

U.S. Department of the Interior  
Central Hazardous Materials Fund

CELEBRATES  
**25**  
YEARS  
OF SUCCESS



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## Letter from the Director

25  
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Greetings,

*The Central Hazardous Materials Fund (CHF) provides resources the Department of the Interior needs to: protect and conserve America's public lands and natural resources; provide access to public lands for the next generation of outdoor enthusiasts; and ensure visitor and employee safety.*

*There are many contaminated legacy sites within the Department's jurisdiction, custody, and/or control from past industrial, mining, and other practices. The CHF is the Department's principal source of funds to clean up the most highly contaminated sites located within national parks, national wildlife refuges, and other Department-managed lands. In most instances, the CHF is the only source of funding available for a bureau to address large contaminated sites and long-term monitoring or operations and maintenance. In addition to funding, the CHF provides support to the bureaus with the Department's best legal, technical, and project management expertise.*

*Over the past 25 years, the CHF program has received a total of \$373 million in funds; of this, \$257 million was through Congressional Appropriations and \$116 million was through cost recovery from responsible parties. The program has distributed \$312 million, or 84%, of these funds to 114 environmentally contaminated sites in 27 states, Midway Atoll, and Puerto Rico. The remaining 16% of funds were used for program support, which include CHF staff, solicitors, contractor support, and database management. In addition to the funds above, responsible parties have performed approximately \$661 million worth of in-kind cleanup work, known as cost avoidance. By comparing the combined amount of cost recovery and cost avoidance versus Congressional Appropriations, the CHF program has leveraged over \$3 in cleanup work for every \$1 appropriated by Congress.*

*The Office of Environmental Policy and Compliance (OEPC) has developed policies and procedures to identify and prioritize funding for hazardous site cleanups, while empowering those in the field and minimizing overhead. Our efforts have reopened public lands for recreation, hunting, and fishing. Areas that impact watersheds have been addressed to improve water quality, enhance limited water supplies, and restore our valuable wetlands.*

*As we implement our mission to remediate contamination on Department-managed lands, we will continue to focus on cost-effective methods to address these sites, develop a comprehensive inventory of contaminated sites, and seek ways to streamline the cleanup process to protect America's great outdoors and increase access to public lands.*

Sincerely,

(signed)

Michaela Noble

Director, Office of Environmental Policy and Compliance

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OF SUCCESS



El Capitan in Yosemite National Park, CA.

## Introduction

The Central Hazardous Materials Fund (CHF) is the U.S. Department of the Interior's principal source of funds to clean up highly contaminated sites located within national parks, national wildlife refuges, and other Department-managed lands. The CHF is managed by the Office of Environmental Policy and Compliance (OEPC). OEPC serves as a Department leader in conservation stewardship and the sustainable development and use of Department-managed resources to benefit the public. OEPC forms and fosters partnerships to enhance resource use and protection, as well as to expand public access to safe and clean lands under the Department's jurisdiction. We strive to continually streamline environmental policies and procedures to increase management effectiveness and efficiency, reduce duplicative practices, and realize cost savings.

Cleanups funded by the CHF follow the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) framework. CHF sites pose potential risks to public health and welfare, the environment, and Department employees and visitors. CHF sites generally require cleanup resources and technical expertise that are beyond the scope of bureau resources and can only be provided at the Department level.

The CHF funds projects in the following bureaus: Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), Bureau of Reclamation (BOR), U.S. Fish and Wildlife Service (FWS), National Park Service (NPS), and the U.S. Geological Survey (USGS). In supporting cleanup efforts, OEPC works in collaboration with other federal, state, and tribal partners.

The Department maintains positive and effective working relationships with the U. S. Environmental Protection Agency (EPA), Department of Defense, and other federal agencies. For instance, a portion of Patuxent Research Refuge is comprised of land that was once part of U.S. Army post Fort Meade.



The land was transferred to the U.S. Fish and Wildlife Service (FWS) after it had been decommissioned, leaving behind munitions and soil contamination. Sites such as this are referred to as formerly used defense sites (FUDS), and the cleanup of these sites is conducted by the U.S. Army Corps of Engineers in partnership with DOI. Similarly, DOI partners with EPA at numerous sites partly on privately held land and partly on DOI-managed lands to ensure consistent and efficient cleanups. The Department also works closely with the Department of Agriculture and the Department of Justice on numerous sites.



U.S. Fish and Wildlife Recreation Assistant, Laurel Harrison sharing information about native birds. (Photo: USFWS)

## Cooperating and Coordinating with DOI Bureaus and Other Federal Partners



## CHF Processes: Cost Recovery and Avoidance

Cost recovery describes the process of when cleanup is performed with CHF funds and DOI solicitors recover the costs through litigation or settlement if there is a potentially responsible party (PRP). Cost-recovered CHF funds are not restricted to the sites or projects from where they are recovered, thus providing flexibility in addressing other cleanup priorities within the program, including abandoned mines and other contaminated sites on Department-managed lands.

The CHF pursues PRPs for cost reimbursement, or for them to perform the work so that the Department can avoid paying for the cleanup costs. Between 1995-2019, the CHF has recovered over \$116 million in cleanup costs. These cost recoveries have allowed the program to support many more cleanup projects than if funded solely by appropriations, which were \$257 million during the same timeframe.

From 1995-2019, CHF had responsible parties perform \$661 million worth of cleanup activities under bureau oversight. For every dollar in appropriations, CHF has recovered or avoided \$3.03 by holding responsible parties accountable.

CHF supports Department solicitors who seek out the PRPs and form legally binding agreements such as Consent Decrees (CDs), Administrative Orders of Consent (AOCs), and Federal Facility Agreements (FFAs). These documents require PRPs to perform the cleanup themselves with Department oversight, saving them the costs of litigation. This is called cost avoidance.

An example of successful cost recovery and avoidance is the Pacific Gas and Electric (PG&E) Topock site in southeastern California. This site is used to compress natural gas and transport it through pipelines into northern and central California. Wastewater that included hexavalent chromium was discharged into a nearby wash, resulting in contamination in the soil and groundwater. OEPC has been working with the Bureau of Land Management, Bureau of Reclamation, the U.S. Fish and Wildlife Service, State of California, and PG&E to address contamination in soil and groundwater. The project has recovered almost all costs to date, approximately \$9.7 million, and avoided \$371 million in costs.



The PG&E Compressor Station sits at the foot of the Chemehuevi Mountains approximately 1,500 feet from the Colorado River. The Colorado River spans 1,440 miles and provides water supply, hydroelectric power, recreation, and resources to the Southwest.

## CHF Processes: Community Involvement on Cleanup Activities

Congress made public involvement in decision-making an important part of the cleanup process. CERCLA and its governing regulations, known as the National Contingency Plan, require that the public has opportunities to be informed of and to comment on the selection of cleanup plans at CERCLA sites. This includes requirements for public engagement, public hearings, and public comment through various means and at various stages of the cleanup process. Safe public access to Department-managed lands for a variety of educational, recreational, and subsistence purposes is a Secretarial Priority. To achieve the maximum benefit of public access and site cleanup, OEPC places a premium on community involvement.

The Red Devil Mine site, located in southwest Alaska and managed by the Bureau of Land Management (BLM), is an informative example of the complexities of community involvement in the cleanup process. The Red Devil Mine is an abandoned mercury mine located on the Kuskokwim River. Sixteen communities, made up of federally recognized tribes, are located along the river. Residents practice traditional subsistence lifestyles - hunting, fishing, and gathering. The communities share a rich history of cultural traditions deeply rooted in their connections to the land and its resources.

Community involvement and tribal engagement are an important and ongoing part of the Red Devil Mine project. Since 2010, BLM has hosted 35 meetings in Kuskokwim River communities, presented regular briefings to interested Alaska Native Corporations, and provided project updates at the Alaska Forum on the Environment. Newsletters are produced and distributed on a regular basis to keep the community informed and engaged. These meetings and communications have been influential in contributing to cleanup efforts.

BLM's community involvement efforts are keeping everyone engaged and working toward solutions that are practical and protective of the community and the environment. The CHF has provided over \$9.2 million in funding. No viable responsible party has been identified at the site. Continued BLM efforts will be supported through appropriations to the CHF and cost recoveries received from other CHF sites.



Community meeting for Red Devil Mine site, Alaska.



# Examples of Successful Cleanup Activities



## Crab Orchard National Wildlife Refuge, Marion, IL U.S. Fish & Wildlife Service

### HISTORY OF THE SITE

In 1936, the Federal government purchased farm land along the Crab Orchard Creek, in Marion, IL, as part of a Great Depression-era re-employment program to increase recreation and conservation activities. In 1942, the War Department transformed the area into a munitions manufacturing facility to support U.S. military efforts during World War II. Wartime operations included production of artillery shells, bombs, and land mines. At the end of World War II, the former manufacturing facilities, along with an additional 22,000 acres of land, were transferred to the Department to be managed by the U.S. Fish & Wildlife Service (FWS) as the Crab Orchard National Wildlife Refuge. FWS was required to make the former munitions facilities available for lease to industry. Various entities have operated there over the Refuges' history.

### THE PROBLEM

During much of the history of operations at these facilities, it was common practice to bury, burn, and dispose of waste in nearby areas. The industrial uses and waste disposal practices resulted in the release of hazardous substances into the surrounding surface and subsurface soils, and into the nearby wetlands and waterways.

### WHAT'S BEING DONE

Various levels of contamination were discovered at the site in the late 1970s. In 1987, EPA placed the Crab Orchard site on the Superfund National Priorities List (NPL). Due to vast environmental contamination, the site was divided into seven operable units (OUs) for cleanup. Multiple entities are cleaning up the refuge, including the Army Corps of Engineers, EPA, Illinois Environmental Protection Agency, FWS, and private parties. Five out of the seven operable units have cleanup activities completed. One operable unit has the remedy currently underway. The final operable unit is wrapping up investigation and consideration of remedy alternatives.

### CLEANUP HIGHLIGHTS INCLUDE:

- Water Towers OU: Approximately 28,000 cubic yards of lead-contaminated soils were removed and disposed of off-site.
- Explosive Munitions Manufacturing Area OU: Unexploded ordnance or munitions of explosive concern (MEC) were removed, contaminated soil was either removed and disposed of off-site or consolidated and capped, and areas used for cleaning TNT from bombs and landmines were remediated.
- Metals OU: Soils were consolidated in a specially designed landfill.
- PCBs OU: Large quantities of PCB-contaminated soils were excavated and disposed of off-site, and contaminated groundwater is currently being treated.



Since 1994, the Department, through the CHF has provided \$66 million to fund cleanup activities at Crab Orchard. Almost half of this funding has been paid back to the CHF by the various responsible parties involved at the site. Additionally, CHF funding has leveraged more than \$100 million of in-kind environmental cleanup activities performed at the site by various responsible parties.

### **WHY THIS IS IMPORTANT TO THE COMMUNITY**

The Crab Orchard National Wildlife Refuge was set up to serve four purposes: conserving wildlife, preserving the area’s agricultural history, increasing recreational opportunities and supporting industry in a way that provides greater economic opportunities to the region. The multiple environmental cleanup activities, both completed and ongoing, support these four main purposes within the local community and surrounding region. The refuge employs approximately 32 people. Annual visitation is approximately 890,000 visitors.



Abandoned historical building on the Crab Orchard National Wildlife Refuge near Marion, IL. These former on-site facilities have been leased to industrial and commercial tenants for re-use. (Photo: FWS)



Groundwater monitoring well installation at the Crab Orchard facility. (Photo: FWS)



Through successful cleanup efforts, the refuge now has a handicap-accessible pond that is available to the community. Crab Orchard Wildlife Refuge hosts a lottery only, youth and disabled hunt. (Photo: FWS)

# Examples of Successful Cleanup Activities

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## Valley Forge National Historical Park Asbestos Release Site, Valley Forge, PA National Park Service

### HISTORY OF THE SITE

From the late 1800s to the mid-1900s, a company manufactured asbestos-containing insulation products at a local plant. Asbestos containing waste was disposed of in nearby quarry pits, which in the past had been mined for agricultural limestone. The Asbestos Release Site (Site) refers to an area located in the center of Valley Forge National Historical Park that was contaminated by activities of the manufacturing company formerly located on the property.

Some of the quarries used for waste disposal became part of Valley Forge State Park after it was established by the Commonwealth of Pennsylvania in 1893 to preserve lands used by the Continental Army during its 1777-1778 winter encampment. The state park was transferred to the National Park Service (NPS) and was established as Valley Forge National Historical Park in 1976.

### THE PROBLEM

NPS discovered buried asbestos-contaminated soil in 1997 during the excavation of a trench for a fiber optic cable. Further investigatory sampling found semi-volatile organic compounds and metals as additional contaminants of concern. Contamination was also found in a channel that eventually discharged into a tributary to the Schuylkill River. The contaminated areas encompass portions of the park that are historically and culturally significant to telling the story of Valley Forge. These areas were closed to visitors as a result of this contamination.

### WHAT'S BEING DONE

NPS initiated an emergency response in 1997 to address the immediate risk to the public. After initial emergency response activities were completed, NPS initiated and oversaw a long-term remedial action under CERCLA, also known as Superfund.

From 2013-2017, NPS managed and oversaw the CERCLA cleanup, which included excavation and disposal of soils posing a hazard to the public and addressing contaminated sediments in the tributary to the Schuylkill River. In 2017, NPS re-opened the majority of the site that had been restored for public use. NPS is monitoring revegetation efforts in other areas of the site in the anticipation that the entire site can be re-opened to the public in the near future.



CHF provided the initial funding (\$4 million) that allowed NPS to begin CERCLA response activities. NPS and DOI's successful negotiation of a settlement agreement with the Commonwealth of Pennsylvania leveraged an additional \$21 million for cleanup of the site.

### **WHY THIS IS IMPORTANT TO THE COMMUNITY**

Valley Forge National Historical Park is nationally significant as the site of the 1777-1778 winter encampment of the Continental Army under General George Washington. Few places evoke the spirit of patriotism and independence, represent individual and collective sacrifice, or demonstrate the resolve, tenacity, and determination of the people of the United States to be free as does Valley Forge. The park is also the largest tract of open space remaining outside of Philadelphia and is a cherished and valued part of the community for the significant recreational opportunities it provides in an ever-increasing developed landscape.

The NPS-led cleanup has returned the 112-acre, once-blighted land back to the public for recreational enjoyment and interpretive uses for which the park was established. Annual visitation is approximately 2,100,000 visitors.



Before: Soil excavation and remediation activity at the Valley Forge NHP. (Photo: NPS)



After: The same area after remediation and revegetation activities were completed. (Photo: NPS)



Warning sign at the Valley Forge NHP Asbestos Release Site. (Photo: NPS)



Log cabin at Valley Forge NHP. (Photo: NPS)

# Examples of Successful Cleanup Activities

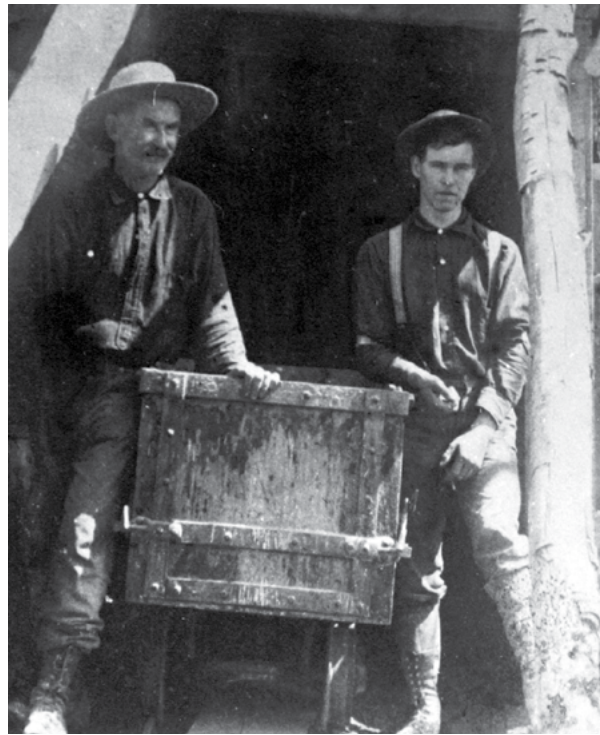
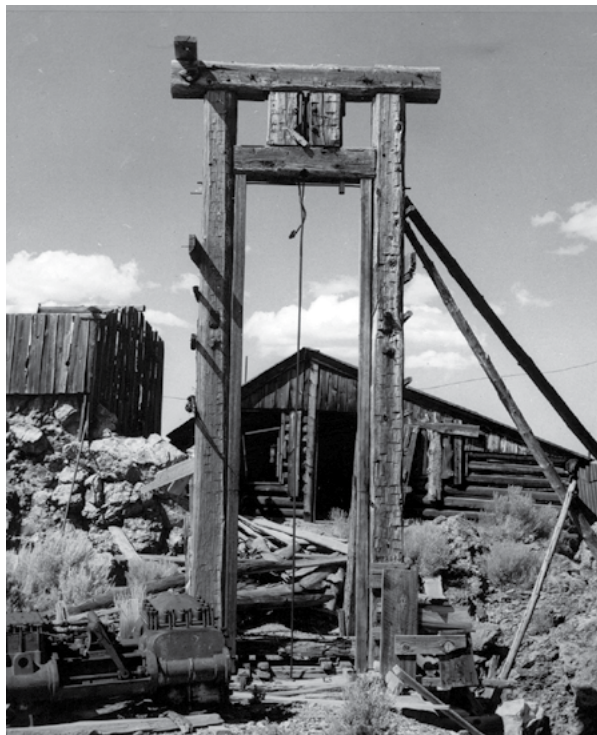


## Formosa Mine Site, Roseburg, OR Bureau of Land Management

### HISTORY OF THE SITE

The Formosa Mine Superfund Site is an abandoned mine located in Douglas County in southwest Oregon. The mine area encompasses a mixture of private land and adjacent public lands managed by the Bureau of Land Management (BLM). Private parties filed mining claims on the public lands. Several operators have mined the site at various times during the past 80 years.

Early exploration began in 1910. Historic underground mining occurred during the 1920s and 1930s. After decades of little activity, new exploration occurred in the 1980s and was followed by active mining from 1990-1993. The mine primarily produced copper and zinc, along with some gold and silver.



Historic photographs of abandoned hardrock mine and the men who worked in it. (Photo: BLM)

### THE PROBLEM

Metal laden tailing leftover from mining activities are leaching copper and zinc to streams, degrading aquatic habitat. In 1997, the acid mine drainage control system failed and acidic mine waters were released into the South Fork of Middle Creek and other points downstream. Eighteen miles of fish habitat downstream from the mine were severely degraded, and the documented fishery that had thrived prior to this time was destroyed.



## WHAT'S BEING DONE

In 2007, EPA added Formosa mine to its Superfund National Priorities List (NPL). BLM requested CHF support starting in 2010 and has received over \$9.1 million in CHF funds to date. In 2018, BLM completed construction of a bulkhead at the Formosa 1 adit to control the release of acid mine drainage. The BLM also requested monetary assistance to excavate mine impacted materials adjacent to the headwaters of two streams and to build an on-site containment facility to prevent leaching during precipitation events. Additionally, roads will be paved within the site, and select areas will be contoured to direct surface water away from mine wastes. Excavation and road work is planned for 2021.

## WHY THIS IS IMPORTANT TO THE COMMUNITY

CHF funding helps BLM coordinate and implement an effective cleanup response within EPA's overall Superfund framework. BLM's efforts to control and decrease acid mine-influenced waters from reaching nearby streams will benefit resident fish populations, as well as coastal steelhead trout, and Oregon coastal Coho salmon. Downstream local communities using surface water for their drinking water supply will be better protected.



Middle Creek – 2 Miles Downstream from Formosa 1 Adit. No aquatic life in the creek. (Photo: John Barber, BLM)



Bulkhead installation in progress at the Formosa Mine Superfund Site. Temporary water treatment system installed during the bulkhead replacement project. (Photo: John Barber, BLM)



Temporary mine waste repositories being constructed at the site during bulkhead installation. (Photo: John Barber, BLM)



Acid mine drainage diversion system scheduled for replacement in 2019 by BLM to protect watershed water quality. (Photo: John Barber, BLM)

# Examples of Successful Cleanup Activities

## Leavenworth National Fish Hatchery, Leavenworth, WA Fish & Wildlife Service



### HISTORY OF THE SITE

The Leavenworth National Fish Hatchery site is managed by the U.S. Fish and Wildlife Service (FWS) and located along Icicle Creek in central Washington. Originally, the site was constructed by the Bureau of Reclamation (BOR) to serve as a fish mitigation facility to offset impacts from the construction and operation of Grand Coulee Dam. From 1946-1999, a shooting range was operated on the hatchery grounds.

### THE PROBLEM

The shooting range operations resulted in accumulation of lead shot and clay targets containing contaminated materials within an 8-acre area. BOR conducted initial sampling and laboratory analysis of lead in soils at the site in March 2010. The study identified areas of lead contamination at concentrations exceeding thresholds for protection of human health and environment.

### WHAT'S BEING DONE

Using CHF funding starting in 2013, FWS excavated and removed over 32,000 tons of contaminated soil and debris. FWS collected an additional 400 samples and analyzed them to ensure the removal action met the cleanup goals. The cleanup restored 100% of the surface area to the original grade and replanted native grasses. The project also saved \$150,000 in costs by using clean fill material from an unimpacted, on-site borrow pit. The excavated borrow area(s) are being used as ponds to assist with water quality management operations. Over the life of these activities, \$2.6 million of CHF funds were used to clean up the site.

### WHAT THIS IS IMPORTANT TO THE COMMUNITY

Over the years, the hatchery production program has included a variety of species, including spring and summer Chinook salmon, coho salmon, steelhead, kokanee, and various resident salmonids. The continued success of the program provides for sport, tribal, and commercial fisheries in the Pacific Ocean, Columbia River, and local surrounding areas.

The Leavenworth Fish Hatchery hosts about 100,000 visitors to the facility annually. The grounds are also used as a campground and serve as event space for Native American cultural celebrations, sport and tribal fishing, seasonal horse-drawn sleigh rides, and a firefighter base camp during fire season.





Leavenworth National Fish Hatchery in Washington. (Photo: Christopher Foster, USFWS)



Outdoor Skills Day at Entiat NFH, Leavenworth Complex (WA), where FWS staff helped students explore the pond area and look at macro-invertebrates they found. (Photo: USFWS)

# Examples of Successful Cleanup Activities



## Palmerton Zinc Pile, Palmerton, PA National Park Service

### HISTORY OF THE SITE

From 1898-1980, the town of Palmerton, PA, was home to two zinc smelting plant operations. During this time, the plants released vast quantities of contamination into the atmosphere, much of which settled onto the surrounding area, contaminating soils, surface water, and groundwater with arsenic, cadmium, and zinc, among other contaminants.

### THE PROBLEM

As smelter emissions continued, metal concentrations accumulated in area soils, reaching concentrations toxic to plant life, resulting in forest die-off and massive sheet erosion across more than 2,000 acres of Blue Mountain. Roughly 800 acres of this impacted area are managed by the National Park Service (NPS) as part of the Appalachian National Scenic Trail (AT). Consequences of the defoliation were extreme, causing rock slides and massive soil erosion, further damaging vegetation in the area.

### WHAT'S BEING DONE

The site was placed on the National Priorities List (NPL) in 1983, and the EPA issued an interim Record of Decision (ROD) in 1987, calling for revegetation as the remedy for Blue Mountain. In 2006, NPS, EPA, and the responsible party reached an agreement to test certain native seed mixes and planting techniques on NPS lands. The demonstration efforts were successful and informed the final remedial design, which included a revegetation performance standard of 70% native cover across Blue Mountain, plus the establishment of strategically placed resource islands where woody species such as pine and oak would be carefully grown to create a seed source for the accelerated reforestation of the area. The goal of the remedial action on NPS lands is to reestablish a native Eastern hardwood forest. With the cooperation of the American Chestnut Foundation, the newly established forest will once again include American Chestnut trees.

Because of safety concerns for hikers during the remedial action, a five-mile stretch of the AT was temporarily re-routed and a new permanent route designed and selected by NPS in coordination with the Appalachian Trail Conservancy. Construction of the new route has begun and will take several years to complete.

To date, NPS has used \$2.3 million in CHF funds to ensure substantive participation in the remedial design and remedial action process, including monitoring the work of third parties along the AT. Over \$767,000 of these funds have been reimbursed to the CHF through cost recovery efforts. In addition, the responsible party has performed an estimated \$40 million of in-kind services related to the cleanup.



## WHY THIS IS IMPORTANT TO THE COMMUNITY

The cleanup and stabilization of soils in the area will protect human health and the environment. The Appalachian Trail is an important economic driver for the local community. The revitalization of the natural habitat along the trail will provide for the enjoyment of this land for current and future generations as required by the NPS Organic Act along the Nation's longest and skinniest park, which is host to thousands of hikers annually.



Before and after images of the successful remediation activities at the Blue Mountain area associated with the Palmerton Zinc Superfund site. (Photo: Greg Nottingham, NPS)



NPS helped create and oversee the establishment of "resource islands", which were planted and protected to become a future seed bank for the surrounding areas. (Photo: Greg Nottingham, NPS)



Fencing used to protect hikers from rock slides. (Photo: Greg Nottingham, NPS)

# Examples of Successful Cleanup Activities



## Patuxent Research Refuge, Laurel, MD U.S. Fish & Wildlife Service

### HISTORY OF THE SITE

The Patuxent Research Refuge area is located between Washington, DC, and Baltimore, MD. The refuge was established in 1936 by executive order of President Franklin D. Roosevelt.

The area is adjacent to Fort George G. Meade (FGGM). During World Wars I and II, FGGM served as a troop training area, parts of which included several firing ranges. In the early 1990s, an 8,100-acre area formerly known as the Range Training Area, was transferred to the U.S. Department of the Interior. The land was added to the Patuxent Research Refuge and is managed by the Fish and Wildlife Service (FWS).

### THE PROBLEM

Fort George G. Meade was added to the Superfund National Priorities List in 1998. To more effectively manage investigations and cleanups at FGGM, the Army, Maryland Department of the Environment (MDE), and EPA, have defined separate areas, or operable units (OUs), that include various contaminated sites and areas of potential environmental concern. The former Range Training Area included contaminants such as projectile fragments and other munitions and explosives of concern. Site activities contaminated the surrounding soil, sediment, wetlands, surface water, and groundwater with hazardous chemicals.

### WHAT'S BEING DONE

FWS signed a Federal Facility Agreement in 2009 with the Army and EPA. The FWS provides ongoing oversight of the Army's investigations, cleanup plans, and associated activities within and impacting the Patuxent Research Refuge. Nine separate and distinct areas within the Refuge have been identified as needing to be addressed. Since 2011, FWS has used \$208,000 of CHF funds for assistance with oversight activities. With such a large and complex site, FWS anticipates several more years of funding needed to complete the planned sampling activities, removal actions, and long-term maintenance and monitoring requirements. FWS oversight coordination provides a more efficient use of the Army's Base Realignment and Closure funds.

### WHY THIS IS IMPORTANT TO THE COMMUNITY

The Patuxent Research Refuge is the only National Wildlife Refuge in the United States established to support wildlife research. Proper containment and disposal of the contaminants of concern will protect and enhance vital terrestrial and wetland habitat located within an otherwise heavily populated area.





The cleanup involved removing trees to get access to artillery shells and metals in the soil. (Photo: USFWS)

Golden eagle perched in a tree at Patuxent Research Refuge. (Photo: USFWS)

# Examples of Successful Cleanup Activities

## Matheson Ore Transfer Station (Site), Redding, CA Bureau of Reclamation



### HISTORY OF THE SITE

The Matheson Ore Transfer Station is part of the much larger Iron Mountain Mine (IMM) Superfund site. The site is located approximately nine miles north of Redding, CA. From the 1860s through 1963, the 4,400-acre IMM was mined for iron, silver, gold, copper, zinc, and pyrite. The Matheson facility, which is on land managed by the Bureau of Reclamation (BOR), was used to store and transfer ore from IMM to Southern Pacific Railroad railcars.

### THE PROBLEM

There were health and environmental concerns that toxic levels of metals concentrations in the soil posed inhalation, ingestion, and dermal (via cuts on skin) risks to humans and wildlife. During rainy periods, the ore and acid drainage were washed into the Sacramento river, which threatened aquatic life.

### WHAT'S BEING DONE

From 2002–2004, the CHF provided BOR with \$1.98 million to clean up the site. BOR performed a removal action that included the excavation, consolidation and capping of metals contaminated soils. BOR completed this activity in 2006. During the removal action process, BOR coordinated cleanup activities with other ongoing actions to reduce the project costs.

### WHY THIS IS IMPORTANT TO THE COMMUNITY

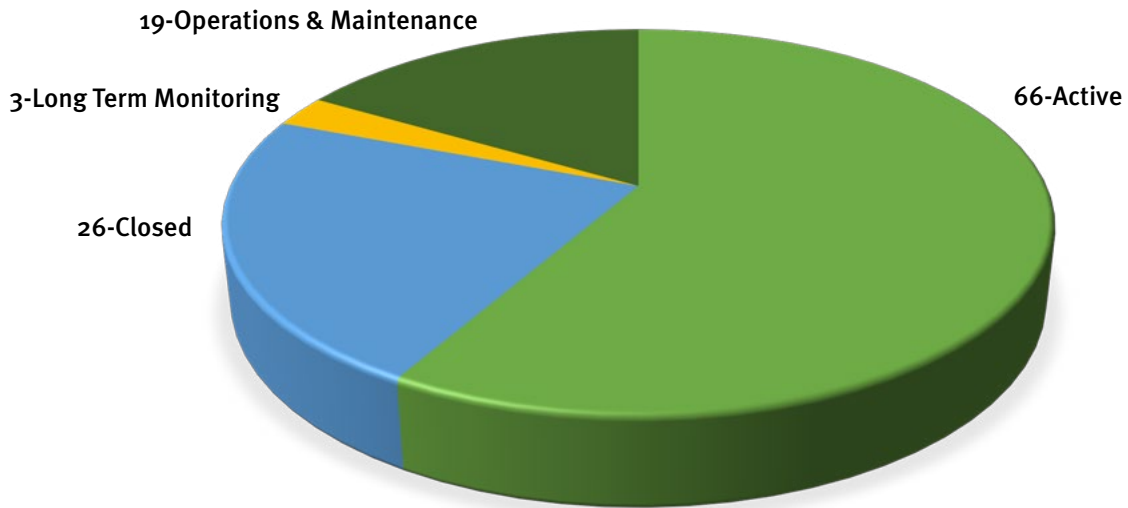
The Matheson Site has been successfully cleaned up. Visitors to the area can safely enjoy the Shasta Area Rails to Trails system that traverses the site. The site is also designated as a public access point to the Sacramento river.



Before and after photos of the excavation, consolidation, and capping of pyrite contaminated soils at the Matheson Ore Transfer Station, near Redding, CA.

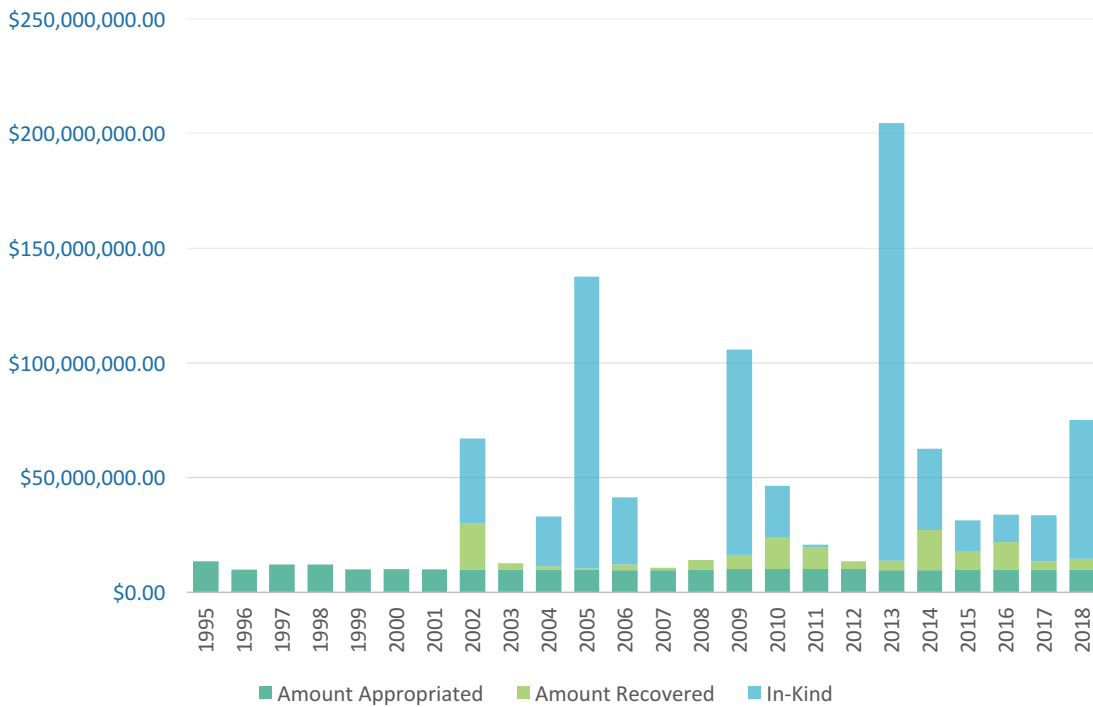


## Appendix 1: Status of Projects at 114 Sites



Total 114 sites (receiving CHF funds, cost recovery, and in-kind work at the bureau-level), with 66 sites in some form of active status – studies or remedial actions. 26 sites have been closed. Another 22 sites have a remedy in place, but monitoring and conducting operations and maintenance (O&M) on the site are ongoing. O&M can include maintaining fencing, signage, mowing and repair of caps. Monitoring typically consists of quarterly groundwater sampling.

## Appendix 2: Return on Investments \$3 : \$1

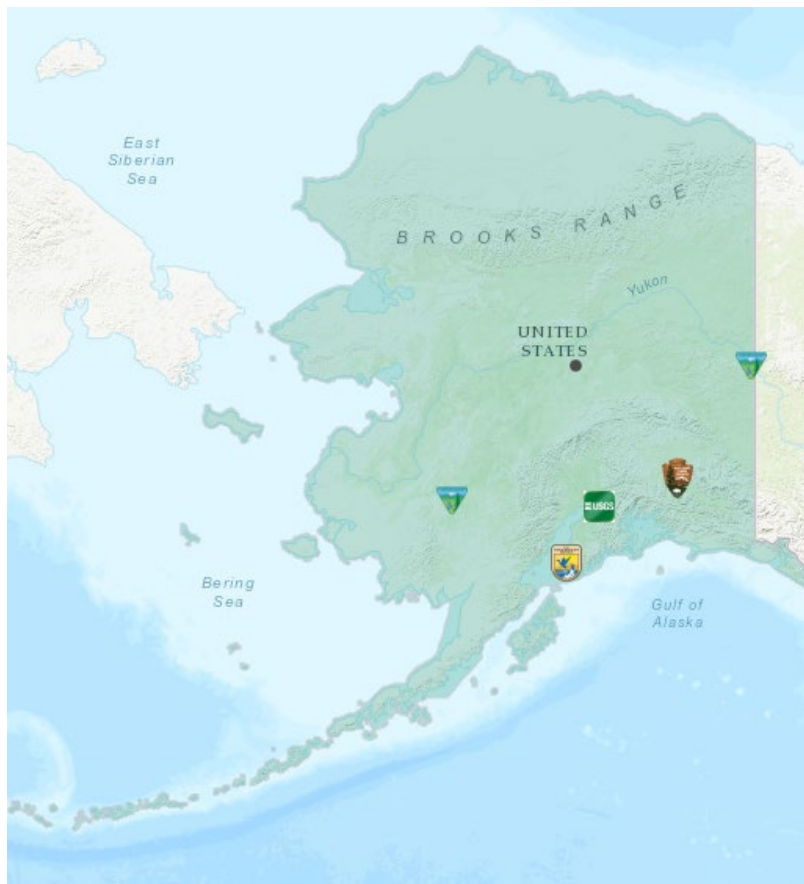


Over the past 25 years, the CHF has received an average appropriation of \$10M per year. The light green indicates the successes we have had with cost recoveries over the years averaging 4.5M per year. The in-kind costs in blue show where PRPs are funding the cleanup and minimizing the costs to the taxpayer. These are estimates based on reports from our project managers. Typically the PRP does not share the cleanup costs with us.

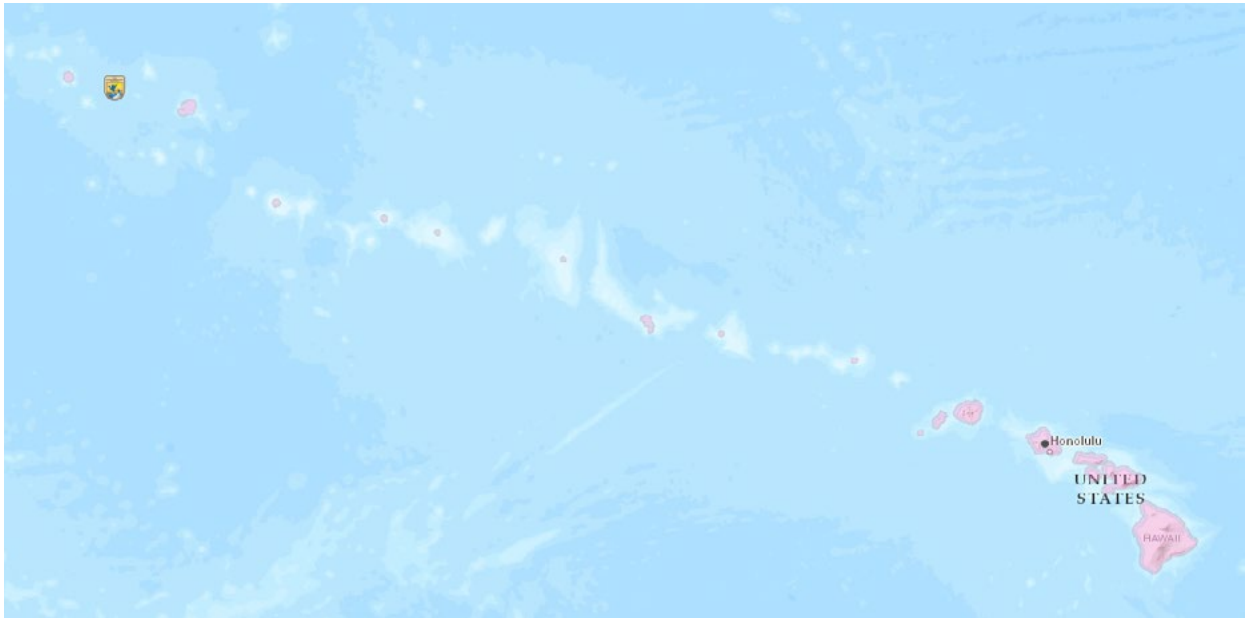
## Appendix 3: Central Hazardous Materials Fund Sites Map - September 2019



CHF sites in the mainland U.S. range from coast to coast and involve six bureaus within the Department of the Interior.



CHF sites in Alaska.

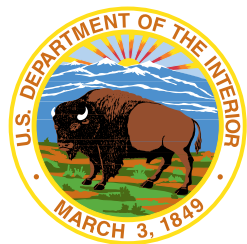


CHF site at Midway Atoll (Hawaiian Islands).



CHF site in Vieques, Puerto Rico.





# U.S. Department of the Interior Central Hazardous Materials Fund

1849 C Street NW, Washington DC 20240

[www.doi.gov/oepec/central-hazardous-materials-fund-chf](http://www.doi.gov/oepec/central-hazardous-materials-fund-chf)

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