



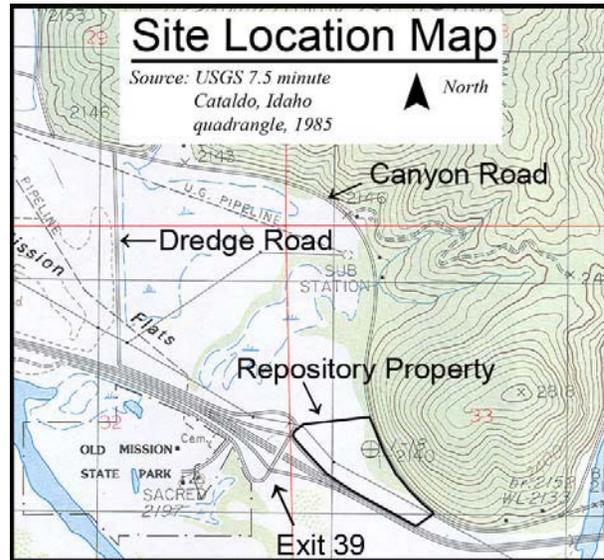
East Mission Flats Waste Repository

60% Design Document Review - Coeur d'Alene Basin, Northern Idaho

July 2008

East Mission Flats Community Open House - Public Invited to Review Design

Want to learn about next steps for the East Mission Flats Waste Repository (EMF) near Cataldo, Idaho, and provide input? Through September 2, 2008, the public is invited to review and give suggestions on the 60% Design Document for the new repository. The report gives new design details, shows the site's configuration, and shares visual simulations. In response to public requests, this courtesy review is being provided by the Idaho Department of Environmental Quality (DEQ), and the U.S. Environmental Protection Agency (EPA).



The East Mission Flats Waste Repository is west of Cataldo, across I-90 from the Old Mission.

Come to a Community Open House

Thursday, July 31

3:30 – 7:00 p.m.

Canyon Elementary School
27491 E. School House Loop
Cataldo, ID 83810

Citizens can talk with project representatives, view displays, and turn in written suggestions on the design. There will be no formal presentation. Drop in any time between 3:30 and 7:00.

Where to Find the Documents

Find the Draft 60% Design Document, and the Executive Summary online at www.basincommission.com under East Mission Flats Repository Info. The documents also will be available at locations listed on back. The Executive Summary will be available by July 14. The Draft 60% Design Document will be made available by July 30.

Public Input Welcome

Send suggestions on the design by September 2 to:
Andy Mork, PG, CHG
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706
andy.mork@deq.idaho.gov

Waste Repositories Needed to Protect Health

Soil from cleanups of residential and commercial properties contains metals, like lead and arsenic, which can harm people. This soil needs a place to go where it can be safely contained. Waste repositories are carefully chosen to isolate the contaminated soils through time, to reduce impacts to people and the environment. These repositories will be managed long after they are closed to be sure the contaminants remain contained and secure.

Some Facts about East Mission Flats

The East Mission Flats Repository is west of Cataldo, Idaho, across I-90 from the Old Mission. It will securely contain contaminated soils from property cleanups in the Lower Basin, and help reduce people's exposure to the contaminants lead, arsenic and cadmium. Property owners who perform their own work under the Basin Institutional Controls Program also can dispose of soils at East Mission Flats. The Panhandle Health District (PHD) runs the Institutional Controls Program. In response to public input on the 30% Design, the planned height of the repository has been reduced from 62 feet to 34 feet. It will not be easily visible from the Old Mission. Only soils contaminated with mine waste will be accepted at EMF. Municipal wastes and residential garbage will not be accepted.

What's New in the 60% Design?

Several changes have been made from the 30% Design. Some changes were in response to public comments received last fall. Please note that all references to height above ground surface are made assuming a ground surface elevation of 2,131 feet. Actual ground surface elevation at the site ranges from about 2,130 to 2,139 feet.

- The height of the repository was reduced from 62 feet to 34 feet. It will be completed with smooth slopes to blend in with the landscape, rather than have benches that look like large steps.
- DEQ purchased another four acres of land to make the repository site 23 acres. The land is between Canyon Road and the original 19-acre site. This allows DEQ to own all land that will be disturbed by building and running the repository.
- In response to public input, the selected repository alternative will hold about 416,000 cubic yards of waste, instead of the 668,000 cubic yard alternative described in the 30% Design Report.
- Contaminated soils will be protected against erosion as they are placed.
- PHD will give key cards to users and monitor access to control what materials are disposed of at the repository.

Site Studies Update

DEQ and EPA are carefully designing the East Mission Flats repository to safely secure mining waste and protect human health. The following activities address several topics of public concern:

Checking for visibility: Citizens can see visual simulations of the repository at the Community Open House. The simulations show how visible the 34-foot-high repository will be after capping and revegetation. They were generated from six viewpoints around the repository, including two viewpoints in the Old Mission State Park. The repository will not be easy to see from the Old Mission. It would be easiest to see from I-90 and the Exit 39 overpass.

Access road choices: When the Lower Basin property cleanup is in full swing, the repository will be busy. Normally, the EMF repository will operate Monday through Thursday, and up to 100 trucks will deliver contaminated soils there each day. All trucks will use Exit 39 off of I-90 to reach East Mission Flats. From there, two options are being considered: directly entering the west side of the repository from Exit 39; or on a route from Exit 39 to Dredge Road to Canyon Road, then entering the site from the north.

Protecting cultural resources: This area is of special cultural and historic importance to the Coeur d'Alene Tribe. A monitoring program is now in place to protect archaeological and cultural resources. When any digging is planned, the program requires State and Tribal archaeologists be notified. Over the past year, an archaeologist observed 22 excavations at the site. Ten excavations were due to tree root wad removal; 12 excavations were related to soil borings. No cultural resources were found in the excavations.

Groundwater test results: Four wells were put in at the site. Testing of shallow groundwater from the wells showed that the water has not been significantly impacted by contaminated soils deposited in the area from historic dredging, flooding, or other events.

Cover to help absorb rainwater: A protective "evapotranspiration" cover will reduce the amount of rainwater and snowmelt soaking into waste soil. The cover will be made of clean soil placed on top of the contaminated soil. The purpose of the clean soil cover is to hold water until it evaporates or is absorbed by plants. This cover should dramatically reduce or eliminate leachate from passing through the imported contaminated soil and mixing with groundwater.

Leaching tests in progress: We know that the top four feet of soil at the EMF site is contaminated with metals, including lead as high as 8,700 parts per million. We also know from groundwater testing that water beneath the site is not contaminated with metals. We assume that the soils extending from the ground surface to the water table can filter the water percolating from the surface and remove harmful metals. We are now scientifically testing this assumption. These tests will help predict amounts of metals in groundwater that may be contributed by soil stored in the repository.

Surface water test results: In fall 2007, water from the Coeur d'Alene River was tested for metals. Water was collected from above and below the East Mission Flats Repository. Results show no significant difference in metals in the two water samples. This suggests that groundwater discharging from the area around the repository does not impact river water quality. Additional tests will be needed to confirm this finding.

Flood water testing: During this spring's flooding, there appeared to be no water flowing across the site from east to west. Instead, water pooled at the site during the maximum high water period, and drained away as the flood level receded. The water flowed onto and off of the site through culverts beneath I-90. DEQ and EPA tested the floodwater to compare

amounts of metals in surface water flowing onto and leaving the site. By mid July, results of these tests will be posted on the Basin Commission web site at www.basincommission.com

Surface water protection: Measures will be taken to protect surface water from contacting contaminated sediments stored in the repository. Standard operating procedures and design features will control erosion even before installing the final cap and riprap armoring on the repository. Soil will be compacted to make it more difficult to erode from the slope face. Hydroseeding will make a temporary cover of vegetation to stabilize the surface.

The repository will have four features to protect surface water:

- A silt fence around the property boundary.
- Two tiers of EcoBlocks around the perimeter in Phase I of filling the repository. The blocks will anchor the silt fence filter fabric and hold in sediment that may slough from the repository flanks.
- Straw wattles placed at a right angle to the slope face to trap eroded waste soil.
- Storm water retention basins.

Shielding the repository from flood impacts: The site is on the 100-year floodplain. We anticipate annual flooding as well as periodic major flood events. In this wet year (2008), standing water about four feet deep was observed at the repository location. The high water did not have a pronounced flow across the site; rather, the site was like a bathtub filling up and draining through culverts beneath I-90. The repository is designed to withstand much higher water levels resulting from the 100-year flood event. This 100-year flood event assumes a flow of 90,000 cubic feet per second in the Coeur d'Alene River at the Cataldo gauging station. For comparison, 2008's peak flow was 32,300 cubic feet per second.

Results of the 100-year flood model predicted flood water levels 17 feet above ground surface at the repository. In addition to the flood height, the model predicted the speed of the water moving past the repository during the entire flood event. Over most of the site, the flow speed was predicted to be about two feet per second. The maximum predicted flow speed was slightly less than six feet per second at one location where the water channel narrows between the Exit 39 embankment and the repository. For reference, six feet per second is a comfortable walking pace. The design engineers may modify the design to accommodate a larger water flow in this narrow spot.

The 60% Design includes simple, low maintenance features to protect the side slopes of the repository from erosion during such a flood event. These features include an apron all the way around the repository made of a woven geotextile layer, 12 inches of clean gravel, and 12 inches of course cobble and boulder riprap. To be on the safe side, this riprap apron will be made to reach three feet above the height of the predicted 100-year flood, or about 21 feet above ground surface.

Threatened and endangered species: The East Mission Flats area is home to many species of animals and plants. Biologists checked records to see if any threatened or endangered species live near the site. One such species, the bull trout, may live in the South Fork Coeur d'Alene River during parts of the year. A report called a Biological Evaluation was prepared describing how the repository will be constructed, and what affect, if any, the repository may have on bull trout. The report concluded that it would be very unlikely the repository would have any affect on bull trout or critical bull trout habitat. The U.S. Fish and Wildlife Service concurred with the report's findings.

Choosing a Waste Repository:

The search for repositories continues in order to meet the cleanup needs of the large Coeur d'Alene Basin site. Beginning in 2003, the agencies considered over 150 possible locations in the Lower Coeur d'Alene River Basin before choosing East Mission Flats. No location is perfect, and each is carefully evaluated before the agencies decide to use it. During this evaluation of potential locations, many factors are considered, including:

- Preventing harm to people and wildlife
- Minimizing impacts to groundwater and surface water
- Appropriateness for the types of waste to be disposed of
- Location relative to the cleanup sites
- Cost effectiveness of location and design
- Presence of existing contamination at the repository site
- Costs for operation and maintenance
- Compliance with applicable laws that ensure a cleanup is protective
- Access alternatives
- Flood impacts
- Presence of wetlands
- Presence of archaeological resources
- Land ownership and willingness of owner to work with the project



U. S. Environmental Protection Agency
1200 Sixth Avenue, Suite 900, ETPA-081
Seattle, Washington 98101-3140

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U.S. EPA
Permit No. G-35
Seattle, WA

July 2008

*Coeur d'Alene Basin, Bunker Hill Superfund Site
East Mission Flats, Northern Idaho*

For More Information

Documents:

Kellogg Public Library
16 West Market Avenue
Kellogg, ID 83827
208-786-7231

North Idaho College
Molstead Library
1000 W. Garden Avenue
Coeur d'Alene, ID 83814
208-769-3355

Wallace Public Library
415 River Street
Wallace, ID 83873
208-752-4571

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

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

Coeur d'Alene Field Office, EPA
1910 NW Boulevard, Suite 208
Coeur d'Alene, ID 83814
208-664-4588

EPA Seattle Office
Records Center
1200 Sixth Avenue, Suite 900
Seattle, WA 98101
206-553-4494

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Website: www.basincommission.com - click on "East Mission Flats Repository Info"



Alternative formats are available. Please call Andy Mork at 208-373-0141 for reasonable accommodation. TTY users may call the Federal Relay Service at 800-877-8339 and give the operator Andy Mork's phone number.



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