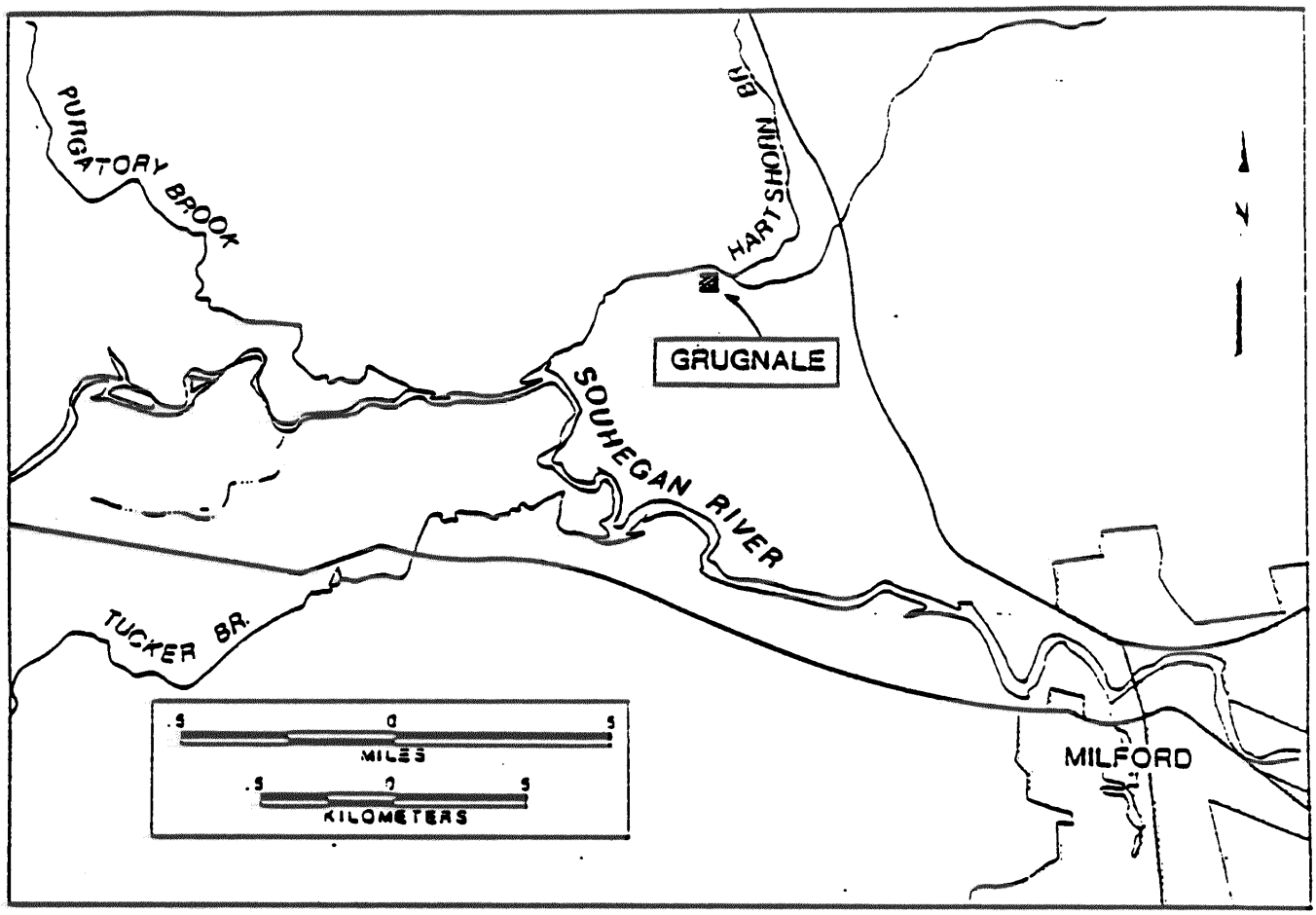
Grugnale Waste Disposal Site (I-58)
Milford, New Hampshire
30 June 1985

Location and Nature of Site

The Grugnale Waste Disposal Site occupies approximately 10.5 acres north of the Souhegan River in Milford, New Hampshire. Hartshorn Brook, northwest of the site, discharges to the Souhegan River 760 meters southeast of the Grugnale site. The Souhegan River flows into the Merrimack River approximately 19 kilometers downstream from the site at the Town of Merrimack. Although available data indicates that the Grugnale site has undergone extensive excavation and fill during the last ten years, it is presently level.

Aerial photographs taken between 1967 and 1974 document the disposal of scrap metal and automobiles on the site. As late as 1979, sand and gravel excavation occurred on part of the site, with the excavated area reportedly filled with demolition debris. Photographs, reports submitted to the New Hampshire Water Supply and Pollution Control Commission (NHWSPCC), and eyewitness accounts, indicate that between 200 and 1,500 barrels may have been disposed of on the site prior to 1977. However, a geophysical study done for EPA in 1982 failed to find any evidence of large numbers of drums buried on the site. In 1979, 16 vats of sodium hydroxide and 24 drums containing lubricating oil, paint thinner, and other solvents were also found on the Grugnale site.

The Grugnale Waste Disposal Site is not on the National Priority List. Following the Preliminary Assessment and Site Investigation Report, this site has been put in the inactive file. NHWSPCC plans to do a hydrogeological investigation of the Grugnale site in FY86/87 to determine the source of groundwater contamination. The New Hampshire Bureau of Sewage and Waste Management continues to sample the contaminated wells on the site on a periodic basis.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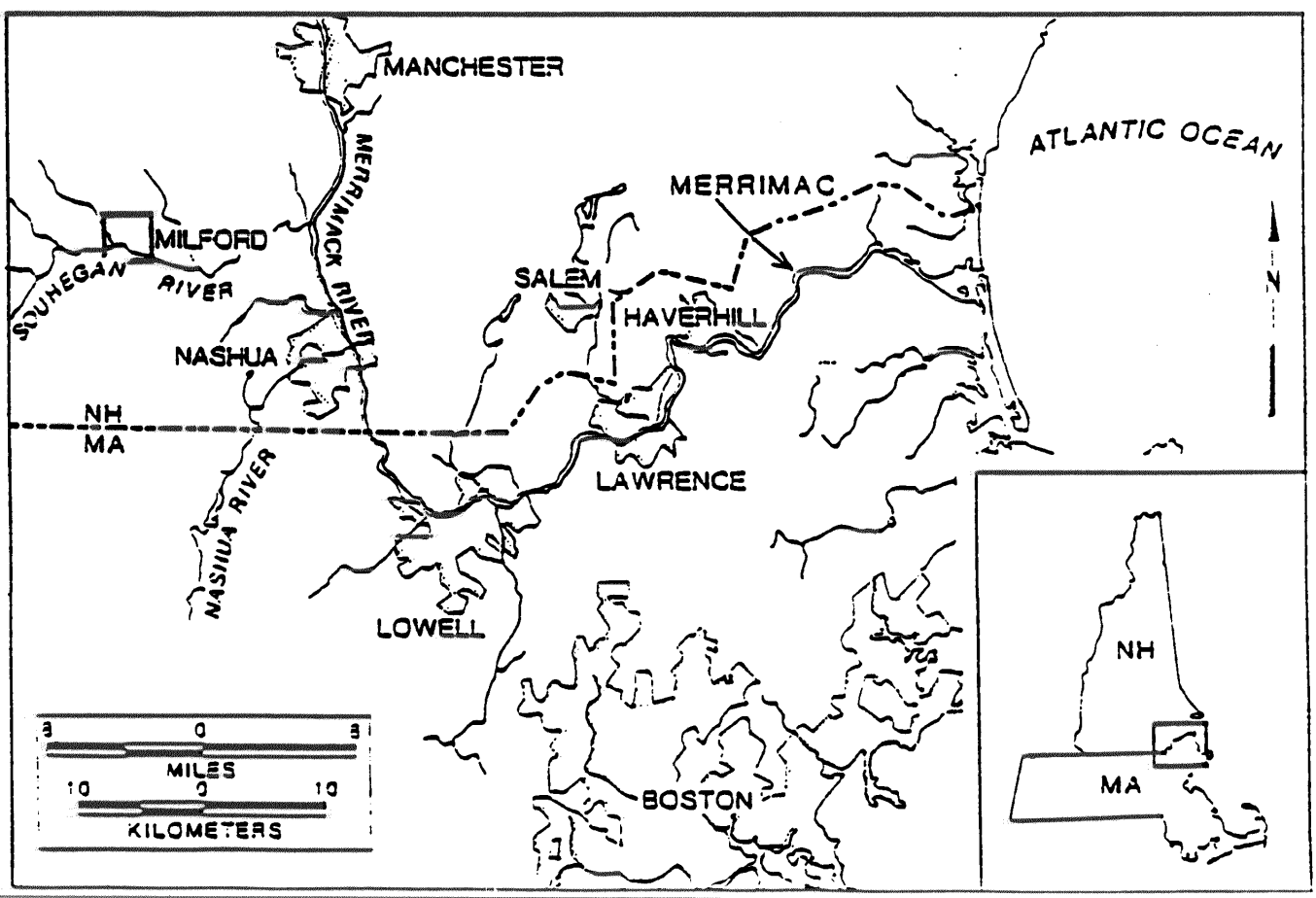
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Proximity of Chemical Hazard to Marine Resources

Surface water sampling conducted by NHWSPCC in 1980 detected 10-20 ppb toluene in Hartshorn Brook downgradient from the Grugnale site.

EPA sampling in 1981 detected benzene (50-80 ppb) and toluene (3-4 ppm) in two private wells on the Grugnale property. One of the wells also contained trace amounts of trichloroethylene and freon. The difference in organic compounds found in the two wells suggests that the contamination may be due to separate, isolated sources rather than large scale contamination of the entire site.

Marine Resources at Risk

This waste site may impact the anadromous fish resources of the Souhegan River and Merrimack River fish to a lesser extent. The Souhegan River has several dams, starting at the town of Merrimack near the confluence with the Merrimack River, and includes two dams in the Milford area. None of these structures have fish ladders and are therefore barriers to upstream migration. However, fish ladders are scheduled for installation on these dams in the 1990's as part of the Merrimack River Basin restoration effort.

The Essex and Pawtaucket dams are located on the Merrimack River downsteam from the Souhegan tributary. Both dams will have fish ladders in place by September 1985, allowing fish runs to extend up the Merrimack River above the Souhegan. By 1987, complete restoration of natural fish migration to the headwaters of the Merrimack is planned.

The U.S. Fish and Wildlife Service operates the National Nashua Fish Hatchery on the Nashua River near its confluence with the Merrimack River. The New Hampshire Department of Fish and Game (DF&G) operates a fish hatchery at Milford which releases hatchery-reared fry into the waters of the Souhegan River. These fry are able to survive downstream passage of all dams en route to the Atlantic Ocean. Atlantic salmon currently do not spawn naturally in any portion of the Merrimack River; both New Hampshire DF&G and the U.S. Fish and Wildlife Service capture adult Atlantic salmon near Lowell and truck them to the hatcheries for spawning. After the installation of fish ladders is complete on the Merrimack, Atlantic salmon are expected to ascend the river above Manchester to re-establish their natural spawning runs in the Peme River.

American shad restoration is also a high priority with New Hampshire DF&G and the U.S. Fish and Wildlife Service. Adult shad captured in the Connecticut River and released upstream of Lowell in the Merrimack River system have spawned, with fry returning to the Atlantic Ocean for maturation. Shad are expected to proliferate in the Merrimack River Basin, including the Nashua River tributary, after installation of fish ladders on all

of the dams.

Alewives, blueback herring, and rainbow smelt are able to migrate up to the Pawtaucket dam. Migrations upstream are expected to be re-established with the installation of fish ladders.

Site Chronology

1967-1974 Aerial photographs obtained by State of New Hampshire show excavation and disposal operations active on Grugnale property.

1972-1977 Alleged disposal of drummed chemical wastes on Grugnale property based on photographs and eye-witness accounts.

1979 Sixteen vats, 24 55-gallon drums, and assorted metal scrap found by New Hampshire Bureau of Solid Waste Management on Grugnale site.

March 1981 Preliminary Assessment and Site Investigation of the Grugnale Waste Disposal.

July 1982 Geophysical investigation of the Grugnale Waste Disposal Site completed.

NOAA Reviewer: Sharon Christopherson , NOAA Hazardous Materials Response Branch

EPA Contact: Camille Connick

State Contact: John Regan

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