



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND

June 11, 2002

Callahan Mining Corporation A Proposed Superfund Site

The U.S. Environmental Protection Agency (EPA) has proposed the former Callahan Mining Corporation located east-southeast of Harborside Village in the town of Brooksville, Hancock County, Maine for inclusion on the National Priorities List (NPL). The NPL, also known as Superfund, is a list of hazardous waste sites that are eligible for Federal funding to pay for extensive, long-term cleanup actions under the Superfund program. The goal of the Superfund program is to protect you and the environment from the effects of hazardous substances.

Site History

The Callahan Mine Site is located approximately 1,000 feet east-southeast of Harborside Village in the town of Brooksville, Hancock County, Maine. The site is the former location of a zinc/copper open pit mine. The mining operations were conducted adjacent to and beneath Goose Pond, a tidal estuary. The Callahan Mine was reputedly the only intertidal heavy metal mine in the world at the time of its operation.

The approximately 150 acre Site is located in a rural coastal setting on the Cape Rosier peninsula. The Site property abuts and extends into Goose Pond Estuary to the east, and private properties to the west, south and north. The developed portion of the Site extends about 5,000 feet south-southeast from the Goose Falls Road, and approximately 1,000 to 1,500 feet west from Goose Pond Estuary. The Holbrook Island Sanctuary, a State owned nature preserve, is located on the eastern shore of the estuary

First Meeting

**Public Information
Meeting to learn about
upcoming activities at the
Callahan Mine Proposed
Superfund Site**

**Tuesday, June 11, 2002
6:30 p.m.**

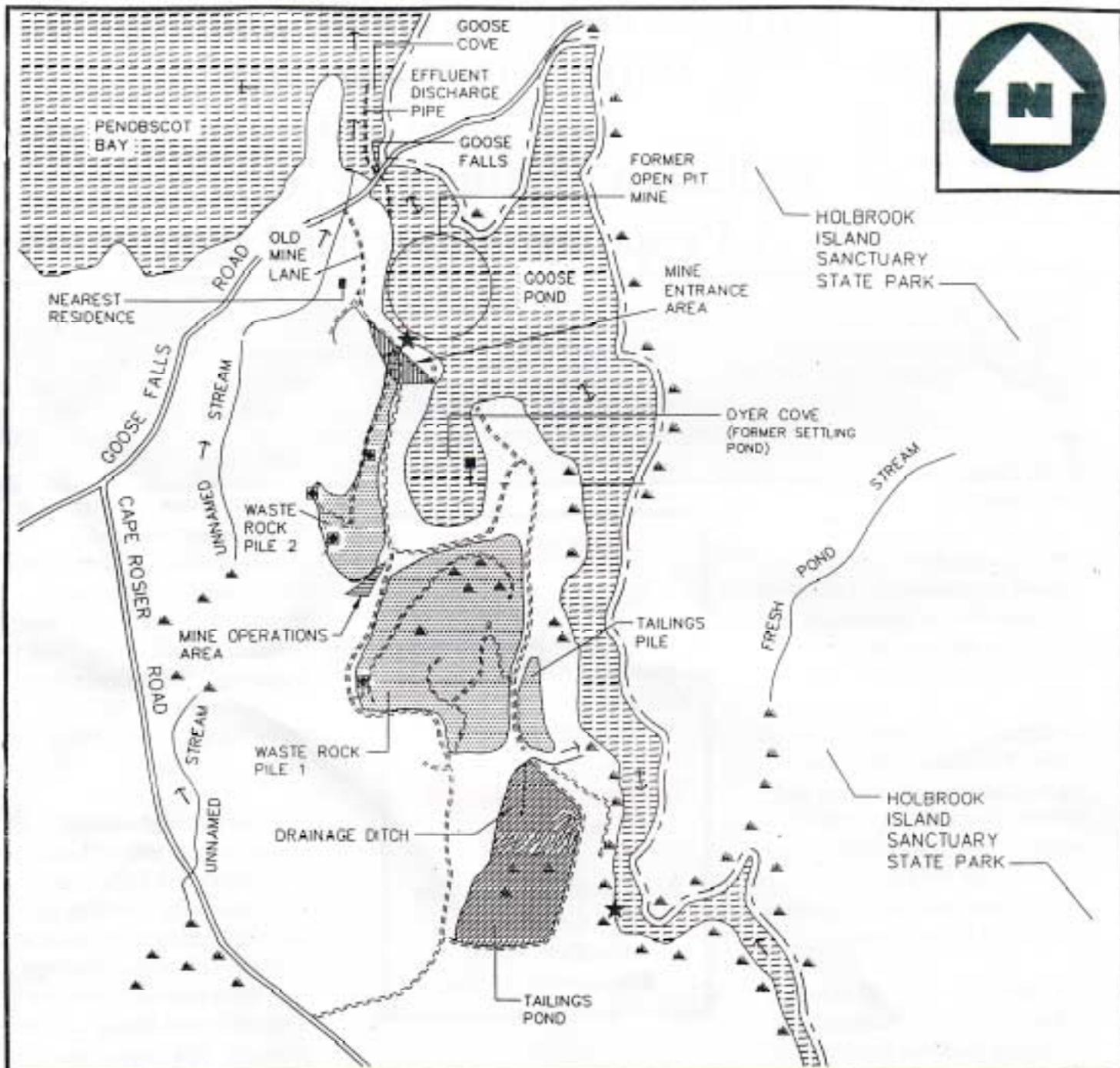
**Brooksville Community
Center
Confield Road
Brooksville, Maine**

opposite the Site. The open pit mine ceased operations in 1972 and was flooded by opening a dam at Goose Falls. The mine is currently under water and is subject to daily tidal exchange in Goose Pond. Goose Pond is connected to Goose Cove to the north by reversing falls known as Goose Falls. Goose Cove is located on the southern part of Penobscot Bay (see Figure 1).

When mining operations began,

two dams were constructed at the saltwater inlet and freshwater inlet of Goose Pond. Fresh water that normally flowed into Goose Pond was diverted south to Wier Cove via a drainage ditch. Goose Pond was subsequently drained to allow for the excavation of the mine.

The open pit mine was approximately 600 to 1,000 feet in diameter and 320 deep. Approximately 5 million tons of non ore-bearing waste rock and 800,000 tons of ore-bearing rock were removed from the mine and piled throughout the property. The largest quantity of this material was piled up in the west-central portion of the Site and has been referred to as "Callahan Mountain". At the base of this waste pile is an area known as Dyer Cove. Dyer Cove was used as a settling pond for water pumped from the open-pit while the mine was operational. A pump house, metal shop building, foundations of a former laboratory, a concentration mill, and a primary crusher are



LEGEND

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|-----------------------------|--|----------------------|---|-----------------|
| SURFACE WATER | FLOW DIRECTION | SOURCE SAMPLE | HOLBROOK ISLAND SANCTUARY STATE PARK BOUNDARY | SEDIMENT SAMPLE |
| WASTE ROCK PILES (SOURCE 1) | PROBABLE POINT OF ENTRY TO SURFACE WATER PATHWAY | UNPAVED ROAD | BACKGROUND SOIL SAMPLE | WETLAND |
| TAILINGS POND (SOURCE 2) | | PAVED ROAD | MINE ENTRANCE AREA | |
| | | MINE OPERATIONS AREA | | |

SITE SKETCH

CALLAHAN MINE
HARBORSIDE
BROOKSVILLE, MAINE



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #
00-06-0020

DRAWN BY:
W. SHAW

DATE
8/11/00

FILE NAME:
S:\00060020\FIG3.DWG

FIGURE 1

for community involvement.

One: A detailed study, the **Remedial Investigation**, is done to identify the cause and extent of contamination at the site and the possible threats to the environment and the people nearby. A **Feasibility Study** identifies options for cleaning up the site.

Typically the Remedial Investigation and the Feasibility Study take around two years to complete.

Two: EPA uses this information to develop and present a **Proposed Plan for Long-term Cleanup** to citizens and to local and state officials for comment. The proposed plan describes the various cleanup options under consideration and identifies the option EPA prefers. The community has at least 30 days to comment and is able to discuss the plan with EPA during a public meeting.

Three: Once the public's concerns are addressed, EPA publishes a **Record of Decision**, which describes how it plans to clean up the site. A notice is also placed in the local newspaper to inform the community of the cleanup decision.

Four: Next, the cleanup method is designed to address the unique conditions at the site where it will be used. This is called the **Remedial Design** and usually takes a year to complete.

The design and actual cleanup is conducted by EPA, the state, or by the parties responsible for the contamination at the site. If EPA does not perform the design, it closely oversees this design phase and the development of the cleanup at the site. When the design is completed, EPA prepares and distributes a fact sheet to the community describing the design and the action that will take place at the site.

Five: How long the **cleanup** actually takes depends on how the site needs to be cleaned and the extent of the problem. EPA will make sure the people living and working around the site are protected now and in the future. EPA regularly monitors every Superfund site to make sure it remains safe. If there is any indication that there is a problem, action will be taken to make the site safe again.

Who Pays for the Cleanup?

Superfund is either paid for by the people and businesses responsible for contamination or by the Superfund trust fund. Under the Superfund law, EPA is able to make those companies and individuals responsible for contamination at a Superfund site perform, and pay for, the cleanup work at the site. EPA negotiates with the responsible parties to get them to pay for the plans and the work that has to be

done to clean up the site. If an agreement cannot be reached, EPA issues orders to responsible parties to make them clean up the site under EPA supervision. Superfund ensures that the parties responsible for the pollution pay to fix the problems they created. EPA may also use Superfund trust fund money to pay for cleanup costs, then attempt to get the money back through legal action.

What Assistance is Available to the Community?

EPA values your input and wants to help you understand the technical information relating to the cleanup of Superfund sites in your community so that you can make informed decisions.

Under the Superfund law, EPA can award Technical Assistance grants (TAGs) of up to \$50,000 per site. TAGs allow communities to hire an independent expert to help them interpret technical data, understand site hazards, and become more knowledgeable about the different technologies that are being used.

Your community group may be eligible for a TAG if you are affected by a site that is or proposed to be added to Superfund. The EPA Community Involvement Coordinator can provide more information.

located southwest of Dyer Cove. An 11 acre tailings pond located adjacent to and south of the Callahan waste rock mountain was created to receive finer waste rock materials and residual chemical reagents discarded during the ore-milling process. Ore-bearing rock was processed at an on-site separation mill prior to shipment to smelting facilities. The milling process included crushing the rock into a fine sand, into silt, then separating the ore from waste rock material using flotation cells. Approximately 18% of the processed rock was recovered as copper/lead and zinc ore concentrates. During mining operations, fresh water was retained behind a dam adjacent to the tailings pond and diverted to Weir Cove via a canal dug by the mining company. At that time, no apparent controls were installed to prevent leaching of metals and residual chemicals from the tailings pond area to the fresh water canal and Weir Cove.

Reclamation History

Mining and milling operations ceased in June of 1972 and a reclamation program was begun which included the following:

- draining of surface water from the tailings pond and seeding the surface
- grading, seeding and planting of the waste piles;
- removal of the fresh water dam;
- flooding of the 320 foot deep open-pit mine by opening the sluice boards in the salt water (Goose Falls) dam.

In the period between the mine closure and 1980, an aquaculture facility was operated at the Site for the cultivation and sale of Coho Salmon. During this period, restricted tidal flow into Goose Pond was maintained by the dam located at the tidal entrance to the pond. No other operations have been located at the site since 1980.

Permission for removal of the remaining portion of the dam was issued by the Maine Department of Environmental Protection in 1987 to allow unrestricted tidal flow into the pond as occurred prior to the development of the mine. Also in 1987, four underground storage tanks located in the vicinity of the metal shop building were removed. No indication of releases or contaminated soil were observed during the tank removals.

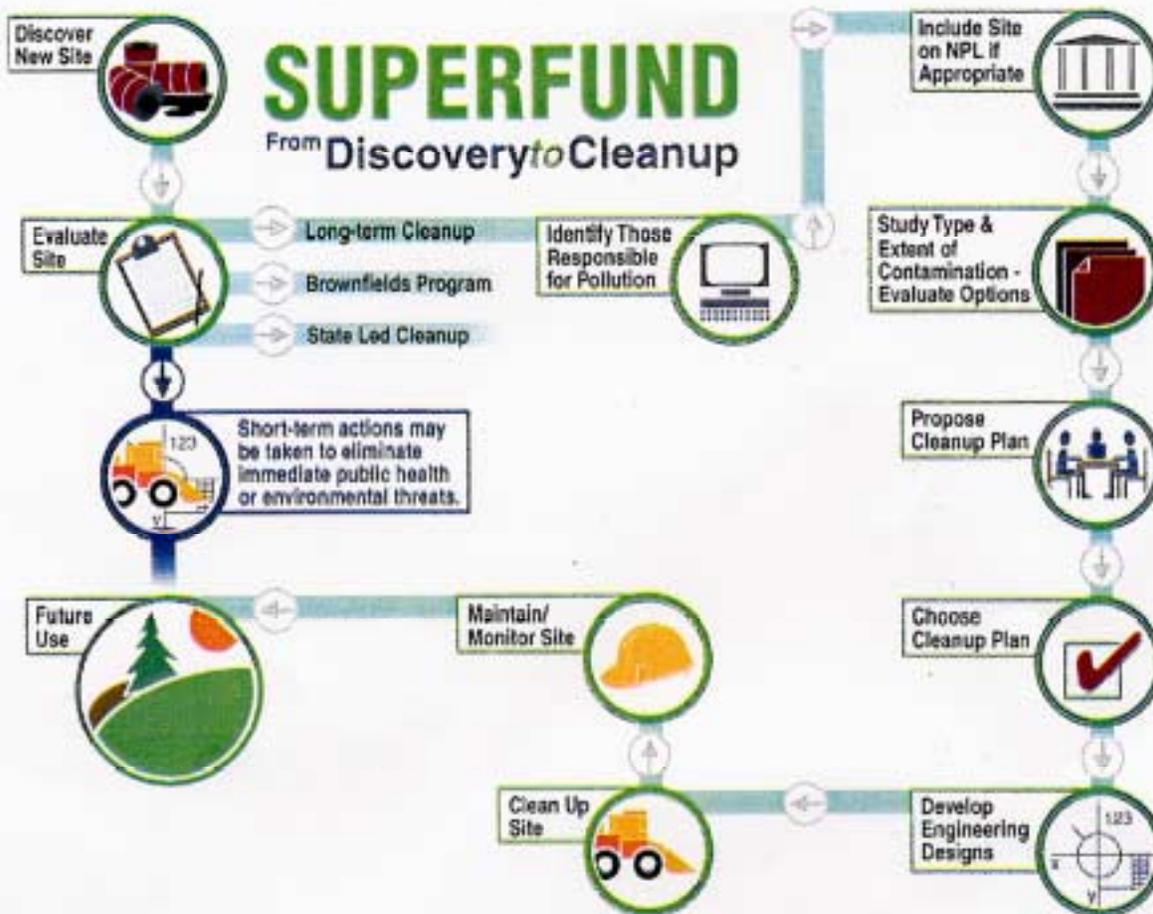
Several studies were conducted by state and federal agencies to assess the environmental impact of mining operations in the vicinity of Goose Pond. Investigations included the assessment of metal concentrations in groundwater, sea water, benthic marine flora/fauna, and sediments. Investigations conducted from 1967, prior to the beginning of full operations at the mine, through 1979 concluded that mining operations had a major and significant effect on metal concentrations in bottom sediments, rockweed, and soft-shell clams in Goose Cove. High concentrations of mining related metals for Atlantic Coast soft shell clams were detected at Goose Cove sampling stations under direct influence of effluents of the Callahan Mine.

During operation of the mine, sea-water samples collected up to one mile from the mine effluent discharge point in Goose Cove contained metal concentrations at levels toxic to certain algae. Sampling conducted several years after the mining operation had ceased indicated metal contamination was contained near the source area (i.e. Goose Pond Estuary, Dyer Cove, and Goose Cove) and declined markedly away from the source.

There have been isolated occurrences of elevated lead concentrations in wells located in the area. However, sampling of drinking water wells have detected metals below safe drinking water levels. Several leachate seeps were identified and sampled at the base of the tailings pond as part of a 1986 environmental site assessment. Zinc, lead and cadmium were detected in water samples collected from the seeps. Analyses of sediment samples collected from Dyer Cove (settling pond) and Goose Cove were reported with elevated concentrations of copper, zinc, lead and cadmium.

What Should Neighbors Expect if the Area becomes a Superfund Site?

The Superfund process is conducted in several phases that lead to the ultimate goal of cleaning up the site and providing a safe environment for the people living and working around it. Throughout the process, there is opportunity



For More Information Contact

For site information:

Leslie McVickar
EPA Remedial Project Manager
1-617-918-1374 or toll free
1-888-372-7341
mcvickar.leslie@epa.gov

Naji Akladiss
ME DEP State Project Manager
1-207-287-7709
naji.n.akladiss@state.me.us

Pam Harting-Barrat
EPA Community Involvement
Coordinator
1-617-918-1318 or toll free
1-888-372-7341
harting-barrat.pamela@epa.gov

For health information:

Jill Dyken
ATSDR Health Assessor
1-888-422-8737

Bill Sweet
Senior Regional Representative
1-617-918-1495 or 1-888-422-8737