

**PENNSYLVANIA IMPORTANT BIRD AREA #9
SHENANGO RESERVOIR**

**Phase I Conservation Plan
(Prepared By: John Tautin; May, 2004)**

Purpose of the Phase I Conservation Plan: This phase I conservation plan is a preliminary document to: 1) catalogue the natural resources and built environment for each Important Bird Area (IBA), 2) identify site boundaries, 3) document the criteria for which it was selected, 4) describe the birds and wildlife habitat which occur on the site with special reference to the species for which the site was selected as an IBA, 5) identify any conservation issues or threats to the site, and 6) provide recommendations for conservation actions to conserve or enhance habitat for bird populations, especially for those species for which the site was selected as an IBA. This Phase I Conservation Plan is intended to augment and expand the one-page site report contained in “A Guide to Critical Bird Habitat in Pennsylvania” (Crossley, 1999). The recommendations are presented from the perspective of bird and wildlife habitat conservation. It is acknowledged that not all the recommendations contained herein may be feasible or affordable. However, the plan is presented as an initial position from which to plan for and implement bird conservation on the site.

Site Name: Shenango Reservoir

Size: 3,500 acres (1,417 hectares)

Ownership:
US Army Corps of Engineers (COE)

County/Municipality:
Mercer County/ Delaware, Jefferson, Pymatuning, and South Pymatuning Townships/
Clark, and Sharpsville Boro.

Physiographic Province/Bird Conservation Region/Watershed:
The IBA is within the Glaciated Pittsburgh Plateau Section of the Appalachian Plateaus Physiographic Province. The IBA is within the Bird Conservation Region (BCR) Lower Great Lakes/St. Lawrence Plain # 13. The Shenango River represents the main watershed for the IBA.

Legislative Districts:
3rd Congressional District, U.S. Representative, Phil English (R) – Mercer County
50th Senatorial District, State Senator, Richard D. Robbins (R) - Delaware, Jefferson, Pymatuning, South Pymatuning Townships and Clark and Sharpsville Boros
7th House District, State Representative, Michael C. Gruitza (D) – Delaware, Pymatuning, South Pymatuning Townships and Clark and Sharpsville Boros
17th House District, State Representative, Rod E. Wilt (R) – Jefferson Township

Stewardship Adoption Status:

Bartramian Audubon Society (Bartramian) (<http://www.csonline.net/russs/bas/>) has adopted this IBA and has been active. Although it has not adopted Shenango Reservoir formally, Three Rivers Birding Club (TRBC) of Pittsburgh has also been very active in promoting birding and bird conservation there.

IBA Selection Criteria:

- (1a) The site is important during the migratory and winter season for waterfowl and supports numerous species of waterfowl (FM*, W, SM-2,000+);
- (1b) The site supports numerous shorebirds (FM- 2,000+), Killdeer (250+), Lesser Yellowlegs (75+), Semipalmated Sandpiper (50+), Least Sandpiper (50+), Semipalmated Plover (25+);
- (2) The site supports the state endangered Great Egret (FM 15+), state endangered and federally threatened Bald Eagle (B- 3 pairs, W - 5 +-), and state threatened Osprey (B- 8 pairs).

Note: Numbers indicate single season maximum documented in recent years.

*SM= spring migration; FM= fall migration; B= breeding; W= winter

Important Avian Habitats:

Large areas of exposed mud flats and shorelines, open water habitat of the reservoir, forest, field and brush habitat.

General Site Description:

Located near the town Sharon on the Ohio border in western Pennsylvania, Shenango Reservoir is a typical multiple-use COE project. The main purpose of the project was to provide flood control for the Shenango River Valley, and to a lesser degree, for the Beaver and upper Ohio Rivers. The dam at Sharpsville was closed in 1967, flooding several miles of the Shenango River to the east, and to the northwest, the lower stretches of Pymatuning Creek on into Ohio. More than 15,000 acres (6,071 hectares) of river bottom and adjacent uplands were encompassed by the project. Up to 11,000 acres (4,452 hectares) may be flooded at maximum pool level of 919 feet (273 meters) above sea level. The summer pool is maintained normally at 896 feet (273 meters) and 3,560 acres (1,441 hectares).

Mud flats and open shorelines that become exposed as water levels fall in the summer are the most important habitat for the many shorebirds that Shenango Reservoir hosts. The Golden Run area and the inlets off West Lake Road are particularly attractive to them. Under the right conditions, a continuum of shorebird habitat is exposed during summer/fall migration. Waterfowl also use this habitat for loafing and some feeding.

The open waters of the Reservoir are especially important to waterfowl, Bald Eagles and Osprey. The Eagles, Ospreys and Mergansers depend on the fish found in the open waters. Even when conditions are ideal for shorebirds (i.e., low water and exposed mudflats), the surface area of the Reservoir's summer pool remains sufficiently large

(3,500 acres (1,417 hectares) to accommodate waterfowl, Eagles and Ospreys, and other open water species such as the Double-crested Cormorant.

Although mud flats and open waters are the habitats most important to the species that earned IBA status for Shenango Reservoir, one should not overlook the associated upland habitats. The entire Reservoir project area contains 15, 071 acres (6,099 hectares), most of which provide a good mix of forest, field and brush habitats for land birds.

Recreation and the maintenance of downstream water quality were other purposes for which the project was developed. COE maintains administrative facilities and several access and recreational areas around the Reservoir. The COE web site provides detailed information on Shenango Reservoir (<http://www.lrp.usace.army.mil/rec/lakes/shenango.html>).

COE devotes considerable attention to wildlife management at Shenango Reservoir. They have a Ranger/Biologist staff and operate under annual and five-year plans for wildlife and fisheries management (USACOE 1980). Approximately 4,800 acres(1,943 hectares) in Ohio and 3,100 acres (1,255 hectares) in Pennsylvania are leased to the Ohio Department of Natural Resources (ODNR) and the Pennsylvania Game Commission (PGC), respectively.

Summary of Birds:

Definitive information on birds at Shenango Reservoir is available through the efforts of COE staff, Bartramian, TRBC (<http://www.3riversbirdingclub.org>), Pennsylvania Society for Ornithology (PSO), and many interested birders. Especially useful are records collected under PSO's Special Areas Project (www.pabirds.org).

The *Checklist of the Birds of Shenango River Lake, PA* compiled by Bartramian lists 212 species of birds as having been recorded there¹. Waterfowl (26 species) and shorebirds (25 species) dominate the list. Up to 2,000 waterfowl occur during migration. Canada Goose, Mallard, American Black Duck, Hooded Merganser and Wood Duck nest at Shenango Reservoir, with Hooded Merganser and Wood Duck production augmented by 300 nest boxes. One of Ohio's pairs of Trumpeter Swans nests on the Ohio portion of Shenango Reservoir just outside the PA IBA boundary. This pair produced 8 cygnets in 2003 (Brudowsky, personal communication).

Similar numbers of shorebirds occur during fall migration, with Killdeer, Lesser Yellowlegs, Semipalmated Sandpiper, and Least Sandpiper most commonly observed. The variety and numbers of shorebirds to be observed at Shenango Reservoir rival Presque Isle and have made the Reservoir a popular destination for birders. Audubon Society of Western Pennsylvania (ASWP), TRBC and others regularly organize shorebird watching trips.

¹ This is certainly a minimal number, with some common and some rare species not listed. For example, Brudowsky (personal communication) reports nesting American Kestrels, and has observed Atlantic Brant.

Shenango Reservoir also provides important habitat for three species of concern including the state endangered Great Egret, state threatened Osprey and state endangered and federally threatened Bald Eagle. Up to 15 Great Egrets can be found during fall migration. Osprey and Bald Eagles were listed as spring and fall migrants when Shenango Reservoir was originally selected as an IBA (Crossley 1999), but they are also well established breeding birds. In 2003, eight pairs of Ospreys nested at Shenango Reservoir using towers and artificial and natural nest platforms (Brudowsky 2003). Three pairs of Bald Eagles nest on the Pennsylvania portion of the Reservoir, and four pairs outside the PA IBA boundary in Ohio. These pairs fledged four and six young respectively in 2003 (Brudowsky, personal communicatio).

Other notable avian occurrences at Shenango Reservoir include a colony of Cliff Swallows at the headquarters area, consistent nesting of Red-headed Woodpeckers in the Golden Run area, and the presence of up to 200 American Pipits during fall migration. COE, with the assistance of cooperators maintains nest boxes for Wood Ducks (300), Eastern Bluebirds (100), American Kestrels (40), and Purple Martins (3).

A bird checklist is available from COE and Bartramian. Birding at Shenango Reservoir is featured in books (e.g., Ford 1995), periodicals (e.g., McKay 2003), and web sites (e.g., http://www.pabirds.org/PA_BIRDS_Listserve.htm <http://www.3riversbirdingclub.org/hotspots/srr.asp>).

Avian Monitoring Efforts:

Birds have been monitored at Shenango Reservoir under PSO' Special Areas Project. Records from several years are available, largely through the efforts of Bartramian members. COE monitors numbers and production of nesting Ospreys and Bald Eagles, and they band about 12 Ospreys a year. COE also does a winter Bald Eagle count, and cooperates with the PGC and ODNR counting and banding waterfowl.

Education/Recreation/Ecotourism Activities and Opportunities:

COE facilities include a visitor center and an outdoor amphitheater. Programs featuring birds are occasionally presented.

Shenango Reservoir is a popular recreation site, drawing people from western Pennsylvania and eastern Ohio. Picnicking, camping, hiking, fishing, hunting, birding and boating are permitted, with campgrounds, boat launches and other facilities available. Boating is especially popular. Unlimited horsepower boating and water skiing are allowed in some areas, while boating in other areas is restricted to 10 hp motors, electric motors or canoes. Hunting is allowed in undeveloped areas in accordance with state and federal regulations. New hiking trails are being developed in cooperation with the Shenango Conservancy.

Ecotourism in the area is not well developed, and opportunities appear limited.

Management/Conservation Issues and Opportunities:

As is common on many IBAs, invasive species present some threat to avian habitats at Shenango Reservoir, Common Reed, Purple Loosestrife and Japanese Knotweed being the most threatening species. The common watershed problems of non-point source pollution, siltation and other forms of residential and agricultural run-off also affect this IBA. However, the major habitat issue (and opportunity) at Shenango Reservoir concerns water management.

The amount of mud flats and exposed shorelines, the critical habitat for shorebirds, depends on water levels. Optimal shorebird habitat occurs at levels slightly below the summer pool elevation of 896 feet (273 meters) that COE attempts to maintain to provide reliable downstream flows, and sufficient surface area and depths to support boating and other recreational uses. In wet years, or when COE otherwise maintains higher levels of water, relatively little, good quality shorebird habitat is available.

Shorebirds at Shenango Reservoir would benefit from lower water levels during the late summer-early fall migration period. To address this issue, in 2002, TRBC requested that COE alter its water management regime to provide more, and more reliable, habitat for shorebirds. COE could not honor the request because of commitments to maintain downstream water quality and provide water-associated recreational opportunities. However, COE remained amenable to alternative approaches to enhancing shorebird habitat.

Subsequently, in a 2003 follow-up TRBC proposed that COE seek the means for enhancing shorebird habitat through Section 1135 of the Water Resources Act of 1986 (Public Law 99-662) which authorizes projects for aquatic restoration. In this case, restoration would involve moving earth to create and manage mud flats that would be exposed at the COE desired summer pool elevation. TRBC, Westmoreland Bird and Nature Club, Bartramian, and ASWP have sent letters of intent to provide matching funds of 25% of the COE total project cost. COE has responded favorably, and negotiations and planning are underway (Solomon, personal communication). This is an excellent opportunity for all concerned parties to work cooperatively to the benefit of shorebirds at Shenango Reservoir.

The consistent presence of significant numbers of both shorebirds and birders argues for including Shenango Reservoir in the International Shorebird Survey.

Conservation Actions: *The following conservation actions describe current and ongoing efforts by COE:*

- Maintaining nest boxes and nest structures for Ospreys and other species
- Maintaining small, impounded wetlands
- Controlling and managing invasive plant species
- Maintaining grasslands and early successional habitats
- Planting food producing trees, shrubs and cover crops
- Maintaining closed areas around Bald Eagle nests

- Conducting surveys of waterfowl, Ospreys and Bald Eagles
- Banding Ospreys

*The following conservation actions describe **proposed recommendations** for consideration by COE and other interested organizations, agencies and groups for the maintenance, improvement and enhancement of habitat for bird species especially to optimize habitat value for IBA target species as well as for the promotion of bird conservation through educational outreach:*

- Enhance, create and maintain mud flats and exposed shorelines for shorebirds
- Request inclusion in the annual International Shorebird Survey
- Have shorebird data compiled and made available
- Develop information and education program promoting birding and IBA status
- Improve management and control of invasive species
- Promote efforts to enhance watershed quality
- Update the bird checklist regularly every five years
- Include bird conservation displays and materials in the visitor center for use by the public and place IBA signs at Public access points

Institutional Partners and Key Contacts:

- Audubon Society of Western Pennsylvania (ASWP) 412-963-6100
- Bartramian Audubon Society (BAS) Suzanne Butcher, 330-759-1945
- Ducks Unlimited (DU) Chris Clouser, 814-832-4675
- First Energy Corporation (FEC) 800-646-0400
- Mercer County Regional Planning Commission (MCPC) 724-981-2412
- National Wild Turkey Federation (NWTFF) Larry Holjencin, 814-834-6492
- Natural Resources Conservation Service (NCRS) 724-662-3740
- Ohio Department of Natural Resources (ODNR) Steve Barry, 419-898-0960
- Pennsylvania Department of Conservation and Natural Resources (PA DCNR) 717-787-2869
- Pennsylvania Federation of Sportsmen's Clubs (PFSC) 717-748-3119
- Pennsylvania Fish and Boat Commission (PFBC) 814-336-2426
- Pennsylvania Game Commission (PGC) 814-432-3187
- Purple Martin Conservation Association (PMCA) John Tautin, 814-734-5803
- Shenango Conservancy (SC) 724-662-2242
- Three Rivers Birding Club (TRBC) Jack Solomon, 412-521-3365
- US Army Corps of Engineers (USACOE) Charles Brudowsky, 724-646-1124
- US Fish and Wildlife Service (USFWS) David Putnam, 814-234-4090
- Waterfowl USA (WUSA) 803-637-5767

References:

Crossley, G. J. 1999. A Guide to Critical Bird Habitat in Pennsylvania. Pennsylvania Audubon Society. Harrisburg, PA. 219 p.

Ford, P. 1995. Birder's Guide to Pennsylvania. Gulf Publishing Co. Houston, TX. 268 p.

McKay, M. 2003. Local Notes-Mercer County. Pennsylvania Birds 17(1):64.

Pennsylvania Natural Diversity Inventory database. Available online at:

<http://www.dcnr.state.pa.us/forestry/pndi/pndiweb.htm>

The Pennsylvania Code, Title 58, Subchapter B.BIRDS, Section 133.2.1. Classification of birds, as amended.

US Army Corps of Engineers.1980. Shenago River Lake, Pennsylvania and Ohio Forest, Fish and Wildlife Management Plan. Pittsburgh, PA 133 p.

US Fish and Wildlife Service. 2002. *Birds of conservation concern 2002*. Division of Migratory Bird Management, Arlington, Virginia. 99pp.