

Source Water Assessment Public Summary

Northampton Borough Municipal Authority PWSID 3480057

Lehigh River, 001

Spring Mill Creek, 002

May 2002

Introduction

The Pennsylvania Department of Environmental Protection (DEP) has conducted assessments of potential contaminant threats to the raw water quality of all public drinking water sources as required by the 1996 Safe Drinking Water Act. This Source Water Assessment Public Summary provides information to support local and state efforts to protect the raw water quality of Northampton Borough Municipal Authority's drinking water source. The information in this assessment pertains to the watersheds that provide raw water to Northampton Borough Municipal Authority which is then treated for drinking water use. The assessment pertains to "source" water, rather than "tap" water. Information on "tap" water quality is available in the Northampton Borough Municipal Authority's Consumer Confidence Report that can be obtained directly through the water supplier.

What is the Source of Your Drinking Water

The Northampton Borough Municipal Authority (NBMA) provides water to the Boroughs of Northampton and North Catasauqua and portions of Allen Township in Northampton County, and the Borough of Coplay, Whitehall Township and North Whitehall Township in Lehigh County. The source of water for NBMA is surface waters from the Lehigh River and Spring Mill Creek. The Lehigh River, as well as Spring Mill Creek, is designated for the protection of Cold Water Fishes (CWF). The watershed encompasses approximately 950 square miles including eight counties in Pennsylvania. The NBMA serves a population of approximately 40,000 and withdraws around 3.5 million gallons per day from the two surface water intakes (about 3 MGD from the river and 0.5 MGD from Spring Mill Creek). Approximately 79% of the Lehigh River watershed is forested, with some areas of agriculture (10%) and urban or developed land (7%). Water storage, wetlands and barren areas comprises the remaining land usage. The Spring Mill Creek watershed is almost entirely agricultural lands (91%). Water storage and urban lands make up the remaining land area.

Water Quality and Water Treatment Information

Water withdrawn for treatment at the purification plant is filtered and disinfected with chlorine prior to distribution to customers. Water quality testing performed by the NBMA indicated that results of tap water sampling done in 2001 were acceptable. Additional information about treated water quality can be obtained from the Northampton Borough Municipal Authority's Consumer Confidence Report.

Evaluation of Significant Potential Sources of Contamination

The assessment evaluates contaminants that **may** enter the raw water from the watershed that contributes to the Lehigh River and Spring Mill Creek before treatment. The contaminants addressed in this assessment include those regulated under the federal Safe Drinking Water Act as well as those DEP has determined may present a concern to health. Descriptions of the significant potential sources of contamination associated with the watersheds are provided below. Each potential source of contamination has been analyzed and given a qualitative susceptibility rating (A = high priority through F = low priority) according to its potential to impact the water supply. Potential sources of contamination are summarized below.

Potential Sources of Contamination	Contaminants of Concern	Description	Protection Priority
Transportation corridors, Bridges, Railroads	Metals, turbidity, SOCs	Road deicing and potential for spills along roads, bridges	A
Boating, Auto Repair Shops, Carwashes	MTBE, BTEX, other petroleum products, Metals	Accidental spill or disposal of products/byproducts	A
Residential Developments	Nitrates/Nitrites, pathogens, VOCs, SOCs, nutrients	Stormwater runoff, lawn care, on-lot waste disposal	A
Power plants	Heavy metals	Waste piles	A-B
Utility substations	Heavy metals, SOCs, VOCs	Accidents near water source	A-B
Strip mines, abandoned mines	Turbidity, metals, heavy metals, acidity	Storm water runoff from stripped area	B
Wastewater Treatment	Pathogens, bacteria, viruses, nutrients	Regulated discharges and overflow	B

As indicated above, roads, bridges, railroads, repair shops/carwashes, boating, residential developments, utility substations and power plants, wastewater treatment plants and runoff from abandoned strip mines are the most significant potential sources of contamination within the watersheds that contribute water to the Lehigh River or Spring Mill Creek intakes. Roads, bridges and railroads receive a high ranking due to the locations (near streams) and possible release of a variety of substances from accidents. The marinas located along the river could yield cumulative amounts of petroleum products entering the source water in a short amount of time. Auto repair shops and carwashes also pose a threat of releasing petroleum products such as BTEX and MTBE. If the watershed is prone to runoff from agricultural or residential areas, multiple chemicals and contaminants may be transported over the surface into the source waters.

Source Water Protection Needs

It has been determined that existing state and federal regulations should provide adequate protection of the NBMA water sources. Overall, the watersheds contributing raw water to Northampton's purification plant has moderate risk of significant contamination. Numerous acid mine drainage-impaired waters exist within the watershed boundary as due impairments resulting from urban runoff and agricultural lands. Should a group (watershed organization, water supplier, municipalities) implement a watershed protection plan, the focus should be placed on controlling stormwater runoff along transportation corridors near the river leading to the intake. The same runoff management should be applied to surface mines in the area. It is important to note that the Northampton Borough Municipal Authority is active with local watershed groups such as the Wildlands Conservancy for raising awareness for and implementing source water protection programs. The recent Lehigh River 2001 Water Quality Monitoring program is an example of cooperation among federal, state and local agencies as well as non-governmental and citizen groups in collecting valuable data from the river. This data will be used to further develop flow management strategies and water quality improvement in the Lehigh River.