

US EPA ARCHIVE DOCUMENT



Aberjona River

Industri-Plex and Wells G & H Superfund Sites, Woburn, MA

Spring 2003

EPA Releases Draft Baseline Human Health Risk Assessment for Aberjona River Study Area

This fact sheet summarizes EPA's investigation of contamination in the Aberjona River Study area and the risk it presents to people who may use the river and its floodplain and wetlands for recreation.

The human health risk assessment for the Aberjona River Study area focuses on sediments and soils along six miles of the Aberjona River and wetlands from Route 128 in Woburn to the Mystic Lakes in Arlington and Medford. The study area is divided into six sections along the river, called reaches, which are illustrated on the attached map. Reach 1 contains the Wells G&H Superfund Site and associated 38-acre wetland, while Reach 2 contains a former cranberry bog. After the cranberry bog, the river continues to flow south as a well-defined river channel through Reaches 3, 4 and 5 prior to discharging into Reach 6, or the Mystic Lakes.

EPA analyzed over 390 sediment and soil samples from 52 sampling stations along the study area (see map). Additional sediment samples were collected from twelve stations outside the study area to provide background information for comparison. Surface water and fish samples were also collected from inside and outside the study area. EPA also conducted various studies to more accurately characterize potential risks along the study area.

Arsenic was present in sediments throughout the study area. Other metals, including antimony, chromium, copper, lead, mercury and zinc, were also detected at elevated levels. The Wells G&H 38-acre wetland exhibited some of the highest concentrations of metals within the study area.

EPA evaluated the potential for people who may come into contact with contaminants in the study area to experience adverse health effects. The study evaluated the following ways that an individual might become exposed:

- contact with surface water
- contact with and ingestion of sediment
- contact with and ingestion of floodplain surface soil
- eating the fish

EPA evaluated the risk to adults and young children who may come into contact with contaminants while engaging in recreational activities, such as wading. Sediment and soil samples that were collected from areas likely to be accessible to people, such as near the shore line, were evaluated

for potential current and future risks. EPA's evaluation found that only contact with and ingestion of sediments poses a risk. Contact with surface water, contact with and ingestion of floodplain surface soil, and eating fish do not pose a risk to people.

The results of the risk assessment indicate that sediments at two exposure stations, or areas, may pose a current health risk to people using the study area. The two exposure areas are WH and CB-03 (see map). WH is situated along the east side of the Wells G&H 38-acre wetland, near the former municipal Well H. CB-03 is located in the irrigation channels along the western side of the center of the former cranberry bog. It is important to note that six other exposure areas were evaluated for potential risks along the former cranberry bog, but none of these areas pose a health risk.

Additional Information

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**Copies of the Human Health Risk Assessment
are Available at the Following Locations:**

Winchester Public Library
80 Washington Street
Winchester, MA

Woburn Public Library
45 Pleasant Street
Woburn, MA

**a copy of the report can also be found on EPA's
web site:**

[www.epa.gov/region01/superfund/sites/wellsgh/
42364_TOC_Text.pdf](http://www.epa.gov/region01/superfund/sites/wellsgh/42364_TOC_Text.pdf)

In addition, the results of the risk assessment indicate that sediments at six exposure areas may pose a future health risk to people using the study area. These include WH and CB-03, as well as four additional exposure areas: NT-1, NT-2, NT-3 and I3/TT-27 (see map). Exposure areas NT-1, NT-2 and NT-3 represent an area under consideration by the City of Woburn for the construction of nature trails and either a boardwalk or pier in the wetlands. Exposure area I3/TT-27 is situated along the west side of the Wells G&H 38-acre wetland and may become accessible in the future if physical barriers, such as fences, are removed.

Arsenic contaminated sediment in these discrete areas presents the most significant risk to people who may be using the study area. For the estimation of risk, exposure to study area sediments was assumed to occur repeatedly over a long period of time (e.g., years). Short periods of exposure (e.g., weeks) is not a concern.

For the two areas which pose a current potential risk, EPA will coordinate with the City of Woburn regarding the posting of signs discouraging contact with and ingestion of sediments.

The draft human health risk assessment is available for review at the Woburn and Winchester public libraries. In addition, a copy of the risk assessment is posted on EPA's web site at:

www.epa.gov/region01/superfund/sites/wellsgh/42364_TOC_Text.pdf

To Comment:

If you have any comments or questions on the draft human health risk assessment please send them within the next 60 days to the following address:

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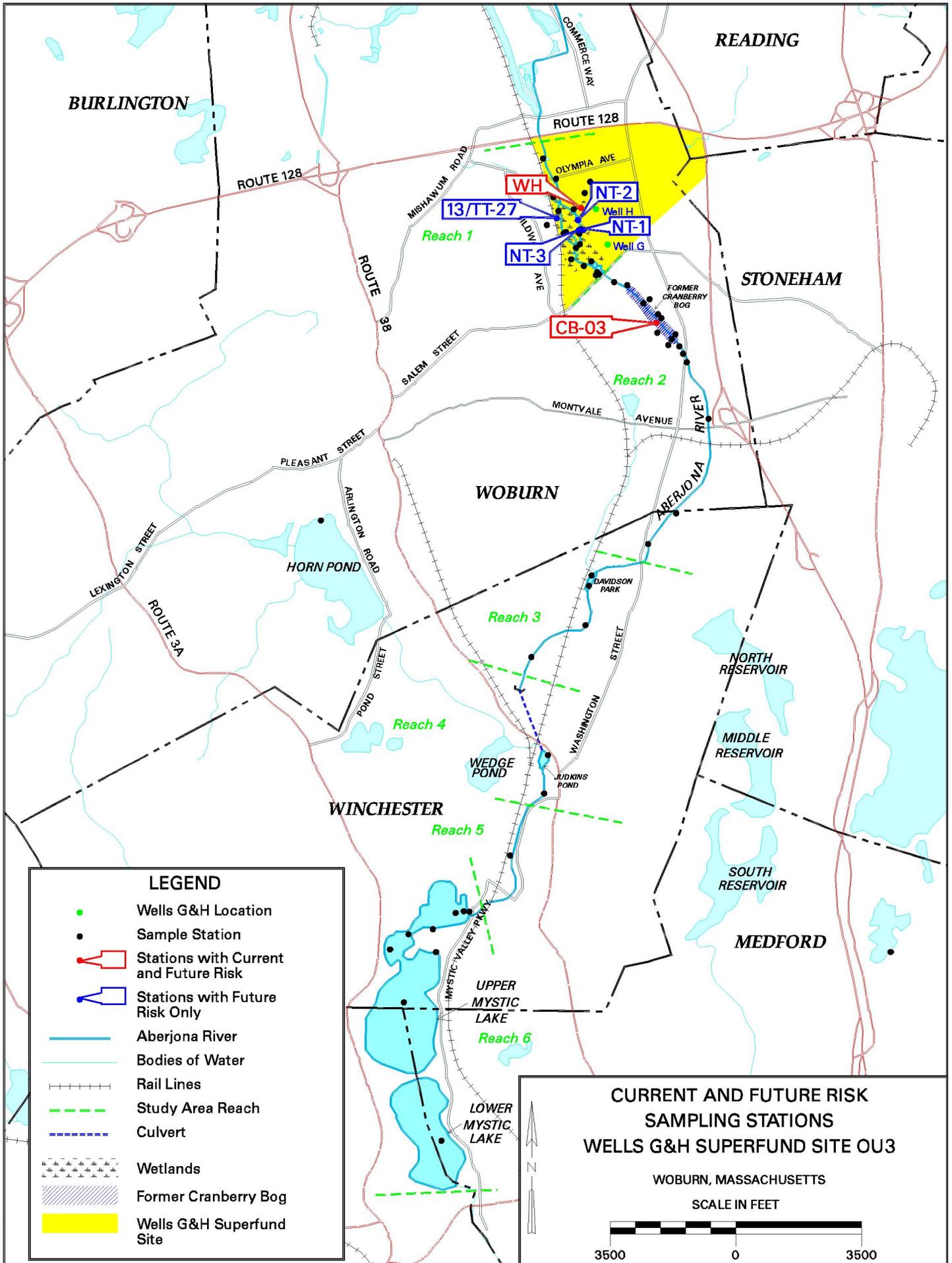
or e-mail your comments or questions to:

bonarrigo.angela@epa.gov

Next Steps:

The ecological risk assessment for the study area is being prepared separately and is expected to be completed within the next four to six weeks. The ecological risk assessment will evaluate the potential impact of contaminants on aquatic life, fish, birds and mammals exposed to the sediments. Once complete, EPA will release the draft ecological risk assessment to the public.

As outlined in EPA's spring 2002 fact sheet, both draft risk assessments will be expanded to include environmental data collected immediately upstream of the study area (i.e., north of Route 128). A final risk assessment will be presented in a report called a Remedial Investigation. This comprehensive Remedial Investigation will evaluate all data, the movement of contaminants within the environment, and any potential risks associated with these contaminants. This report is expected to be completed by fall 2003, and will be used to formulate a comprehensive strategy to address human health and ecological risks from the Industri-Plex Superfund Site to the Mystic Lakes.



BURLINGTON

READING

ROUTE 128

ROUTE 128

WH

NT-2

13/TT-27

NT-1

NT-3

CB-03

Reach 1

Reach 2

WOBURN

STONEHAM

HORN POND

NORTH RESERVOIR

MIDDLE RESERVOIR

SOUTH RESERVOIR

MEDFORD

WINCHESTER

WEDGE POND

JUDKINS POND

UPPER MYSTIC LAKE

LOWER MYSTIC LAKE

Reach 3

Reach 4

Reach 5

Reach 6

LEGEND

- Wells G&H Location
- Sample Station
- ▢ Stations with Current and Future Risk
- ▢ Stations with Future Risk Only
- Aberjona River
- Bodies of Water
- +—+—+— Rail Lines
- - - Study Area Reach
- - - Culvert
- ▨ Wetlands
- ▨ Former Cranberry Bog
- ▨ Wells G&H Superfund Site

**CURRENT AND FUTURE RISK SAMPLING STATIONS
WELLS G&H SUPERFUND SITE OU3**

WOBURN, MASSACHUSETTS
SCALE IN FEET

