

**PENNSYLVANIA IMPORTANT BIRD AREA #11  
THE GLADES – STATE GAME LANDS 95**

**Phase I Conservation Plan  
(Prepared By: Dr. Gene Wilhelm; 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, 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:** The Glades – State Game Lands 95 (SGL 95)

**Size:** 15,945 core site acres (6,457.725 hectares), 6,153 stewardship acres (2,491.965 hectares), and 76,014 conservation boundary acres (30,785.67 hectares) based on Audubon Pennsylvania (AP) land cover and watershed/wetlands maps.

**Ownership:**

Public – Pennsylvania Game Commission (PGC) and Private

**County/Municipalities:**

Butler County/Cherry, Clay, Concord, Venango and Washington Townships

**Physiographic Province/Bird Conservation Region/Watershed:**

The IBA is in the Pittsburgh Low Plateau Section of the Appalachian Plateaus Province and in Bird Conservation Region #28. The IBA site is part of the Beaver River-Ohio River Watershed with scores of tributaries draining southwest via the Slippery Rock Creek- South Branch of the Slippery Rock Creek system.

**Legislative Districts:**

3<sup>rd</sup> Congressional District, U. S. Representative Phil English (R): all townships  
21<sup>st</sup> Senatorial District, State Senator Mary Jo White (R): Cherry, Clay Townships  
41<sup>st</sup> Senatorial District, State Senator Don White (R): Concord, Venango, Washington  
8<sup>th</sup> House District, State Representative Richard Stevenson (R): Cherry, Clay, Concord  
64<sup>th</sup> House District, State Representative Scott Hutchinson (R): all townships

**Stewardship Adoption Status:**

The Bartramian Audubon Society (BAS) officially adopted the Glades – SGL 95 as a Special Areas Project (SAP) of the Pennsylvania Society for Ornithology (PSO) between March 1997 and May 2000. The site became an IBA in 1999 and has been monitored by the BAS since 2001.

**IBA Selection Criteria:**

- (2) One pair of Bald Eagle (PA threatened) has nested here for years; 1 pair of Osprey (PA threatened) built a nest in 2003 for the first time but produced no young. American Bittern, Least Bitterns (PA endangered) & Upland Sandpiper, Sedge Wren (PA threatened) historically bred here.
- (3) The Northern Harrier (Candidate At-Risk), Pied-billed Grebe, American Coot, Wilson's Snipe and Marsh Wren (all Candidates Rare) are probable breeders on the IBA; Virginia Rail, Sora, Common Moorhen, Red-headed Woodpecker and Golden-winged Warbler historically bred here and may still do so (BAS).
- (4b) Extensive and diverse wetlands, from emergent marshes to live and dead tree swamps support breeding Canada Geese, Wood Ducks, Blue-winged Teal, Mallards, Hooded Mergansers, Veery and Northern Waterthrushes.
- (5) Audubon Society of Western PA (ASWP), BAS and Todd Bird Club (TBC) have done extensive bird surveys on this site for decades. More recently, the BAS, in cooperation with PSO's SAP, monitored the Glades on 61 field trips between March 1997 and May 2000. In 2001 the BAS commenced an IBA point count survey route that continues to the present.

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

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

**Important Avian Habitats:**

SGL 95 was originally selected for its diversity of habitats, particularly its wetlands. There are even today different types of marshes and swamps, such as extensive sedge-cattail emergent marshes, alder-willow scrub-shrub, palustrine forested types and standing dead tree swamps (PA Maps). Add to those lakes, ponds, wet and dry meadows, old abandoned fields, brushy fields, scrub thickets, pine- and aspen-studded strip mines, mature hardwood forests, eastern hemlock stands, exotic spruce and fir trees at abandoned home sites, crabapple thickets, old orchards, corn, soybean and grain fields, pine plantations and hedgerows of autumn olive and multi-flora rose. Such a broad diversification has attracted a rich variety of avian species. However, because of severe fragmentation of the land and scattered distribution of habitats, few of the more than 200 species recorded here ever achieve large numbers (Byers, 1996). This is the reason the site did not qualify as an IBA under Category PA-1a or 1b.

**General Site Description:**

SGL 95 is located in northwestern Butler County southeast and east of Grove City (PA Maps) and is managed by the Pennsylvania Game Commission (PGC). It consists of many scattered land and water parcels in a gentle to rolling landscape in Cherry, Clay, Concord, Parker, Venango and Washington Townships. However, the IBA itself is far

more restricted with general boundaries defined as south of PA Route 58, east of PA Route 8, north of PA Route 138 and west of PA Route 38. Logging and surface coal mining drastically changed the appearance of the landscape both within and outside of these public lands. Wetlands such as scrub-shrub and forest swamps are still common along Slippery Rock Creek and the South Branch of Slippery Rock Creek and their tributaries. Emergent marshes far less so, although the PGC recently has established several low water depth ponds many that are surrounded by emergent marshes. However, the largest most recognizable feature in the IBA is Glades Dam Lake (2.5 miles or 4.0225 kilometers in length) that was formed by damming the South Branch of Slippery Rock Creek to form a large but fluctuating impoundment. In addition to the lake and wetlands, the IBA is composed of second growth deciduous trees, mostly oaks, hickories, black cherry, tulip poplar, American beech and red maples. Many abandoned old fields are reverting back to forest and are at different stages of succession. The PGC leases land to local farmers for planting fields of corn, soybeans and grains with the requirement to leave a portion of the standing crops for wildlife. Habitats, however, can change rather abruptly and drastically due to PGC management practices. Mature forests are occasionally clear-cut for deer browse. Border and pole tree stands are often cut and made into brush pile cover. Former landowners and more recently the PGC planted White, Red and Scotch pine tree plantations. These plantings vary from year to year. Most of these practices create an 'edge effect' and maintain the landscape in dynamic states of succession. It must be remembered that these are primarily game lands managed for hunting game mammals and birds. Non-game avian species, however, do receive attention. The PGC maintains a propagation area at the north end of Glades Dam Lake and surrounding terrain and is strictly off limits to all people, including hunters. The water level of Glades Dam Lake is drawn down in the spring to protect vegetative cover at the south end of the lake and raised in the fall to accommodate migrating waterfowl. Since the time of water level adjustments varies each year with the weather, the amount of exposed shoreline and mudflat area is unpredictable for shorebirds.

### **Summary of Birds:**

It should not be surprising that with such a variety of habitats that this IBA is a great attraction for birds. Until the mid-1990s, the Upland Sandpiper (PA threatened) bred here. In fact, prior to the making of Glades Dam Lake, this species was common according to the 1991 Butler County Natural Heritage Inventory (BCNHI). Construction of the impoundment resulted in the loss of much of its required habitat due to changing water levels of the lake. In addition, agricultural decline and landscape manipulation threatened the existence of the species. It has not bred in the IBA, as far as is known, since 1992 or 1993 (BAS). On the other hand, the creation of Glades Dam Lake is responsible for the Osprey and Bald Eagle nesting here. Both nest sites are off limits during the breeding season. Unfortunately, much of the site's extensive wetlands are inaccessible (Propagation Area) or difficult to traverse. Monitoring SGL 95 wetlands between 1980-1988 for the PA Breeding Bird Atlas Project proved that the currently listed PA endangered American Bittern and Least Bittern were common there as were the currently listed PA threatened Upland Sandpiper and Sedge Wren (PSO, 2002). All four species require wet meadows and marsh conditions at least some time during their

breeding regimen and these vegetative conditions are still present, although considerably less in acreage, along Glades Dam Lake and inside the propagation area (BAS). Construction of the lake impoundment resulted in the loss of much of this habitat by changing the water level of the lake in spring and fall. Further, forest succession, agricultural activities and overgrown fields threatened these species with the result that currently they are unknown to breed in the IBA (BAS). However, the Glades Dam Lake is responsible for establishing a favorable habitat for the appearance and nesting of the Osprey and Bald Eagle. Likewise, other breeding wetland species are well documented in the IBA as indicated by recent (1997-2000) SAP data: Pied-billed Grebe, American Coot (candidate rare), Wilson's Snipe and Marsh Wren (candidate rare) and Swamp Sparrow. Some other IBA breeding species under consideration for listing include the Virginia Rail, Sora, Common Moorhen, Red-headed Woodpecker, Golden-winged Warbler and Cerulean Warbler. Interior area sensitive forest species known to breed here are Acadian and Least Flycatchers, Veery, Wood Thrush, American Redstart, Ovenbird, Hooded Warbler, Scarlet Tanager, Black-and-White Warbler, Kentucky Warbler, Blue-gray Gnatcatcher, Cerulean Warbler, Louisiana Waterthrush, Red-eyed Vireo and Northern Parula. The Wood Thrush, Cerulean Warbler and Kentucky Warbler are identified on the Audubon's Watch List and the same species are listed by the U. S. Fish & Wildlife Service as migratory non-game species of conservation concern in the USA (USFWS, 2002). Area sensitive thicket breeding species include healthy populations of Brown Thrasher, Gray Catbird, White-eyed Vireo, Blue-winged, Yellow, Chestnut-sided and Prairie Warblers, Common Yellowthroat, Yellow-breasted Chat and Eastern Towhee (SAP). Other interesting breeding species include 4 Empidonax flycatchers: Acadian, Alder, Willow and Least; and 4 swallow species nesting at one site within feet of each other. The IBA consistently attracts unusual species for this part of Butler County, such as Sandhill Crane (spring), American Pipit (spring), Loggerhead Shrike (winter), N. Mockingbird (possible breeder), Rusty Blackbird (spring and fall) and even Brewer's Blackbird (fall). Of course, spring and fall migration periods usher in abundant waterfowl, shorebirds, cuckoos, flycatchers, vireos, warblers, finches, blackbirds and their allies. There is suspicion that Golden-crowned Kinglet, Red-breasted Nuthatch, Brown Creeper and Purple Finch breed in the pine plantations but confirmation is lacking to date. Also, little is known about owls in the IBA other than sporadic records of Long-eared and Short-eared Owls. The Great Horned and E. Screech Owls are common, the Barred Owl less so. An owl prowl is contemplated by BAS in the near future.

#### **Avian Monitoring Efforts:**

- BAS's avian wetland survey for the PBBAP from 1980-1990.
- PSO's Special Area Project (SAP) by the BAS between 1997-2000.
- Audubon Pennsylvania's (AP) IBA point count survey route by BAS in 2001-2003. This survey is continuing by BAS.
- Two annual Breeding Bird Surveys (BBS) are conducted by volunteers for the U.S. Fish and Wildlife Service (USFWS) on the east and west sides of the IBA conservation boundary (see PA Land Cover Map).
- The PGC annually monitors American Kestrel, Eastern Bluebird and scores of waterfowl nest structures. The agency also monitors yearly active Osprey and Bald

Eagle nests and old, standing, dead White Oaks that were converted into wildlife apartment dwellings.

- Monthly avian observations are sent to the Butler County Compiler of PA BIRDS (PB) for publication in that quarterly journal.

### **Education/Recreation/Eco-Tourism Activities and Opportunities:**

The IBA is managed by the PGC mostly for hunting, trapping and fishing. There are some environmental education and interpretive services but little eco-tourism activities other than hiking, birding and cross-country skiing. The future potential, however, is there. Please consult PGC's website for a listing of recreational opportunities and activities at <http://www.pgc.state.pa.us>.

### **Management/Conservation Issues and Opportunities:**

- The propagation area is closed to the public on a year-round basis in order to protect birds and other wildlife yet there is public pressure to increase access to the site.
- Invasive plant species like Purple Loosestrife, Phragmites, Reed Canary-grass and Garlic Mustard, are a threat to quality avian habitat. The PGC has implemented management practices to control the invasive plants through environmentally sound herbicide applications and mowing.
- A large population of carp in the Glades Dam Lake threatens native fishes, quality aquatic vegetation and species of concern water birds.
- Fields are cultivated to create pasture for Canada Geese and other wildlife. The PGC is allotted a portion of the crops that are typically left in the fields as feed for wildlife. Yet, there is no management for non-game grassland birds.
- SGL 95 is actively managed for waterfowl, especially Canada Goose, Wood Duck and Mallard, and non-game avian species, such as American Kestrel, Eastern Bluebird and Tree Swallow, by placing artificial nesting devices throughout the site but again much more can be done for non-game avian species.
- The PGC follows a Wildlife Resource Assessment Procedure (WRAP) to guide management decisions in SGL 95, yet lack of access to that guide prevents this reviewer from learning what these procedures entail.
- Finally, the PGC considers partnerships with conservation organizations and agencies a valuable tool to promote conservation and environmental education; yet such partnerships are weak in SGL 95 and need greater focus and goal orientation.

### **Conservation Actions:** *The following conservation actions describe **current and ongoing** efforts by the PGC in SGL 95:*

- The PGC intends to continue to keep the propagation area closed to the public but will explain more in detail why it is doing so.
- The PGC will continue monitoring invasive plant species and will expand seeking public input for alerting the agency of any discovered threats.
- The PGC will continue monitoring the carp problem, however, currently the problem has declined considerably because of Ospreys and Bald Eagles preying on the carp.
- The PGC will continue cultivating fields for wildlife but consider non-Game avian species in its management plans.

- The PGC will continue monitoring game and non-game avian artificial nesting devices but target and expand the non-game species.
- The PGC will continue and strengthen partnerships with conservation organizations and state-federal agencies.

**Proposed Recommendations:**

- The PGC should monitor and manage non-game wetland, grassland and forest avian species to complement waterfowl monitoring efforts through partnerships with the BAS and Audubon Pennsylvania's IBA program.
- The PGC should identify target areas surrounding SGL 95 for land purchase or conservation easement as a protective buffer measure and encourage partnerships in this endeavor.
- The PGC should install an interpretive sign provided by Pennsylvania Audubon identifying part of SGL 95 as an IBA and its conservation partners.
- The BAS, PSO and PA should issue a joint bird checklist and revise such a list every five years.
- The PGC should promote greater conservation practices through more outreach and environmental education programs for the public with BAS partnership.
- The PGC should explore the feasibility, with the help of the BAS, of re-establishing the ecological requirements for the return and breeding success of these four wetland species of special concern: American Bittern, Least Bittern, Upland Sandpiper and Sedge Wren. There are few if any other western Pennsylvania breeding sites where all four species occur together. Only the Upland Sandpiper has been absent from the IBA the past few years and may be encouraged to return with suitable habitat.
- The PGC should explore the feasibility, with the help of the BAS, of encouraging avian grassland species, such as the Savannah, Grasshopper, Henslow's and Vesper Sparrows, Bobolink, Eastern Meadowlark and Horned Lark, to breed inside the IBA by delaying and staggering field mowing times until after July 15 and using prescribed burning of particular fields to create the proper succession scenario for these species. Currently all species are found scattered in SGL 95.

**Institutional Partners/Key Contacts:**

- PA Game Commission (PGC): Dale Hockenberry, Agent: 814-432-3187
- Pennsylvania Audubon (PA): Paul Zeph, IBA: 717-213-6880
- PA Society for Ornithology (PSO): Douglas Gross, SAP: 717-542-2191
- Bartramian Audubon Society (BAS): Dr. Gene Wilhelm: 724-794-2434

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