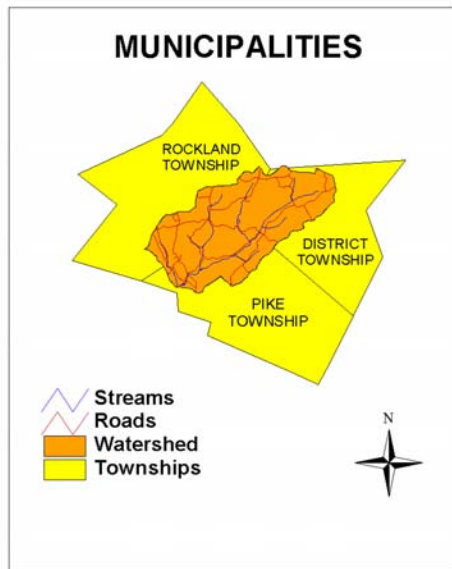


## PROJECT AREA CHARACTERISTICS

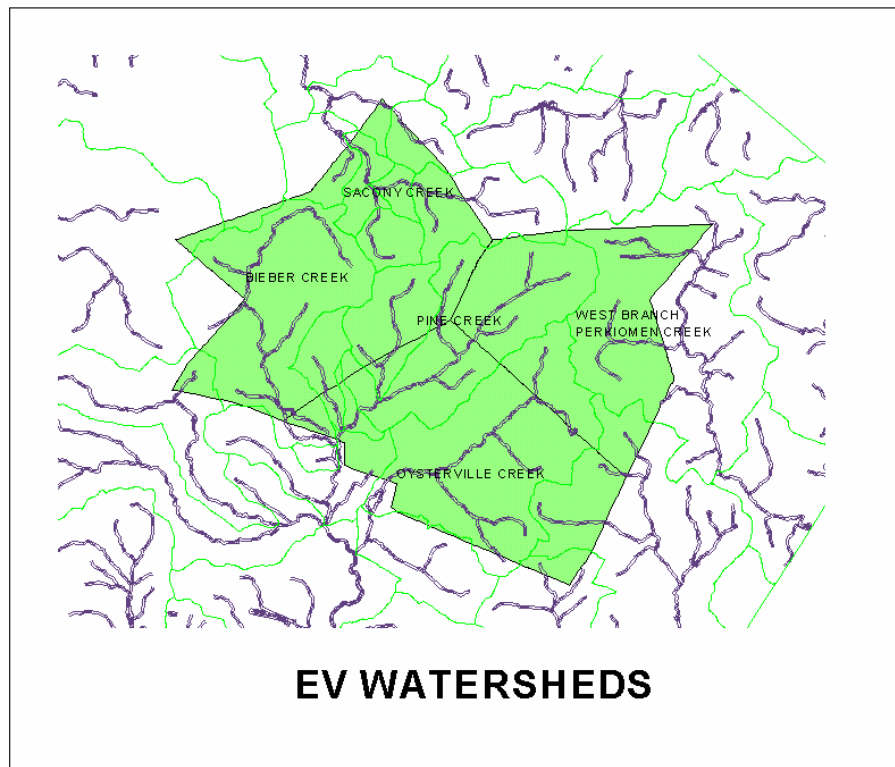


### Location and Setting

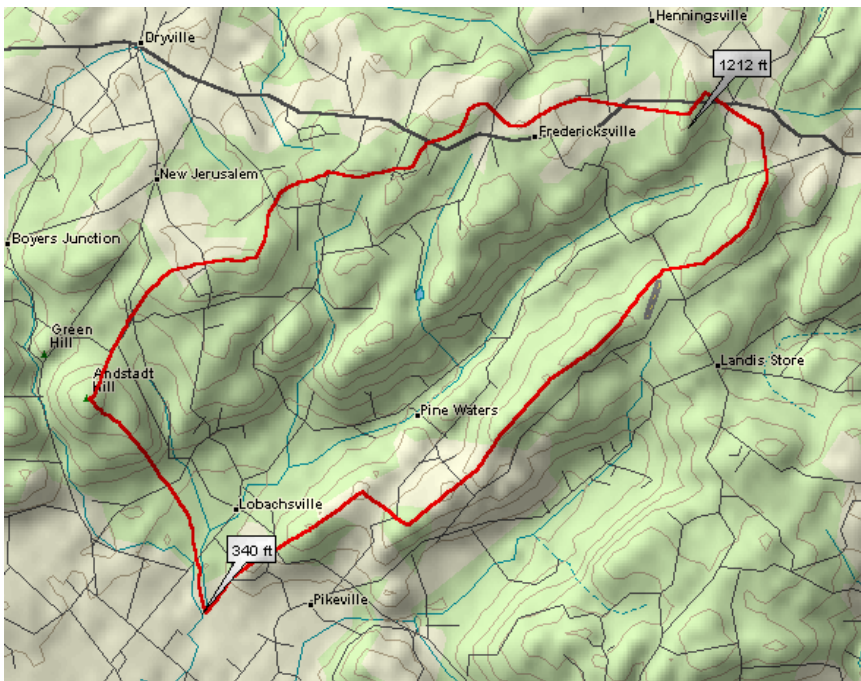
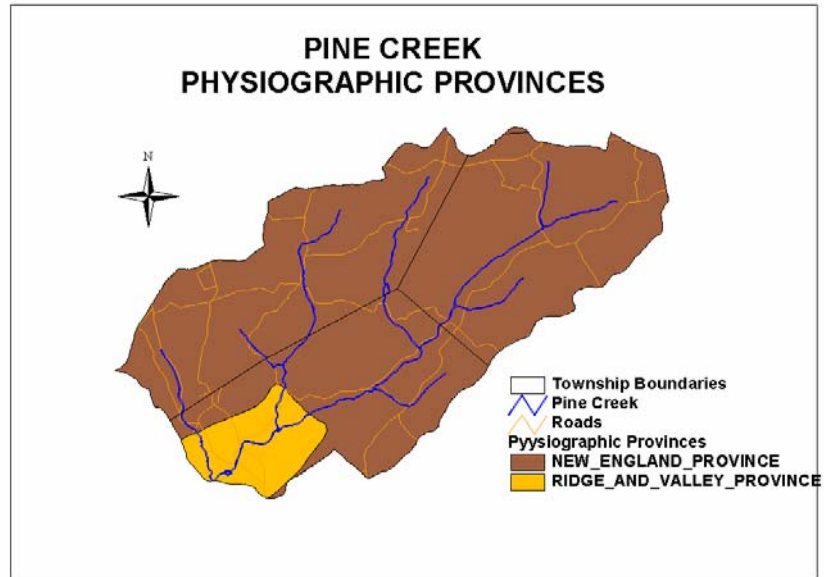
The Pine Creek watershed is located in eastern Berks County, Pennsylvania, in District, Rockland, and Pike Townships with a small section extending into Oley Township where it joins Bieber Creek to form the Manatawny. The watershed encompasses approximately 8,800 acres, with 2,400 acres in District Township, 3,300 acres in Rockland Township, 3,100 acres in Pike Township and 30 acres in Oley Township. The land is rural and sparsely developed, composed primarily of wooded hills with scattered farms and two small villages, Lobachsville and Fredericksville.

Pine Creek is in an important headwaters region. It is one of five adjacent streams arising in the forested

uplands of District, Rockland and Pike Townships, which have all achieved the highest designation for stream quality, EV, or Exceptional Value: Pine Creek, Bieber Creek, Sacony Creek, West Branch of Perkiomen, and Oysterville Creek.



The setting for Pine Creek, and its adjacent headwaters streams, is the *Reading Prong* formation, the southern terminus of the New England physiographic province, a region of steep wooded ridges extending through New England, New York and New Jersey to eastern Pennsylvania. The hills and ridges of the Reading Prong, made up of granitic gneiss, granodiorite, and quartzite, are very resistant to erosion and stand higher than the softer sedimentary rocks that surround them. The slopes of these hills are steep, primarily wooded, and sparsely populated due to the inherent development limitations of steep rocky terrain. Pine Creek and its adjacent watersheds originate in these uplands where they flow clear and swift, tumbling over rocky beds, shaded by native deciduous forests.



The *Reading Prong* forms a horseshoe shape around the Oley Valley, a rich agricultural area. At the head of this horseshoe is the Pine Creek watershed, ranging from high elevations of 1,200 feet to a 340-foot level at its mouth. The Pine Creek Watershed is mapped topographically in USGS 7.5 Minute Series Manatawny Quadrangle. This map depicts headwaters originating at 1,000 feet in elevation, and descending over 600 feet to its confluence with Bieber Creek at the beginning of the Manatawny Creek.

## Surface Geology

To a large extent, relief depends upon the nature of the underlying rock. The highest ridges in the landscape occur where the rocks are most resistant to weathering. Relief affects surface runoff, and runoff, in turn affects the soils over which it flows. Water from runoff also enters streams that play a part in causing erosion and in dissecting areas of soils.

The surface geology map reflects the basis for the Reading Prong formation. Granitic Gneiss and Hornblende Gneiss are hard rocks formed from molten materials which weather slowly, while the Allentown and Leithsville Formations are sedimentary rocks formed from calcareous shale and limestone.

