Yaworski Waste Lagoon (I-52)
Canterbury, Connecticut
30 June 1985

Location and Nature of Site

Yaworski Waste Lagoon occupies 340 acres in Canterbury, Connecticut. The site consists of a lagoon which lies within a meander loop of the Quinebaug River. The lagoon originally measured 210 meters by 122 meters and 3.7 meters deep, surrounded by a two to three meters wide dike. As of September 1984, the lagoon had been completely backfilled and mounded to promote drainage away from the area. Open cultivated fields lie to the east and south of the site, with the areas north and west of the site consisting of wetlands, meadows, and trees.

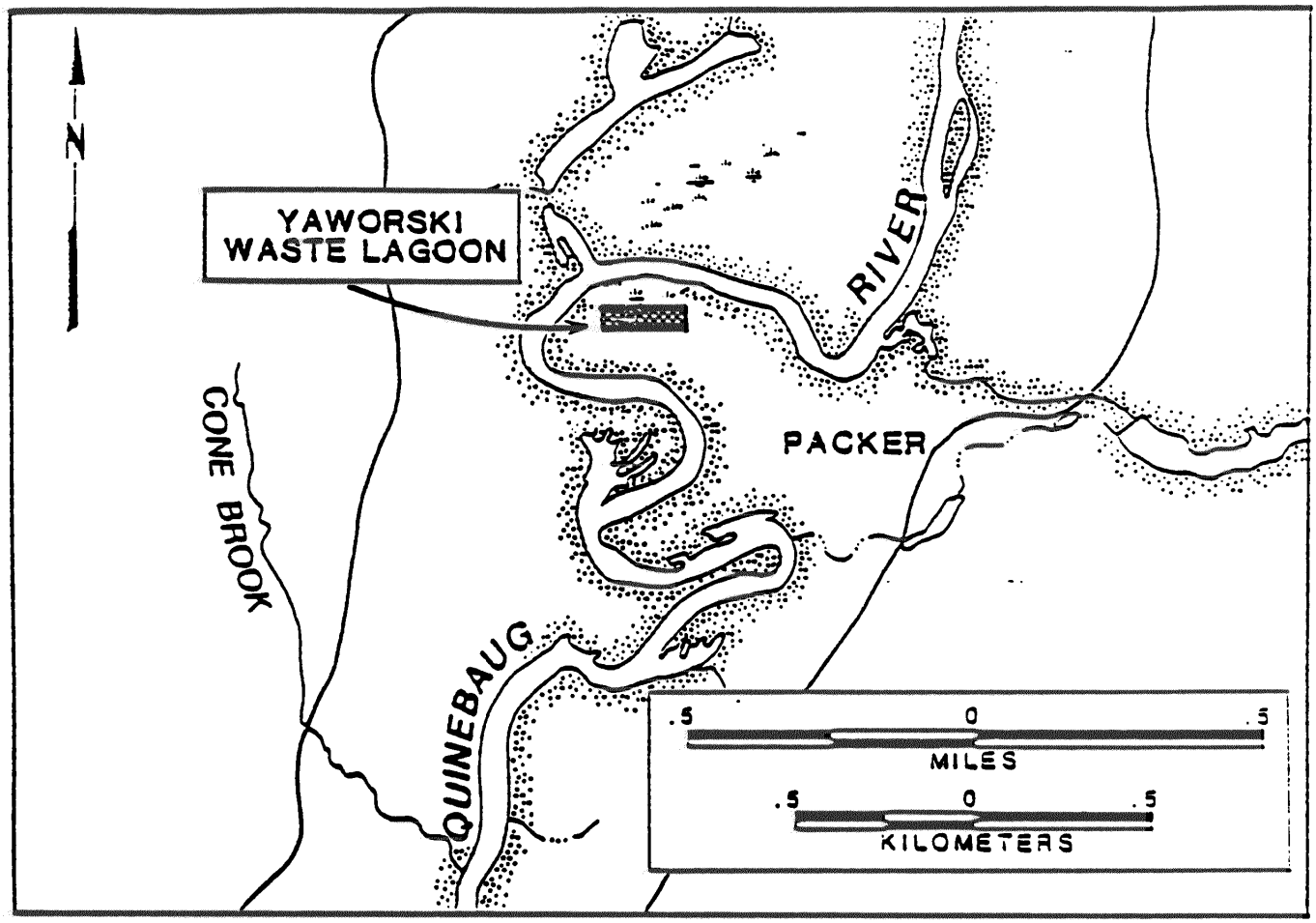
From about 1948 to 1973, drummed materials and bulk wastes (including textile dyes, solvents, resins, acids, and caustics) were accepted for disposal in the lagoon. In August 1973, the State of Connecticut issued an order to close the lagoon due to organic odors. In May 1980, EPA detected methyl ethyl ketone, ethyl benzene, toluene, and xylene in the lagoon and groundwater. The primary concern associated with the site appears to be the potential environmental impact of the contaminants on the Quinebaug River and adjacent wetland areas.

Proximity of Chemical Hazard to Marine Resources

Although the Yaworski lagoon lies within nine meters of the Quinebaug River, surface migration of contaminants offsite as a result of flooding is not likely. Groundwater is the primary source of concern for offsite contaminant migration; the bottom of the lagoon is believed to lie within the groundwater water table, at least during the peak spring river flows.

In 1983 the Connecticut Department of Health (DOH) sampled groundwater below the lagoon and found:

Methyl ethyl ketone (630-10,000 ppm)
Methyl isobutyl ketone (100-540 ppm)
Toluene (4.9-1000 ppm)


N
YAWORSKI
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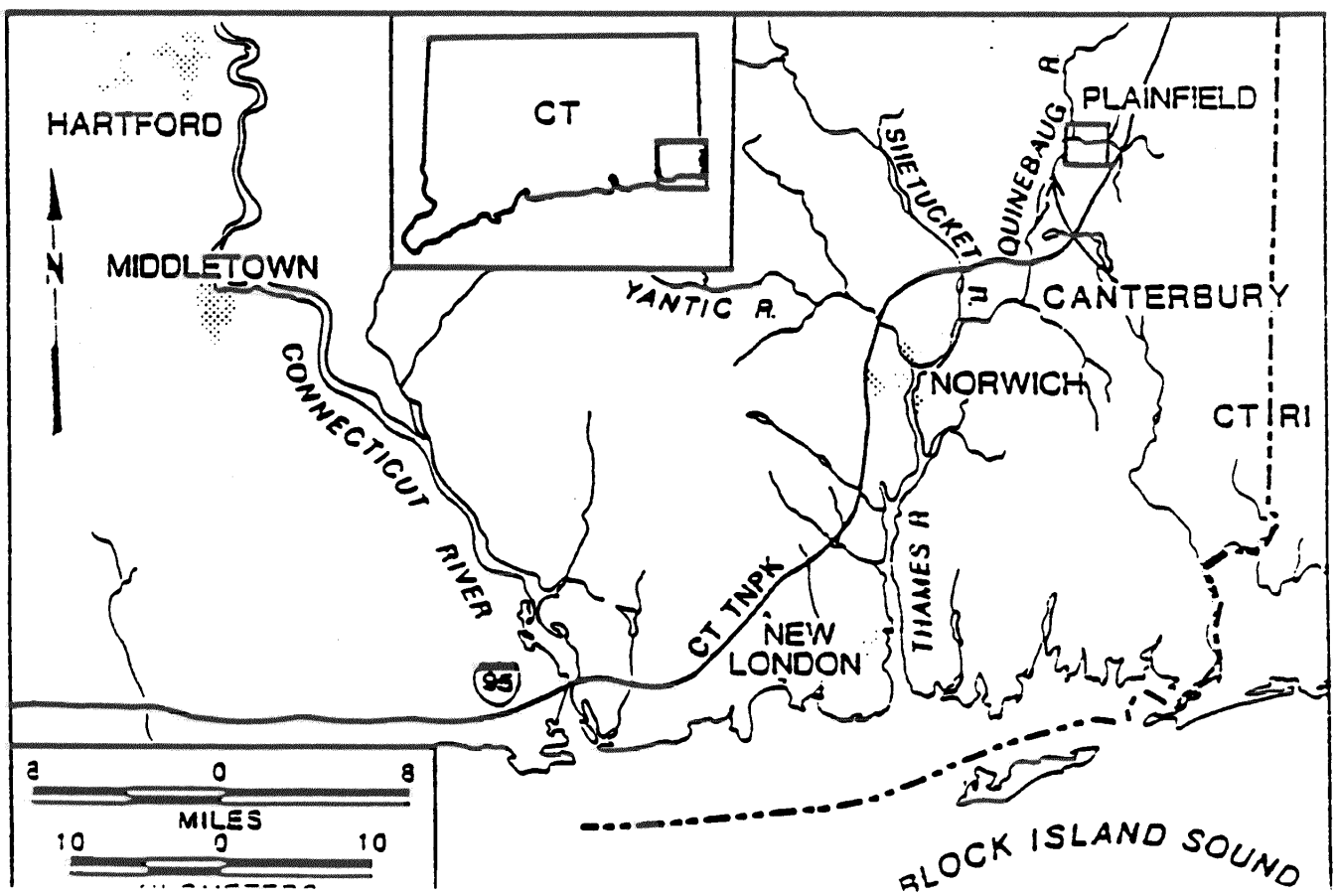
HARTFORD
CT
N
MIDDLETOWN
SHETUCKET R.
QUINEBAUG R.
PLAINFIELD
YANTIC R.
CANTERBURY
NORWICH
CT RI
CONNECTICUT RIVER
CT TNPK
THAMES R.
NEW
LONDON
2 0 8
MILES
10 0 10
BLOCK ISLAND SOUND

Ethyl benzene (300-3800 ppm)
Xylene (300-3800 ppm)
Acetone (57-450 ppm)
Tetrahydrofuran (46-490 ppm)

In 1980, EPA sampled the groundwater in monitoring wells within a meter of the river and found methyl ethyl ketone, ethyl benzene, toluene, and xylene in concentrations from 2-50 ppm.

Surface water samples collected by EPA at the same time from the Quinebaug River midstream and downstream from the site contained methyl ethyl ketone, xylene, ethyl benzene, and toluene in the ppb range. However, sampling conducted in 1981 failed to find any detectable levels of volatile organic contaminants in the river. Further sampling is planned.

A surface water sampling program now being implemented may verify volatile organic contamination of the river at the ppb range. Considering the dilution factor of the river, this would indicate a very large volume of contaminated groundwater entering the river or another source. This could indicate possible localized impact on the benthic area downstream from the site in the groundwater recharge zone of the river. There is also a possibility that the contaminants found in the river do not originate from the waste lagoon site. There are indications that a landfill (also owned by Yaworski) downgradient of the lagoon site may also be a possibly serious pollution problem. EPA is still investigating this.

Marine Resources at Risk

The Thames River Estuary extends from the Atlantic Ocean inland for 24 kilometers to the first main fork in the vicinity of Norwich City. The west branch is the Yantic River and the east branch is the Shetucket River. There are three dams located on the Thames River system below the Canterbury. The Greenville Dam is on the Shetucket River adjacent to Norwich. Approximately three kilometers above this dam the river forks again; the west branch is the Shetucket and the east branch is the Quinebaug River.

The Connecticut Department of Environmental Protection (DEP) conducted a study from 1969 to 1974 to restock searun brown trout below the Greenville Dam. This effort was to establish return migrations of trout to the base of the dam, and litigation is in progress for constructing a fish ladder.

Historic records document abundant runs of American shad, Atlantic sturgeon, and Atlantic salmon in the 1830's. American shad were known to run far up the Quinebaug River. Today, migratory runs of American shad, alewife, and blueback herring exist only below the Greenville Dam.

The Quinebaug River system supports a normal-sized recreational fishing sector based on a bass and chain pickerel assemblage in the pools behind each dam. Trout fishing is prominent in the cascading portions of the river.

State of Connecticut and Federal fisheries biologists recognize that most of the stream tributaries entering the Quinebaug River above the Aspinook River are well suited for the spawning habitat requirements of Atlantic salmon. Although this fact will be one of the justifications for the fish migration restoration program of the Quinebaug River, no such program is currently in effect. Connecticut DEP is now in the progress of preparing the restoration plan for review by the U.S. Fish and Wildife Service.

Site Chronology

1948-1973	Site is used for the disposal of drummed and bulk liquid wastes, primarily organic solvents, acids, and caustics.
1965	Complaint filed against Yaworski site by Connecticut DOH regarding burning at site.
1965	Site purchased by Mr. James Yaworski.
April 1973	Connecticut DEP issued orders for cleanup on site, preventing any additional waste disposal
1976	Monitoring wells drilled adjacent to the lagoon; contamination of groundwater documented.
Dec. 1981	Engineering and hydrogeologic investigation of Yaworski Site completed.
May 1982	Consent Order issued by Connecticut DEP requiring owner to close dump, retain financial liability for maintenance for 30 years, and continue surface and groundwater monitoring.
May 1982	Potential Hazardous Waste Site Identification and Preliminary Assessment completed .
Dec. 1982	Yaworski Waste Lagoon listed on NPL.
Aug. 1983	Lagoon completely filled in and capped with clean dirt.
Oct. 1983	Remedial Action Master Plan completed.
Oct. 1984	Work Plan for Remedial Investigation/ Feasibility Study completed. RI/FS is concentrating on studies to determine contaminant migration which might impact the Quinebaug River and adjacent wetlands.

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Steve Farrick
Kathy Burke
State Contact: Tom Stark

References

Beckett, Gordon, 1985. Personal Communication. U.S. Fish and Wildlife Service, New Hampshire.

Minta, Peter, 1985. Personal Communication. Connecticut Department of Environmental Protection, Waterford, Connecticut.

Remedial Action Master Plan: Yaworski Site, Canterbury, Connecticut, 1983. NUS Corporation. NUS Work Project No. 0701.64.

Whiteley, Ronald, 1985. Personal Communication. Chairman, Thames River Valley Chapter - Trout Unlimited. Member of Thames Valley Watershed Association, Ledward, Connecticut.

Work Plan for Remedial Investigation/Feasibility Study: Yaworski Site, Canterbury Township, Windham County, Connecticut,1984. NUS Corporation. NUS Work Project No. 0787.01.