

**PENNSYLVANIA IMPORTANT BIRD AREA #25
LAKE SOMERSET**

**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: Lake Somerset

Size: 250 acres (101 hectares)

Ownership:
Pennsylvania Fish and Boat Commission

County/Municipality:
Somerset County/Somerset Township

Physiographic Province/Bird Conservation Region/Watershed:
The IBA is within the Allegheny Mountain Section of the Appalachian Plateaus Physiographic Province. The IBA is in Bird Conservation Region (BCR) #28, Appalachian Mountains. The IBA is within the Casselman/Youghiogheny River Watershed.

Legislative Districts:
12th Congressional District, U.S. Representative, John Murtha (D) – Somerset County
32nd Senatorial District, State Senator, Richard A. Kasunic (D) – Somerset Township
69th House District, State Representative, Bob Bastian (R) – Somerset Township

Stewardship Adoption Status:
This IBA has not been adopted formally. The Allegheny Plateau Audubon Society (www.pitt.edu/~dnicodem/) is a possible adoptive organization.

IBA Selection Criteria:

- (1a) The site is important during the migratory seasons for waterfowl and supports numerous species of waterfowl (SM* -12,000±), including Canvasback (SM-1,700±), Long-tailed Duck (SM-300±), and Lesser Scaup (SM-2,500±);
- (2) The site supports the state threatened Osprey (B-1 pair).

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

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

Important Avian Habitats:

Open water and exposed mud flats

General Site Description:

Lake Somerset is a 250 acre (101 hectare) man-made lake located at Somerset in Somerset County. It was created in 1958 by the PFBC for the purpose of developing a small lake sport fishery. The lake is shallow (7.5 feet (2.3 meters) mean depth, 16.0 feet (4.8 meters) maximum depth) and productive, to the point of being eutrophic. It supports good populations of warm and cool water game fish species, some that reproduce naturally and others that must be maintained by stocking. The lake is popular with area anglers. PFBC has its Southwestern Regional Headquarters at the Lake.

The open waters of the Lake are the most important avian habitat at Lake Somerset. The open waters provide feeding areas for Osprey, and feeding and resting areas for migratory waterfowl. Some emergent wetland dominated by Bur-reed (*Sparganium eurycarpum*) also occurs at Lake Somerset. A small amount of scrub-shrub wetland occurs. During draw-downs, exposed mud flats provide habitat for migrating shorebirds.

Summary of Birds:

Waterfowl are the most abundant and conspicuous birds at Lake Somerset. Located at a relatively high altitude in the Allegheny Plateau where there are few large water bodies, Lake Somerset attracts significant numbers and variety of waterfowl during spring and fall migration, particularly when weather creates fallout conditions wherein birds that might ordinarily over-fly the area stop for refuge and rest. Relatively large numbers of diving ducks like Canvasback and Lesser Scaup can be found at times. Long-tailed Duck, Atlantic Brant, Scoters and other Arctic nesters can be found at times. In total, up to 2,000 waterfowl may be found at a time in spring. Lake Somerset is roughly half way between the Lower Great Lakes and the Chesapeake Bay/Mid-Atlantic Coast where many of these birds winter.

Other waterbirds such as loons and grebes can usually be found during migration at Lake Somerset. Up to 100 Common Loons have been observed at once (Bastian 2004). Several thousand gulls use the Lake during the course of the year. The Ring-billed Gull is most common, but Herring Gull, Greater Black-backed Gull, Franklin Gull, Laughing Gull and others have been observed. As many as 400 Bonaparte's Gulls have been observed at once (Bastian, personal communication).

Periodically, when PFBC lowers the lake level to control aquatic vegetation, shorebirds become common at Lake Somerset. To observe 100-200 shorebirds at a time is not unusual, and 500 or more may be present on exceptional occasions. Pectoral, Spotted, and Solitary Sandpipers are the most common species (Bastian, personal communication).

One pair of state threatened Osprey nests regularly on a nest platform at Lake Somerset. This pair fledged one young in 2003 (Marich, personal communication).

State endangered Least Bitterns were found in a cat-tail marsh at Lake Somerset in 1987 (Brauning 1992), and Common Moorhen nested there prior to 1988 (Marich, personal communication).

A checklist of birds occurring at Lake Somerset is not available. A Guide to Birding Sites in Somerset County is available through Allegheny Plateau Audubon Society. Scott Bastian's book, Somerset County Naturally: A Guide to Enjoying the Wildlife of Somerset County, PA (Bastian, personal communication provides information on birds and birding at Lake Somerset.

Avian Monitoring Efforts:

Lake Somerset falls with the Johnstown Christmas Bird count circle.

Education/Recreation/Ecotourism Activities and Opportunities:

Educational facilities are not available at Lake Somerset, and educational materials available at the PFBC office understandably emphasize fish.

Fishing is the most popular form of recreation at Lake Somerset. PFBC manages the Lake for recreational fishing and maintains two boat launch sites. Boating is limited to canoes and craft with electric motors. Some hunting of waterfowl occurs in season, and some birding occurs, particularly during spring and fall migration.

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

Management/Conservation Issues and Opportunities:

Lake Somerset was created by impounding a small stream in a relatively small basin close to a populated area (Somerset). The dam and Lake are large relative to the watershed that feeds the Lake. In dry years, outflow ceases and water levels drop. Under these conditions Lake Somerset acts as a catchment basin for whatever runs off the surrounding land. Siltation is heavy. Storm-water runoff from developed areas, and excess fertilizers, pesticides and herbicides from farms and residences accumulate in the water at Lake Somerset, making it eutrophic. The nutrient rich water supports heavy growth of submerged aquatic vegetation (SAV).

In the 1980s, the growth of SAV (primarily *Potamogeton crispus*, *Ceratophyllum demersum*, *Elodea canadensis* and *Myriophyllum sp.*) began to adversely affect fish and

fishing. Up to 50% of the surface area of the Lake was covered in some years. Impeded access and an imbalance of predator-prey species resulted in lower quality fishing.

PFBC initiated a Lake management plan in 1988 to control SAV. After ruling out herbicides as undesirable, and mechanical means as less efficient, they adopted over-winter draw-downs as the control means. In 1988 and 1989, the Lake level was drawn down 7 feet (2.1 meters), reducing the Lake's surface area to 125 acres (51 hectares) (50%). The over-winter freezing of SAV root stock proved effective. In 1991 PFBC went to a bi-annual draw-down schedule. In conjunction with the draw-downs, PFBC also adopted a new fish stocking regime. Throughout the process, PFBC monitored results of their Lake management plan, conducting surveys of SAVs and fish populations (PFBC 1996). The Lake management strategy has successfully reduced SAV, restored a balanced fish population, and improved fishing. Recently, PFBC went to a tri-annual drawdown schedule, with the draw-down commencing immediately after the Labor Day holiday, and ceasing on March 1 of the following year. The goal is to maintain ideal SAV coverage at 20% of the Lake.

Obviously during years of draw-down, aquatic birds are affected, because less water and less SAV, important food for some diving ducks, is available. The situation is compounded in years when a dry summer follows a winter-drawdown. Some contend that the draw-downs have serious, adverse affects on waterbirds, but no studies have been done to confirm this. Regardless, adverse impacts on waterbirds may be offset by the positive impacts that draw-downs apparently have on shorebirds. Some local birders actually look forward to the draw-downs for that reason.

Given (1), fishing is the mission at Lake Somerset, (2), funds derived from fishing support operations at the Lake¹, (3), compelling evidence that the draw-downs positively affect fish populations and fishing at Lake Somerset, (4), the lack of similar evidence demonstrating adverse impacts on waterbirds, and (5), apparent positive impacts for shorebirds, it is unlikely that PFBC would abandoned its draw-down management strategy in favor of waterbirds.

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

- Maintaining an osprey nesting platform.
- Maintaining duck nesting boxes
- Maintaining an un-mowed shoreline buffer strip

*The following conservation actions describe **proposed recommendations** for consideration by PFBC 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:*

¹ Dingall-Johnson funds (federal fisheries aid) pay for 75% of the operations at Lake Somerset (Lorson, personal communication)

- Conduct a study to determine how draw-downs at Lake Somerset affect waterfowl and other birds
- Develop a bird checklist
- Publicize Lake Somerset's IBA status with signs, and information at the PFBC office

Institutional Partners and Key Contacts:

- Allegheny Plateau Audubon Society (APAS) Dennis McNair, 814-255-4088
- Bastian, Scott (SB), 814-445-6727
- Ducks Unlimited (DU), Anthony Marich, 814-926-4139
- Pennsylvania Department of Environmental Protection (DEP) 412-442-4184
- Pennsylvania Fish and Boat Commission (PFBC), Richard Lorson, 814-445-3454
- Somerset Lake Preservation Committee (SLPC)
- US Army Corps of Engineers (USACOE) 412-395-7500
- US Environmental Protection Agency (USEPA) 215-814-5000
- US Fish and Wildlife Service (USFWS) David Putnam, 814-234-4090

References:

Bastian, Scott. 2002. Somerset County Naturally: A Guide to Enjoying the Wildlife of Somerset County, PA. Thompson Shore. Dexter, MI. 168 p.

Brauning, D. W., ed. 1992. Atlas of Breeding Birds of Pennsylvania. Univ. of Pittsburgh Press. Pittsburgh, PA. 484 p.

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

Pennsylvania Fish and Boat Commission. 1996. Lake Somerset Management Report. Somerset, PA. 59 p.