

SUGAR GROVE TOWNSHIP

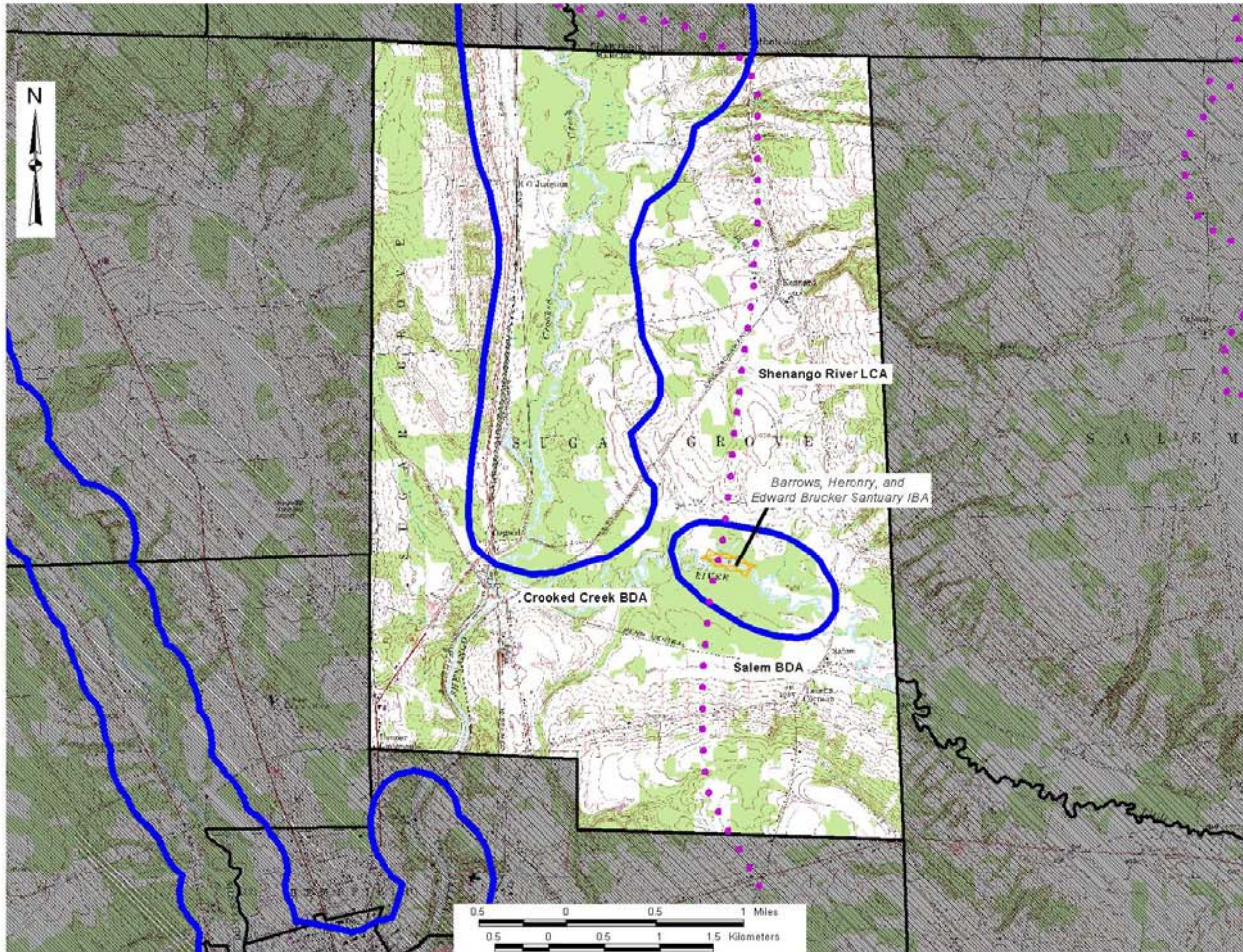
<u>PNDI Rank</u>		<u>Legal Status</u>	
Global	State	Fed.	State

NATURAL HERITAGE AREAS:

CROOKED CREEK BDA		<i>High Significance</i>	
Yellow Lady's Slipper (<i>Cypripedium parviflorum</i>)	G5	S1	PE
Special Animal 1	G5	S3	PC
Special Animal 2	G5	S3	PC
Hemlock - Mixed Hardwood Palustrine Forest	G?	S3S4	
SALEM BDA		<i>Notable Significance</i>	
Great Blue Heron (<i>Ardea herodias</i>)	G5	S3S4BS4N	
SHENANGO RIVER LCA		<i>Exceptional Significance</i>	

MANAGED LANDS: None

Sugar Grove Township



Sugar Grove Township

Mercer County Natural Heritage Inventory

Biological Diversity Areas:

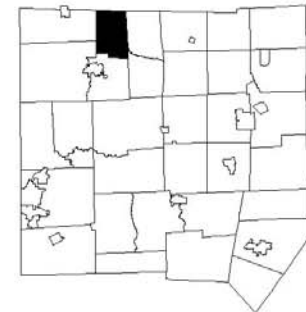
Crooked Creek
Salem

Landscape Conservation Areas:

Shenango River

Managed Areas:

None



Map Legend

-  Biological Diversity Area (BDA)
-  Landscape Conservation Area (LCA)
-  Audubon Society Important Bird Area (IBA)
-  Managed Area
-  Municipal Boundary

SUGAR GROVE TOWNSHIP

Sugar Grove Township is located in northwestern Mercer County, northeast of Greenville Borough. Both Crooked Creek and the Little Shenango River drain the township. There are three Natural Heritage Areas and no managed lands located in Sugar Grove Township.

Crooked Creek BDA

Crooked Creek flows south into the Little Shenango River and, along with the Shenango River, is one of the outlets for Pymatuning Lake. The BDA contains a flood control impoundment that roughly separates this BDA into two sections. Above the impoundment, the site features Northern Hardwoods Forest and a Black Ash Swamp. Below the impoundment the stream and its floodplain contain scattered bottomland hardwood palustrine swamps.

In the wooded floodplain above the impoundment, the dominant canopy species include yellow birch (*Betula allegheniensis*), sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), white oak (*Quercus alba*) and hemlock (*Tsuga canadensis*) which in some places grows in pure stands. Sycamore (*Platanus occidentalis*) grows along sections of the stream and the understory species include American hornbeam (*Carpinus caroliniana*), green ash (*Fraxinus pennsylvanica*), American basswood (*Tilia americana*) and spicebush (*Lindera benzoin*). Herbaceous species in the woods include brome-like sedge (*Carex bromoides*), mayapple (*Podophyllum peltatum*), Jacob's ladder (*Polemonium reptans*), Gray's sedge (*Carex grayii*) and blue cohosh (*Caulophyllum thalictroides*). In the hemlock dominated areas there is a sparse herbaceous layer composed mostly of intermediate log fern (*Dryopteris intermedia*), New York Fern (*Thelypteris novaboracensis*) and Canada mayflower (*Maianthemum canadense*).

Growing upstream of the impoundment is a Red Maple - Black Ash Palustrine Forest dominated by black ash (*Fraxinus nigra*), white pine (*Pinus strobus*), hemlock (*Tsuga canadensis*), yellow birch (*Betula allegheniensis*) and American elm (*Ulmus americana*). Poison sumac (*Toxicodendron vernix*) dominates the understory. Common herbaceous species include skunk cabbage (*Symplocarpus foetidus*), marsh marigold (*Caltha palustris*), three-seed sedge (*Carex trisperma*), brome-like sedge (*Carex bromoides*) and weak stellate sedge (*Carex serosa*). It is also the location of a Pennsylvania plant species of special concern; **yellow lady's slipper** (*Cypripedium parviflorum*).

Below the dam, the floodplain of Crooked Creek widens and contains a mosaic of Bottomland Oak - Hardwood Palustrine Forest and Northern Hardwoods Forest. The creek itself provides habitat for a Pennsylvania animal species of special concern (**Special Animal 1**). Common fish in the creek include bluntnose minnow (*Pimphales notatus*), white sucker (*Catostomas commersoni*), northern hogsucker (*Hypentilium nigricans*), largemouth bass (*Micropterus salmoides*), Johnny darter (*Etheostoma nigrum*) and yellow perch (*Perca flavescens*). Forest canopy dominants include red maple (*Acer rubrum*), black cherry (*Prunus serotina*), pin oak (*Quercus palustris*), tuliptree (*Liriodendron*

tulipifera) and yellow birch (*Betula allegheniensis*). In low-lying areas, swamp white oak (*Quercus bicolor*) grows. Common understory species are green ash (*Fraxinus pennsylvanica*), spicebush and American hornbeam. Herbaceous species are numerous and are specific to various habitats. In the wet valleys of tributaries, skunk cabbage (*Symplocarpus foetidus*) and false hellbore (*Veratrum viride*) are the predominant herbs. On higher sections of the floodplain grow sensitive fern (*Onoclea sensibilis*), mayapple (*Podophyllum peltatum*), Canada mayflower (*Maianthemum canadense*), wild geranium (*Geranium maculatum*) and New York fern (*Thelypteris novaboracensis*). The upstream end of the site has massive infestations of multiflora rose (*Rosa multiflora*).

The western end of the site lies between two railroad tracks and contains several emergent marshes. The area around the marshes is highly disturbed and is host to many invasive species. These wetlands provide habitat for a Pennsylvania animal species of special concern (**Special Animal 2**).

Threats and Stresses

During the survey of Crooked Creek, heavy silt loads were observed in the creek. Activities upstream are contributing excessive silt and may, along with runoff from adjacent land uses, contribute road salt and other nutrients. This is especially detrimental for this stream system given that the stream is very low gradient and is slow to flush pollutants and materials. As the nutrients accumulate aquatic habitat could be compromised. The presence of invasive species such as multiflora rose (*Rosa multiflora*) is also a problem. Heavy infestations are present below the dam with scattered infestations in the upper parts of the site.

Recommendations

Specific sources of erosion and silt inputs need to be identified and subsequent strategies for their control developed. Impoundments within the BDA should be evaluated within the context of these large wetland communities and the hydrologic changes that resulted after their construction. Invasive species need to be monitored and where possible steps taken to either eradicate them or prevent their spread.

Salem BDA

Salem BDA (Barrows Heronry) is the nesting location of an animal species of special concern; **great blue heron** (*Ardeas herodias*). The site is listed with the National Audubon Society as an Important Bird Area (IBA). Covering about ten acres, the site is in the riparian zone of the Little Shenango River. Black cherry (*Prunus serotina*) and some tall sycamores (*Platanus occidentalis*) provide roosting habitat for the birds. The Barrows heronry is the largest of its kind in Pennsylvania and holds about 500 nests.

Threats and Stresses

This relatively quiet and isolated area where the animals breed has remained unchanged for sometime, allowing this population to remain viable. However, these animals are sensitive to disturbance, including casual visitation, that occurs within a few hundred meters from their location. Any activities that occur frequently or continuously within the BDA stand to impact these animals. Removal of trees, living or dead, could remove valuable habitat essential to these animals.

Recommendations

Given the presence of the animal species of concern within this BDA, current levels of activity and disturbance are likely compatible with their needs. Assuring that landowners within the corridor are aware of the natural history and needs of the animals would confer added protection.

Shenango River LCA

Shenango River LCA is discussed in Delaware Township.