

# Source Water Assessment Public Summary

## The City of Lancaster Bureau of Water

### Susquehanna River and Conestoga River Intakes

#### Introduction

As required by the 1996 Safe Drinking Water Act, the Pennsylvania Department of Environmental Protection (Pa. DEP) is completing assessments of potential contamination to the raw water quality of all public drinking water sources. This summary of information has been provided to support local and state efforts to protect the raw water quality of the city of Lancaster Bureau of Water's drinking water source in the Susquehanna River Basin and the Conestoga River Watershed. The assessment is of "source" water (river water), rather than "tap" water. Information on "tap" water quality is available in the city of Lancaster's *Annual Water Supply Report*.

#### Drinking Water Sources

The Susquehanna and Conestoga Rivers are the sources of water for the City of Lancaster Bureau of Water. The Susquehanna River intake drains approximately 4,105 square miles in 15 Counties. The Conestoga River intake drains approximately 322 square miles in Berks, Chester, Lancaster and Lebanon Counties. An average of 12 million gallons of water per day is withdrawn from the Susquehanna River intake. The Conestoga River intake withdraws an average of 6 million gallons of water per day. Approximately 49 percent of the Susquehanna River assessment area is agricultural land, 44 percent is forested, 4 percent is developed land, and the remaining 2 percent is water and disturbed land. In the Conestoga River assessment area, approximately 62 percent is agricultural land, 32 percent is forested, 6 percent is developed and about 1 percent is water and disturbed.

#### Water Quality and Water Treatment Information

Water withdrawn from the Susquehanna River and Conestoga River intakes is filtered and disinfected before distribution to customers. Water quality testing is continuously performed by the City of Lancaster. Refer to its *Annual Water Supply Report* for further water quality information.

#### Evaluation of Significant Potential Sources of Contamination

This assessment evaluates contaminants that may enter the water, drawn from both intakes. Each

source of contamination has been analyzed and given a susceptibility rating according to its impact potential to the intake. A susceptibility rating of A–F (A = high priority, F = low priority) is used to rank protection priorities for the potential sources of contamination. A table of the significant potential sources of contamination is provided below. These sources have received the highest susceptibility rating in one, or both, of the watersheds, and are priorities for environmental protection. For a complete listing of sources, refer to the Source Water Assessment and Protection (SWAP) Report for the city of Lancaster, Bureau of Water.

Source of Contaminants	Contaminants of Concern	Susceptibility Rating
Agriculture (crops)	Nitrite/Nitrate, Pesticides, Turbidity	A/B
Agriculture (livestock)	Microbiological Pathogens, Nitrite/Nitrate, Disinfectants	A/B
Urban/Storm Water Runoff	VOCs, SOCs, Nitrite/Nitrate, Turbidity, Metals	A
Transportation Corridors	Nitrite/Nitrate, Metals, Turbidity, VOCs, SOCs	A
Auto Repair	VOCs, Heavy Metals, Metals, pH	A
Gas/Service Stations	SOCs, Nitrite/Nitrate, Turbidity, Heavy Metals, Metals	A

Agricultural activities and urban runoff are the most significant potential sources of contamination to both watersheds. Fertilizer and agricultural activities can contribute nutrients and pesticides to the streams. The frequency of road crossings above the intakes poses a concern due to the possibility of spills. Auto repair shops and gas/service stations pose a threat due to the quantity of sites and their proximity to the intakes.

#### Ongoing Watershed Protection Activities

There are numerous watershed groups within both assessment areas. They work with government agencies, private businesses, and the public to address important issues within their watershed. Some projects in the Susquehanna assessment area

include regular cleanups and bank stabilization on Donegal Creek, and future projects on Shawnee and Reif Run. In the Conestoga assessment area, projects include stream restoration and protection on Hammer Creek and streambank stabilization on Lititz Run. There are Grower Greener Grants in place for future activities in the Hammer Creek and Lititz Run Watersheds.

#### ***Source Water Protection Needs***

Agricultural practices cause the majority of impairments to the streams in both watersheds. Emphasis should be placed on increasing the use of agricultural Best Management Practices (BMPs) throughout the watershed, especially near streams that are impaired by agricultural runoff. BMPs, such as riparian buffers and streambank fencing, will help reduce the amount of contaminants that reach surface streams in the watersheds.

#### ***Additional Information***

The final SWAP report for the city of Lancaster's intakes on the Susquehanna and Conestoga Rivers will be available through the Pa. DEP.