



Lafayette College students doing water quality monitoring.

## Water Quality Monitoring

Monitoring of Bushkill Creek is or has been conducted by students and faculty at Lafayette College, students at Easton and Pen Argyl High Schools, and local citizens in the Retired and Senior Volunteer Program (RSVP). Automated stream gauges obtained by grants are maintained by Lafayette faculty, and continuously record stream stage, conductivity, and temperature at several locations in the watershed. Easton



Area High School students monitor the Bushkill in Easton near the Rt 22 overpass. Pen Argyl High School students have monitored water quality in the Little Bushkill. Finally, RSVP monitors water quality at nine locations using Lamotte test kits. Collectively, the data are used to identify problem areas of the stream, as well as to serve as a baseline against which to compare future water quality data. The program has identified several areas in the lower Bushkill as impaired.

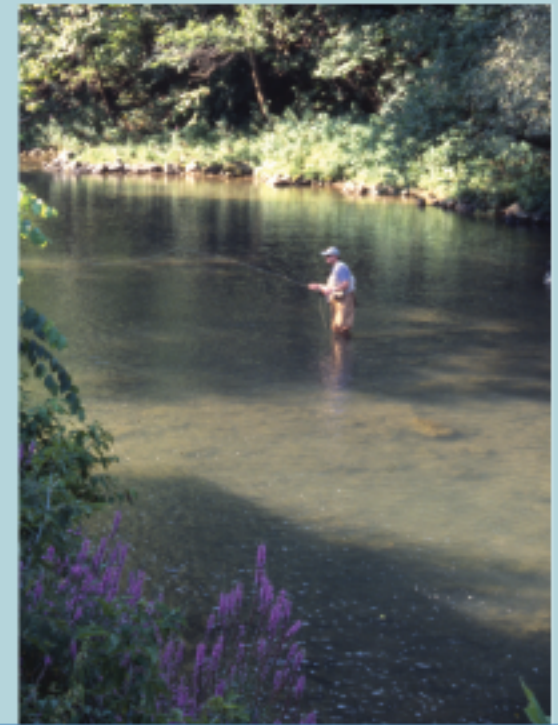
## WHAT CAN YOU DO?

- Maintain natural vegetation near streams and wetlands
- Inspect and pump septic tanks regularly
- Limit use of lawn fertilizer. If you use fertilizer, be sure to test your soil first to determine if fertilizer is needed or how much is needed (Contact Penn State Cooperative Extension at 610-746-1970)
- Maintain your vehicle to prevent oil leaks
- Properly dispose of hazardous wastes and their containers at a hazardous waste drop-off center
- Maintain a desirable 50- to 100-foot natural vegetative buffer around wetlands, streams, ponds, and lakes
- Recycle all suitable materials to reduce demand on landfills
- Get involved with the Bushkill Stream Conservancy

## BUSHKILL STREAM CONSERVANCY

P. O. Box 399  
Tatamy, PA 18085-0399

[www.bushkill.org](http://www.bushkill.org)



# WATER QUALITY AND WATERSHED MANAGEMENT

WITHIN THE  
**BUSHKILL CREEK  
WATERSHED**

BUSHKILL STREAM  
CONSERVANCY

[www.bushkill.org](http://www.bushkill.org)



## What is a Watershed

A **watershed** is the entire area of land (including roads, yards, fields, and forest) that drains to a waterbody, such as a stream, pond, or lake. A watershed may contain many smaller sub-watersheds for its individual tributary streams, creeks, brooks, and runs.

The water quality of streams, ponds, and lakes is directly impacted by the activities occurring throughout a watershed.

Watershed management is an important part of protecting water quality because it focuses on the causes rather than just the symptoms of degradation.



*The Bushkill Creek Watershed encompasses 80 square miles of Northampton County, PA, stretching from Blue Mountain to the Delaware River in Easton, PA (not to be confused with the other Bushkill Creek of neighboring Monroe County). Most of the creek is classified as a HQ-CWF stream for High Quality Cold Water Fishery.*



*Students help with trash cleanup along the Bushkill Creek.*

## Land Use & Water Quality

In forested areas, water is slowed down, nutrients and other pollutants are filtered and absorbed, and cooler water temperatures are maintained. However, when natural areas are converted to agricultural, residential, commercial, and industrial land uses, water quality may be compromised and in some cases is severely impacted. These land uses can pollute both surface water and groundwater with nutrients, heavy metals, bacteria, oil and grease, and toxins. In addition, the increased impervious surfaces that accompany development prevent infiltration of water.

### Potential Sources of Surface and Groundwater Contamination

- Municipal landfills
- Livestock waste
- Parking Areas
- Pesticides
- Erosion problems
- Failing on-site septic systems
- Runoff from abandoned mines and quarries
- Road salt
- Leaky sewer lines
- Fertilizers
- Herbicides

## WATERSHED MANAGEMENT PRINCIPLES

- Reduce pollution to the stream
- Protect and restore the ecological integrity of streams
- Protect and restore aquatic, riparian, and terrestrial habitats
- Protect and restore wetlands
- Protect and restore forest cover
- Increase public involvement
- Improve water quality
- Encourage environmentally sound planning
- Increase stormwater infiltration
- Protect and restore greenways

## Wetlands & Water Quality

Wetlands play an important role in protecting the quality of surface water and groundwater resources. They reduce stormwater runoff, protect downstream areas from flooding, serve as groundwater recharge sites, reduce the amount of sediment entering waterways, and take up nutrients and heavy metals.

*Retired and Senior Volunteer Program (RSVP) members sample the Bushkill Creek.*

