion.

Enforcement: Driven by the Rule of Law

Region 8's Superfund Technical Enforcement program helps ensure that Superfund sites are cleaned up by finding and compelling the parties responsible for contamination to clean it up or pay for the cleanup done by another party (i.e., EPA, a state program or other responsible parties).

If a responsible party does not agree to undertake a cleanup, EPA can issue an order to them to do certain work. EPA can also work with the Department of Justice to pursue the party through the federal court system. If a party is out of compliance with an order or settlement, the Superfund enforcement program takes action to bring them into compliance. Such action may include: referring the case to the Department of Justice for enforcement, assessing penalties or taking over the work.

In 2010, Region 8 participated in one of the biggest national Superfund bankruptcy cash out settlements in the history of the Agency with the ASARCO Company. Other accomplishments are described below.

Multiple Consent Decrees for Cleanup of Former Gold Mine

The 1,229-acre Gilt Edge Mine site is a former open pit and cyanide heap-leach gold mine located in the Black Hills of South Dakota. In 2010, the United States District Court entered five consent decrees involving seven site property owners. To satisfy liabilities associated with contamination on their respective properties, each of these defendants agreed to transfer all of their land within the site boundaries to the State of South Dakota and to assign all potential rights to insurance proceeds to EPA. In addition, one of the parties will market and sell all other real property to which it holds title and give EPA a portion of the proceeds. EPA is currently negotiating a settlement with four major mining companies.

Settlement Agreement Reached for Eureka Mills Site Cleanup

Mueller Industries, Inc.'s predecessor purchased the assets and assumed the liabilities of a major mining company that operated at the site from the mid-1800s to the mid-1900s. Mining activities distributed mine waste containing lead on residential properties in Eureka. EPA settled with Mueller, obligating the company to reimburse EPA and the State of Utah \$2.5 million for cleanup costs at the company's site in Juab County, Utah.

Did You Know?

In FY 2010, EPA Region 8:

Entered into 12 settlements with responsible parties at Superfund sites, which resulted in:

- More than \$16 million in private party commitments for site study and cleanup.
- More than \$15 million in private party payments.
- Cleanup of over four million cubic yards of soil contaminated with hazardous waste and heavy metals.

Referred seven cases to the Department of Justice for judicial enforcement activities.

Strengthening Outcomes: Green Remediation and Renewable Energy

GREEN REMEDIATION is the practice of considering all environmental effects of remedy implementation and incorporating options to maximize the environmental benefits of cleanups.

By incorporating the use of **RENEWABLE ENERGY RESOURCES**, EPA and its partners are maintaining the effectiveness of remediation methods while reducing greenhouse gas emissions from conventional power sources.



Installing hydroelectric equipment at the Summitville Mine site in Colorado.



Cleaning up a hazardous waste site uses energy, water and other natural or material resources. EPA recognizes that much can be done to conserve natural resources, minimize waste generation and reduce energy consumption, consequently improving environmental performance of Superfund activities while fulfilling the Agency's mission to protect human health and the environment.

Examples of environmentally friendly technologies/approaches include: recovering landfill gas for energy production; using renewable energy systems to power on-site treatment systems; purchasing construction materials with recycled or rapidly renewable content; using non-potable water for dust suppression; and promoting sustainable reuse of formerly contaminated lands.

Following its Green Remediation Policy (2009), Region 8 Superfund continues to work collaboratively with its partners to implement green remediation best practices, including the key actions outlined in EPA's 2010 *Green Remediation Strategy*.

EPA-HUD-DOT Sustainable Communities Pilot Project

Following up on past brownfields assessment and cleanup work, Region 8 provided \$150,000 in assistance to the Denver Housing Authority (DHA) in 2010 for the South Lincoln Park project, which will transform a 17.5-acre parcel in central Denver containing 254 aging public housing units into a mixed-use, mixed-income, pedestrian-friendly transit-oriented development. The project was selected as one of five sustainable community pilot projects nationwide as part of a partnership between EPA, the Department of Housing and Urban Development (HUD) and the U.S. Department of Transportation (DOT). Region 8 worked with DHA to conduct an energy design workshop in August 2010 and funded the National Renewable Energy Laboratory to perform detailed energy modeling for the project.

Wind Power Evaluation on Mine Lands

Region 8 expanded its efforts to evaluate wind resources on abandoned mine lands by erecting a 55-meter meteorological tower to collect wind speed data at the Gilt Edge Mine in South Dakota in 2010. The data will be used to determine if a wind farm could be constructed at the site. Regional wind maps indicate that the wind resource is very good (class 6 or 7). EPA erected a similar tower at the Anaconda Smelter in Montana in 2009 and will erect a third tower at a yet-to-be-determined location in 2011.

Hydroelectric Power Plant at Mine in Colorado

Innovative management of contaminated surface water at the Summitville Mine site will include a 35-kilowatt hydroelectric facility that partially powers the plant that treats acid mining-impacted waters at the site. Fabrication work on the plant's turbine was completed in 2010. The turbine was delivered to Summitville in early November and will be placed into operation in spring 2011.



South Lincoln Park project Master Plan

The South Lincoln Park project will be completed in phases and will ultimately become a mixed-use, mixed-income, pedestrian-friendly transit-oriented development. The redevelopment will also help connect the neighborhood's light rail station with Denver's Santa Fe Arts District.





Moving Forward: Reuse and Redevelopment

Photos: Completed and under-construction commercial and residential development at Bingham Junction, Midvale City, Utah, 2010.

As part of the cleanup program, Region 8 Superfund is committed to helping communities turn Superfund sites into valued assets. Their reuse returns land to productive use and restores blighted properties, which in turn can benefit surrounding communities, providing job opportunities, sustaining local economies, and offering recreational and ecological amenities. Through Superfund site reuse, challenges are turned into opportunities. By the end of FY 2010, 27 Superfund sites in Region 8 were determined to be ready for anticipated use.

Cleanup and Mixed-Use Revitalization in Utah's Wasatch Front

By the late 1990s, Midvale City, Utah faced a significant challenge. The community, located 12 miles south of Salt Lake City, was literally running out of space. Rapid population growth and sustained economic expansion meant that almost all available land had been developed. The exception: the Midvale Slag Superfund site, which, together with the nearby Sharon Steel site, comprised more than 600 acres adjacent to the city's downtown.

The potential redevelopment of the 446-acre Midvale Slag site presented a vital opportunity for Midvale City. The site's upcoming cleanup also presented an important opportunity for Region 8 and the Utah Department of Environmental Quality to work with the community.

Beginning in 1999, these parties worked together on a coordinated approach that linked cleanup and redevelopment, with a protective remedy and land revitalization as overarching goals. Today, Bingham Junction has become the thriving mixed-use development envisioned for the site by the community.

As of 2010, the outcomes include: 572 jobs, \$1.4 million in annual property tax revenues and a \$105 million increase in the value of the site property. Families have moved into new condominiums. Office buildings, stores and restaurants are under construction. Crews have restored the banks of the Jordan River and replaced an old, defunct dam. Sections of Bingham Junction's Riverwalk Park have opened. Construction of a Utah Transit Authority commuter rail station is underway, with completion anticipated in 2011.

Superfund Redevelopment in Action



California Gulch (Leadville, Colorado):

A \$1.5 million public sports complex and soccer field now sits atop a former zinc smelter. The U.S. Soccer Foundation, one of EPA's national partners, awarded a \$10,000 grant to develop conceptual plans for the facility.



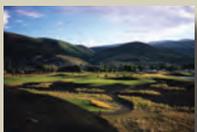
Murray Smelter (Murray City, Utah):

Award-winning mixed-use development includes a light-rail station, shopping areas, and the Inter-mountain Medical Center, a 1.5 million-square-foot hospital facility.



Ogden Rail Yard (Ogden, Utah):

Former 29th Street Pond is now Goode Lake, used for fishing and water ski sport events.



Anaconda Smelter (Anaconda, Montana):

Location of a former copper smelter is now an award-winning golf course.

1997
EPA establishes job readiness programs that provide training and employment opportunities for underserved citizens living in communities affected by Superfund sites.



2010 Reuse Highlights

- **Return to Use Demonstration Projects:** Milltown Reservoir Sediments site (Montana) and Rocky Mountain Arsenal (Colorado)
- **Sitewide Ready for Anticipated Use:** International Smelting and Refining site (Utah, image above), Mystery Bridge site (Wyoming) and Idaho Pole site (Montana)

What is Ecological Revitalization?

Ecological revitalization returns land from a contaminated state to one that supports functioning and sustainable habitat.

Ecological revitalization:

- Improves soil health and supports diverse vegetation.
- Sequesters carbon.
- Protects surface and groundwater.
- Provides wildlife habitat and passive recreation opportunities.

Through FY 2010, five sites in Region 8 are in planned or actual ecological reuse.

1999
EPA's Superfund Redevelopment Initiative created to help communities turn cleaned up Superfund sites into productive assets.



Moving Forward: Ecological Revitalization

Innovative Approach to Cleanup, River Restoration and Redevelopment in Montana

A new chapter is beginning in the storied history of the Clark Fork and Blackfoot Rivers in western Montana. Home to the ancestors of the Bitterroot Salish, Pend d'Oreille and Kootenai tribes, the region's remarkable fishery and other natural resources have sustained communities for generations. From the 1860s until the late 20th century, the area was also part of one of the richest mining regions in the world. These operations generated mining and milling wastes that in turn have led to one of the largest hazardous waste cleanups in the country.

Since the late 1990s, Missoula County and local communities have worked together to plan the future of the Two Rivers Area. Coordinating closely with local, state, tribal and federal partners, EPA and Missoula County recognized that redevelopment planning could be integrated with the environmental remediation of the Milltown Reservoir Sediments site and the ecological restoration of the Clark Fork River.

Beginning in 2002, Region 8 worked with Missoula County and federal, state and tribal partners on a coordinated approach that linked remediation, restoration and redevelopment, with a protective remedy and land revitalization as overarching goals. Assisted by an EPA Superfund Redevelopment pilot grant and EPA funding, the community developed a Conceptual Redevelopment Plan which outlined the creation of a state park with trails, river access, wildlife habitat and interpretive areas celebrating the region's history and heritage.

Today, the community's vision is becoming a reality. The confluence of the Clark Fork and Blackfoot Rivers now flows freely for the first time in a century. More than three



Sediment control and restoration work along the North Fork of Clear Creek in Colorado.

million tons of contaminated sediment have been removed and the restoration of the Clark Fork River's channel and floodplain will be completed by 2012. And in 2010, 450 acres at the site were transferred to the State of Montana for a new state park. Interim redevelopment activities, including several trails and a new pedestrian bridge, were completed. More than \$3 million in grant funding has been allocated for the park's development, on top of about \$5 million already allocated for land acquisitions and adjoining trails and the pedestrian bridge.

Watershed Cleanup and Ecological Revitalization in North-Central Colorado

The Central City/Clear Creek Superfund site consists of a 400-square mile watershed extending from the Continental Divide east to near Golden, Colorado. A popular recreation area, the watershed also serves as a drinking water source for over 500,000 people in the northwest Denver metropolitan area. Region 8 has worked closely with communities in Gilpin and Clear Creek counties to address contamination from historic gold and silver mines and mine wastes left behind in the Clear Creek basin and restore the health of the watershed.

Ecological revitalization is an integral part of the site's remedy. Activities include stream stabilization, habitat development, revegetation and restoration of disturbed areas, and enhanced water treatment to protect human health and restore the health of the North Fork of Clear Creek. In 2010, EPA also signed a partnership agreement with the Colorado Department of Public Health and Environment and the Colorado Department of Transportation to coordinate cleanup activities with roadway improvements along the State Highway 119 corridor.

2000s

Superfund plays a substantial role in responding to the 9/11 attacks, the Columbia space shuttle disaster, hurricanes Katrina and Rita, and the Deepwater Horizon oil spill.



Did You Know?

The Milltown Reservoir Sediments site is part of the nation's largest river cleanup and restoration effort.



Supporting the Cleanup and Sustainable Reuse of Brownfields



EPA Brownfields funds enabled San Juan County to clean up the former Martha/Rose Walsh Smelter site in Silverton, Colorado.

In 2011, the County will break ground on the new Anvil Mountain Neighborhood (master plan above), which will provide affordable homes for the local workforce.

EPA's Brownfields program empowers states, communities and other stakeholders to work together to prevent, assess, safely cleanup and sustainably reuse brownfields. Revitalizing brownfields creates benefits at each site and throughout surrounding communities.

Accomplishments of the Region 8 Brownfields program in FY 2010:

- Assessments Completed: 46
- Cleanups Completed: 15
- Dollars Leveraged: \$31,804,366
- Jobs Leveraged: 118
- Acres Made Ready-for-Reuse: 1,260

In Region 8, the Brownfields program provides funds and technical assistance to states, tribes, communities and other stakeholders to clean up and redevelop potentially contaminated lands in the region, making it easier for such lands to become vital, functioning parts of their communities.

Cleanup Makes Way for Community Soccer Field in Missoula, Montana



In August 2010, the City of Missoula completed the cleanup of 16.6 acres at the White Pine Sash property. The City used a \$200,000 EPA Brownfields grant and local sources to clean up dioxins and pentachlorophenol left behind from lumber mill operations. The newly seeded property will be ready for use as a community soccer field next summer.

Jamestown, Colorado, Completes Cleanup of Elysian Park



In June 2010, the Town of Jamestown completed the cleanup of Elysian Park, a five-acre recreation area. The town used a \$168,000 grant from the State of Colorado's Revolving Loan Fund and a \$200,000 EPA Brownfields cleanup grant to address mine tailings at the park. The cleanup involved capping 32,000 cubic yards

of mine tailings and grading and seeding the park. Once vegetation is established, the town will continue to use the property as a community park.

Petroleum Cleanup of Service Station in Great Falls, Montana



The Great Falls Development Authority used its Brownfields revolving loan fund to make a \$250,000 loan to Platinum, LLC to clean up a former auto service station site in downtown Great Falls.

Brownfields Assessment, Revolving Loan Fund and Cleanup Grants Awarded



In April 2010, \$2.7 million was awarded to support diverse local environmental assessment and cleanup projects in Region 8. Crook County, Wyoming, is using \$200,000 to remove contaminants prior to renovating a historic school building in Sundance (see image) to be used as a much-needed County Museum and

Cultural Center. The Standing Rock Sioux Tribe has received \$400,000 to clean up contamination at the Old Stockade Building and the Old Teachers Quarters in Fort Yates, North Dakota. The Great Northern Development Corporation received a \$1.5 million grant to capitalize a Brownfields revolving loan fund that will support cleanup activities across eastern Montana.

2002

The Brownfields law enacted to expand EPA's Brownfields program, increase funding for assessment and cleanup, enhance roles for state and tribal response programs, and clarify Superfund liability.



Did You Know?

Region 8's Brownfields and Removal programs collaborated to foster community-based cleanups in FY 2010. The programs worked together at four sites, including two tribal locations, leveraging resources to assist communities in redeveloping contaminated and blighted properties.

The sites included the Cheyenne River Reservation in South Dakota, the Fort Berthold Indian Reservation in North Dakota (see image above), a former railroad refueling facility in Deer Lodge, Montana, and an abandoned sugar beet processing facility in Eaton, Colorado.



Expanding Information Access, Ensuring Accuracy and Transparency

2009

EPA announces Public Health Emergency at the Libby Asbestos site in Montana.

2009

The American Revitalization and Recovery Act provides more than \$75 million for Superfund site cleanup in Region 8.

Communities and EPA's local, state, tribal and federal partners rely on Superfund program information. EPA staff members also rely on access to reliable, comprehensive information generated during the program's environmental restoration efforts. Region 8 works hard to ensure that this information is accurate, up-to-date, transparent, comprehensive and easily accessible, serving as a vital and valued shared resource.

Updated Region 8 Superfund Website

In 2010, Region 8 began revising its Superfund website (<http://epa.gov/region8/superfund>) to make the pages more useful and user-friendly. The website provides general information about the Region 8 Superfund program, as well as summary profile pages for each Superfund site. Website enhancements underway include the addition of updated site photographs as well as information highlighting site reuse and renewable energy. New descriptions are being added to inform readers about any site-related institutional controls. Improved location maps with site boundaries are also being added to the site summary profile pages.

New GIS Mapping Tool Enhances Site Discovery Efforts

Region 8 completed work on a new Geographic Information System (GIS) tool that helps identify high-priority impaired waters that may benefit from Superfund resources. Using data provided by the states in Region 8 under Section 303(d) of the Clean Water Act, Region 8's Site Assessment program can create a visual representation of impaired streams and water bodies to facilitate identifying priorities for assessment. The tool was used in 2010 to identify an abandoned mine site which will be assessed in 2011.



Working with Our Partners: Grants and Contracts Management

Region 8 works collaboratively with a diverse network of dedicated partners – communities, states, tribes, local governments, public nonprofits, private sector organizations and other federal agencies – to ensure the protection of human health and the environment.

Tribal nations and states, for example, are vital partners in achieving EPA’s mission. A large percentage of Region 8’s programs are delegated to the 27 tribal nations and six states in Region 8, which carry out environmental work through cooperative agreements, contracts and other arrangements. The region also places a special emphasis on helping tribes administer their own environmental programs.

From initial site assessments to cleanups, from planning to implementation to long-term monitoring, the region’s partnership network helps ensure that all required Superfund cleanup work will be performed. In 2010, EPA awarded more than \$3.8 million of Superfund monies to Region 8 states. Through delegation of these programs from EPA to our partners, we are able to dedicate significantly more resources to the business of protecting the environment than Region 8 alone could provide.

To maintain and improve the effectiveness of the Superfund program, Region 8 continues to build strong, collaborative relationships with its partners. Another focus area in our partnership with states is improving the ability to focus limited resources on priorities. In Region 8, EPA and states are collaborating on a priority-driven resource allocation process that makes sure that resources are deployed to the most critical environmental problems.



Region 8 Partners in Action

Under a cooperative agreement grant from EPA, the Utah Department of Environmental Quality’s Division of Environmental Response and Remediation conducted innovative soil sampling using x-ray fluorescence (XRF) technology at the Jacobs Smelter Superfund site in northern Utah. The sampling identified residential properties with lead levels above risk-based action levels, informing the site’s cleanup, which is addressing soil contamination resulting from historic smelter operations in the area.

Looking Ahead: FY 2011

Innovative Pilot Grants

In October 2010, three communities in Colorado and Montana were awarded Brownfields Area-Wide Planning pilot grants.

This first-of-its-kind program is a key component of the HUD-DOT-EPA Interagency Partnership for Sustainable Communities. The projects will integrate brownfields site cleanup and reuse to address community needs for economic development, housing, recreation, education and public health facilities.

Efforts in Denver, Colorado, will focus on the South Platte River Brownfields-Impacted Area. Aurora, Colorado will target the Montview Corridor, an area challenged by more than 40 brownfields sites. Efforts in Kalispell, Montana (image below) will focus on the downtown CORE Revitalization Area.



For three decades, Region 8 Superfund has worked hard to protect public health and restore the environment. Through transparent, meaningful community engagement, sound science, robust enforcement and innovation, we remain dedicated to the pursuit of excellence.

In 2011 and beyond, Region 8 looks forward to new opportunities to engage with citizens and our state and tribal partners to continue to advance environmental protection and strengthen healthy communities.



FY 2011 Goals

- Final cleanup construction at the **Davenport and Flagstaff Smelter** site in northern Utah is scheduled for 2011. The site's cleanup is addressing soil contamination that resulted from past smelter activities in the area. Numerous properties have already been cleaned up.
- At the 1,200-acre **Summitville Mine** site in southern Colorado, Region 8 and the Colorado Department of Public Health and Environment anticipate starting the operation of the site's new water treatment plant in summer 2011. This final long-term cleanup action will protect the Alamosa River ecosystem from heavy metals.
- Region 8's 2011 cleanup goals for the **Libby Asbestos** site in northwestern Montana include the completed remediation of over 100 properties. The completed cleanup of a former vermiculite processing facility will enable the City of Libby to expand adjacent Riverside Park. Region 8 also plans to issue a cleanup decision for the Kootenai Industrial Park, which will allow for further redevelopment in the area.
- The **Captain Jack Mill** site is part of a former gold and silver mining area in Boulder County, Colorado. In summer 2011, work is scheduled to begin on the consolidation of contaminated tailings and waste rock piles into an on-site containment cell. Design of a treatment system to address contaminated mine water is also scheduled to begin in 2011.
- Efforts to transform a former public housing complex in Denver, Colorado, into a mixed-use, mixed-income, pedestrian-friendly transit-oriented development are ongoing. Phase 1 of the **South Lincoln Park project** broke ground in October 2010. Phase 2, which will include over 500,000 square feet of residential and retail space, is expected to begin in 2011. The development will use 50 percent less energy than buildings built to code. Even greater energy efficiencies are anticipated in subsequent phases. Transportation and stormwater management workshops will also be conducted in FY 2011.
- Following removal actions and construction of site remedies, the **Midvale Slag** site in Midvale City, Utah, and the **International Smelting and Refining** site in Tooele County, Utah, are targeted to be delisted from the National Priorities List in 2011. The first site is a national example of successful mixed-use redevelopment. The second site is now a 3,000-acre wildlife conservation area.
- In FY 2011, the **Region 8 Brownfields** program is committed to completing environmental assessments and cleanups in rural, urban, tribal and underserved environmental justice communities. In addition, the Brownfields program will host a tribal brownfields workshop, assist communities with planning efforts focused on sustainability and smart growth principles, and continue to leverage funds and support job creation through brownfields grants and technical assistance.



Hardrock Mining Updates

Region 8's Regional Mining Team focuses on issues relating to the regulation and cleanup of active, proposed and abandoned mines. FY 2011 priorities for the Team include:

- Facilitating internal cross-program communication and coordination of mining-related issues.
- Participating in national mining-related work groups.
- Showcasing innovative work in the remediation of mine sites.

Long-term priorities for the Team include:

- Assisting with the development of financial assurance regulations for hardrock mines and processing facilities.
- Facilitating the development and implementation of innovative mine cleanup technologies.
- Seeking opportunities for partnerships and grants to enhance the cleanup of mines and processing facilities.



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