



**Minnesota
Pollution
Control
Agency**

Metro District,
Site
Remediation
Section

Proposed Cleanup Plan for the Former Tonka Main Plant Site

Cleanup/C0-13/July 2000

To hear more:

Attend a public meeting at 7 p.m. on Wednesday, **August 16, 2000**, at the City of Mound offices, 5341 Maywood Road, Mound, Minnesota

To comment:

Send in comments about the cleanup plan by **August 30, 2000**, to Nile Fellows at the MPCA.

Mail:

MPCA
520 Lafayette Road
St. Paul, MN 55155-4194

Phone:

651-296-7299

Fax:

651-296-9707

e-mail:

nile.fellows@state.mn.us

Hasbro Inc. (which now owns the Tonka Corporation) is proposing to clean up ground-water contamination at the former Tonka main plant site in Mound, Minnesota, by creating a wetland in the small channel that leads to Harrison Bay of Lake Minnetonka. This area was originally a wetland prior to the early 1900s.

All of this work will be completed under the direction of the Minnesota Pollution Control Agency (MPCA). Before the MPCA approves the plan, however, it invites the public to send in comments by August 30, 2000, to Nile Fellows at the MPCA Metro District, 520 Lafayette Road, St. Paul, Minnesota, 55155.

For more information, people can attend a public meeting at 7 p.m. on Wednesday, August 16, 2000, at the city of Mound offices, 5341 Maywood Road, Mound, Minnesota.

Where and what is the former Tonka main plant site?

The former Tonka main plant site is located between Shoreline Boulevard and Lynwood Boulevard in Mound (Figure 1). Tonka Corporation manufactured metal and plastic toys at this facility from 1954 through 1982.

Hasbro, Inc. acquired Tonka Corporation in 1991 after the plant had been closed. The facility currently houses several small warehouse and manufacturing operations.

What has been done at the site to date?

Tonka started to investigate soil and ground water near its plant in 1985. Although the company did not find significant soil contamination, it did find two areas where



**Figure 1:
Map**





ground water was impacted by volatile organic compounds (VOCs). These areas were designated the west plume and the north plume.

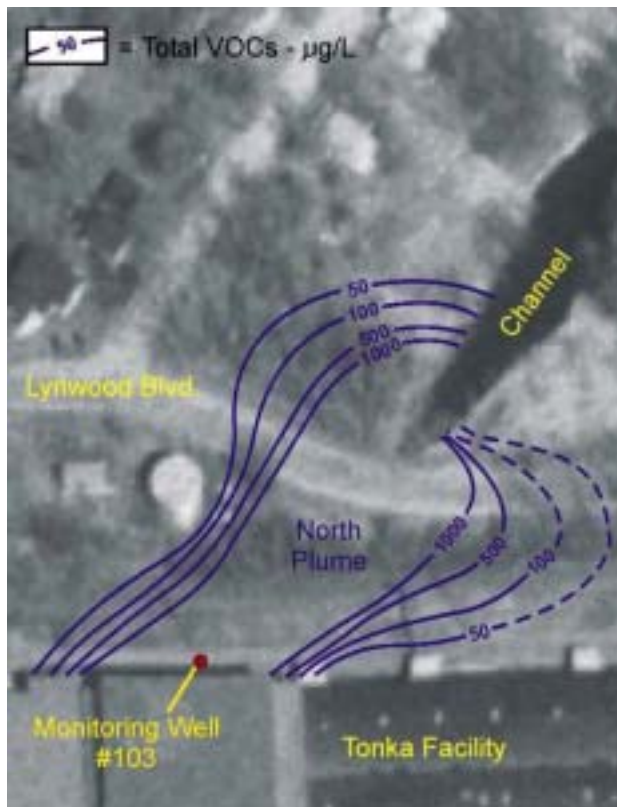
Because of this contamination, the MPCA added the Tonka site to the state Superfund list in 1985. In 1986, Tonka cleaned up storm sewer lines that contained paint residues. The company then worked with the state to conduct more ground-water investigations.

The primary chemicals of concern in the west and north plumes are trichloroethylene (TCE), a solvent used for cleaning metal parts prior to painting, and by-products from microbial degradation of TCE, such as cis-1,2-dichloroethylene (DCE) and vinyl chloride.

In the north plume, the highest concentration of TCE was reported immediately north of the former plant. The plume was reported to be moving toward the channel to Harrison Bay, based on the flow direction and the presence of DCE and vinyl chloride near the channel.

The west plume contains relatively high concentrations of VOCs around the west parking lot. This plume, however, migrates to the southwest and is intercepted by the sanitary sewer beneath Shoreline Boulevard.

Figure 2: Plume contamination



The sewer appears to intercept all contamination from the west plume, since no VOCs were detected in monitoring wells to the southwest of Shoreline Boulevard and north of Cooks Bay. The sanitary sewer then carries the ground water to the wastewater treatment plant, which treats the contamination safely.

In 1995, the MPCA required additional investigation of both plumes. Results of the additional investigation activities confirmed that the west plume is intercepted by the sanitary sewer and, therefore, does not affect human health or the environment. Hasbro is required to continue to monitor the west plume to make sure the plume does not migrate beyond the sewer.

However, the north plume was found to be more extensive (Figure 2). When sampling ground water near Harrison Bay, researchers found vinyl chloride concentrations that exceeded Minnesota surface water quality criteria. This required cleanup, since Minnesota has established criteria for TCE and vinyl chloride in lakes and streams.

What risks does this site pose?

The chemicals of concern in the north plume—TCE, DCE, and vinyl chloride—are dissolved in ground water. While these chemicals may be toxic to people if ingested, inhaled, or taken in through skin contact, the potential for exposure is remote, because the ground water is not used for human consumption or industrial purposes.

However, because ground water discharges very slowly to the channel, people may potentially come into contact with very low concentrations of these chemicals if they wade or swim in the channel near Harrison Bay. Aquatic animals in the channel may also be exposed to these chemicals at very low concentrations.

Feasibility Study

The original 1987 feasibility study (which considered possible cleanup plans) evaluated potential cleanup alternatives for the north and west plumes. Tonka considered different treatment technologies including containment, treatment in place, and ground-water extraction with discharge or treatment. At the time, the MPCA decided that the best option was continued monitoring, since the ground-water plumes had limited impact on the environment.

The feasibility study was supplemented in 1998 in response to the information obtained during the additional investigation. The supplemental study included analysis



of ground water extraction with discharge to the sewer, addition of chemicals to the subsurface to assist in degrading the contamination, and the proposed remedy of a restored wetland.

How will the site be treated?

Before being dredged in 1909, the channel to Harrison Bay was a wetland. The MPCA sees that restoring this wetland will be an effective treatment method, providing a natural mechanism to treat the ground water and protect surface water quality and water users. The proposed plan for a restored wetland is shown on Figure 3.

How will the wetland treat the ground water?

A restored wetland will protect surface water quality by treating ground water as it flows up through the bottom of the wetland.

Many recent studies have confirmed that the natural microbiological processes occurring in wetlands mineralize chlorinated VOCs, transforming them into substances which are not harmful to people or the environment. The wetland would provide optimal

conditions for natural microbial decomposition of chlorinated organics chemicals. Current monitoring data from the site shows that microbially-mediated degradation is already occurring at the site. Restoring the natural wetland in this area will provide a larger area for natural degradation of these compounds.

What are the other benefits of the proposed wetland restoration?

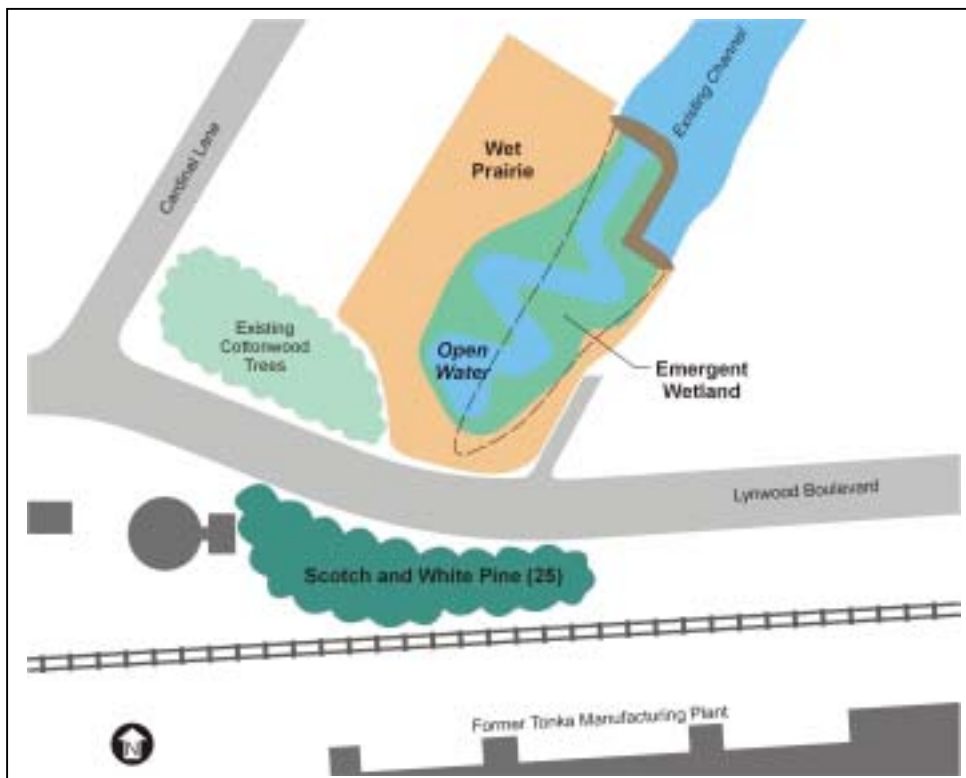
When compared to other remedial alternatives, a wetland restoration project offers minimal disruption to area residents. Because a wetland has no operating equipment, the system is not subject to mechanical failures or disruptions and never needs to be turned off.

In addition, the restored wetland will provide a natural filter to protect the water quality of Lake Minnetonka from surface runoff of nutrients and other chemicals from developed areas and will also add flood-storage capacity within the channel to Harrison Bay.

How can I get involved?

A public meeting to review this plan will be held at 7 p.m. on Wednesday, August 16, 2000, at the city of Mound offices, 5341 Maywood Road, Mound, Minnesota. Anyone interested in learning more about the proposed

Figure 3: Proposed plan for restored wetland



plan for this site or commenting on this proposed plan is encouraged to attend the public meeting or send your comments to Nile Fellows, MPCA project manager, at the MPCA Metro District, 520 Lafayette Road, St. Paul, Minnesota, 55155.

People can also fax their comments to Nile Fellows at (651) 296-9707 or send an e-mail to nile.fellows@state.mn.us.

If you have questions about this information, please contact either Nile Fellows at (651) 296-7299 or Stacy Casey, MPCA information officer, at (651) 296-7769.

MPCA Web site:
<http://www.pca.state.mn.us>