SUPERFUND

SITE UPDATE

Pine Street Canal Superfund Site
Burlington, VT

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND

THE SUPERFUND PROGRAM protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.

BACKGROUND:

The 38-acre Pine Street Canal Superfund Site (the site) is located on Pine Street in Burlington, VT. The site consists of a canal and turning basin, adjacent wetlands, an area formerly known as Maltex Pond, and an additional portion of land. Around 1908, a coal gasification plant began operating on Pine Street, southeast of the canal, until operations ceased in 1966. Plant wastewaters and residual oil and wood chips saturated with organic compounds were directly discharged and disposed of in the Pine Street Canal wetland. During the 1960s and 1970s, an oil-like material was detected seeping from the wetland into Pine Street Canal, the turning basin, and Maltex Pond. The State detected high levels of organic compounds associated with coal tar at several locations. In 1985, EPA undertook an emergency removal of coal tar, capping of the Maltex Pond area, and construction of gates at key access points to reduce exposure to hazardous substances. The Site was added to the National Priorities List in 1983.

CLEAN UP ACTIVITIES:

Starting in 1985, the Site was cleaned up in two phases: emergency actions and a long-term remedial phase focusing on cleanup of the entire site.

Emergency Actions: In 1985, the EPA excavated 500 cubic yards of coal tar, solidified it, and disposed of it in an approved (off-site) facility. The Maltex Pond area also was capped with clay, covered with topsoil, and seeded. A temporary fence was erected, and warning signs were posted and have since been removed.

Entire Site: By early 1991 the EPA had conducted field investigations, including a soil gas survey, a geophysical survey, air sampling, ecological studies, surface water and sediment sampling, soil sampling, installation of monitoring wells, and groundwater sampling to determine the nature and extent of the site contamination. The cleanup plan was completed in 1992 and withdrawn in 1993 in response to the comments received during the public comment period. The Pine Street Barge Canal Coordinating Council (Council), an 11-member community advisory group, formed in 1993. The Council operated on consensus decision making and included a

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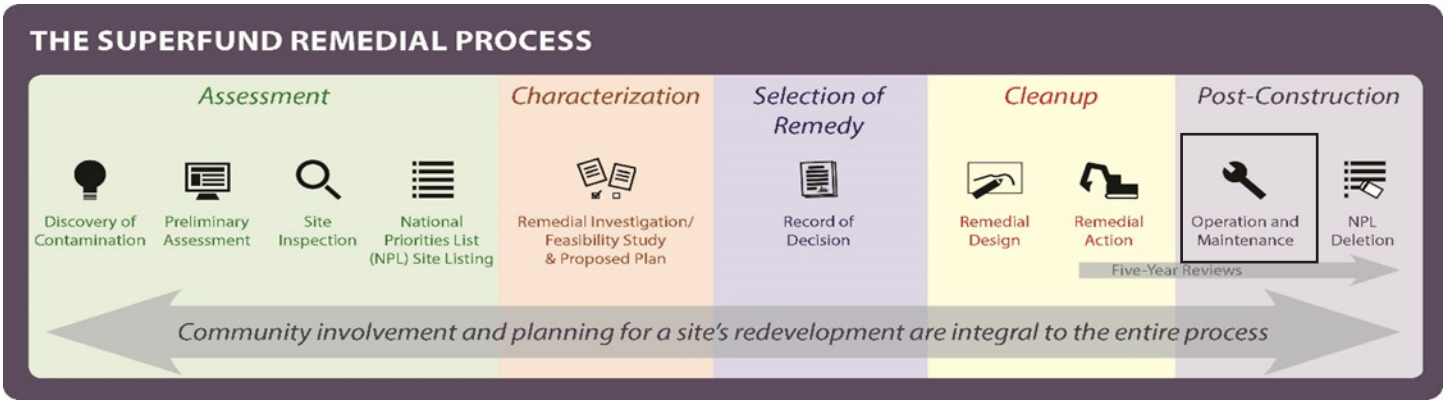
cross-section of citizens, environmental groups, potentially responsible parties, the City of Burlington, State of Vermont, EPA and the U.S. Fish and Wildlife Service. Over a period of 5 years the Council planned additional studies focusing on ecological risk and contaminant migration and recommended a final cleanup remedy to EPA in 1998. EPA accepted the Council's recommendation and released a cleanup proposal for public comment in June 1998.

A Record of Decision (ROD) which considered the Council's recommendations was signed in September 1998. Elements of the remedy include capping contaminated sediments in portions of the canal, turning basin and adjacent wetlands, institutional controls to prohibit potable use of groundwater, institutional controls to restrict certain future uses (e.g., residential use, among others), long term performance monitoring, and periodic five year reviews (required by statute wherever waste is left in place). Subsequent Explanations of Significant Differences (ESDs) were memorialized in 2009 to amend a 400-foot section of the cap in the southern end of the canal, and 2011 to install a 300-foot vertical barrier wall between the western border of the site and Lake Champlain and routinely remove non-aqueous phase liquids adjacent to the capped area of the canal.

CURRENT SITE STATUS:

Since the signing of the 1998 ROD all elements of the remedy have been implemented and the site is now in the Operation and Maintenance (O&M) phase of the Superfund remedial process. This phase of the process ensures that remedies continue to be protective of human health and the environment. EPA's activities during this phase include overseeing the responsible parties' O&M of long-term remedy components including regularly inspecting the site to ensure that the containment remedy continues to be effective, and enforcing any necessary restrictions to minimize the potential for human exposure to contamination.



REDEVELOPMENT:

In 1999, EPA launched the Superfund Redevelopment Initiative with the goal of returning formerly contaminated lands to safe and productive reuse. Over the last 20 years, EPA has helped facilitate the safe reuse and redevelopment of Superfund sites into commercial, recreational, ecological and residential spaces while remaining protective of human health and the environment.

As mentioned previously, limitations on land use and activities (i.e., institutional controls) have been legally recorded. These institutional controls play an important part in the remedy because they reduce potential harm by preventing uses and activities that could result in exposure to contaminants. EPA has and will continue to work with abutting property owners where they may be restrictions to ensure that any redevelopment is done safely - without compromising the remedy or potentially exposing individuals or the environment to site contaminants.