

**PENNSYLVANIA IMPORTANT BIRD AREA # 21
MOUNT ZION**

**Phase I Conservation Plan
(Prepared By: Doug Kibbe; 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 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: Mount Zion (Piney Tract)

Size: 6466.23 acres (2586.5 hectares)

Ownership:

Corporate (C & K Coal Company) and private in-holdings

County/Municipality:

Clarion/Piney and Toby Townships

Physiographic Province/Bird Conservation Region/Watershed:

The IBA is within the Appalachians Plateau Physiographic Province and part of the Appalachian Mountains Bird Conservation Region (BCR) # 28. The IBA is within the Clarion River watershed.

Legislative Districts:

5th Congressional District, U.S. Representative, John Peterson (R) – Clarion County
21st Senatorial District, State Senator, Mary Jo White (R) – Clarion County
63rd House District, State Representative, Fred McIlhatton (R) Piney and Toby Townships

Stewardship Adoption Status:

Interest has been building for a decade to acquire and manage the property through a combined effort of the Pennsylvania Game Commission and Piney Tract Coalition (more

than a dozen conservation oriented groups known as the Mid-Appalachian Grassland Initiative). Issues relative to the long-term commitment of resources to the acid mine drainage issues on the property have prevented acquisition of the property by the state of Pennsylvania.

IBA Selection Criteria:

- (1e) The IBA supports a significant number and diversity of breeding grassland birds.
- (2) The IBA supports several Pennsylvania birds of special concern including the endangered, Short-eared Owl (B* 2+ pair, W 8+/- indiv.), endangered, Upland Sandpiper (B 4+/- pair)
- (3) The IBA is important in supporting populations of the Northern Harrier (B 2+ pair, W4+ indiv.), a Pennsylvania candidate-at risk.
- (4a) The site is comprised of post-mining reclamation grassland habitat supporting a large numbers of grassland species: Henslow's and Grasshopper Sparrows, Bobolink, Eastern Meadowlark
- (5) The site is monitored by the PGC as part of the Grassland Breeding Bird Survey conducted from 1997 to present and is also part of the Special Areas Project (SAP) with Seneca Rocks Audubon Society.

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

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

Important Avian Habitats:

Extensive grassland (post-mining reclamation site), with small ponds/artificial wetlands

General Site Description:

The site is an area of former strip mines on the south side of the Clarion River reclaimed in the late 1970's. The mining activity, which started in the early 1900's, encompassed most of the site. Reclamation which commenced in the late 1970s, entailed regrading, seeding with grasses and forbs, construction of about a dozen acid mine drainage treatment facilities, and limited reforestation with locust and conifer trees tolerant of acid soil conditions typically found on mine reclamation areas. The topography is gently rolling and expanses of grassland dominate the landscape. The extensive grasslands cover about 70 percent of the tract and support one of the state's largest assemblages of breeding grassland birds. Due to the past mining history and rural location, development potential of the site has been low although the current owner is interested in selling the site. Several all-season roads transect the site. Limited seed sources and well-established grass cover have maintained the site in an early successional stage for the past twenty years. Trees and highly invasive species, e.g., multiflora rose, are slowly advancing into the grasslands and will, within a few decades, render the grasslands unacceptable habitat for the assemblage of sparrows and other open country species that currently occur.

Summary of Birds:

Seneca Rocks Audubon Society has recorded at least 130 species of birds from the tract. cursory review of the bird observation list indicates that additional field effort during migration periods is likely to significantly increase this listing (for example, only two

species of vireo are included). The principal species of interest are grassland dwellers including: Henslow's, Grasshopper and Vesper Sparrows; Upland Sandpipers; Short-eared Owls; and Northern Harriers all of which have been documented breeding on the site. The site is known as Pennsylvania's only breeding area for Short-eared Owls, the largest concentration of Henslow's Sparrows, and multiple pairs of Upland Sandpipers and Northern Harriers. The Upland Sandpiper, Short-eared Owl and Henslow's Sparrow are also considered birds of conservation concern according to U.S. Fish and Wildlife Service (2002) as part of BCR #28.

Sparrow populations breeding on the site are generally believed to be self-sustaining and would continue to repopulate the site as long as adequate suitable habitat is present. Avian usage of the site in nonbreeding seasons is less well known. Winter and migrational use by raptors has only been documented to a limited degree. Buckwalter (1988) indicated a high number (75+/-) of wintering Short-eared Owls in 1986, a total which appears not to have been matched in subsequent years although this may be the most reliable location in the state to find this species at any season. Numbers of Northern Harriers and Rough-legged Hawks are also commonly found here during the winter. Long-eared Owls are considered frequent winter residents.

Avian Monitoring Efforts:

A Pennsylvania Society for Ornithology Special Areas Project (with Seneca Rocks Audubon) is conducted within the IBA and the PGC has conducted point-count survey since 1997. The site was also a research area used by Piehler (1987) and Brauning et al. (2001). Good information has been collected on the relative abundance and density of grassland species nesting on the site. Estimates of the total number of grassland birds, which breed at the site in the 1990's have been developed for species of special interest. Acid mine drainage treatment facilities create several small ponds and wetlands on the site but the acidic conditions within the ponds (water is generally treated as it exits the pond) reduce the productivity of the aquatic systems. Waterfowl populations are not very diverse as consequence. Winter avian use is less well known. Approximately five miles (eight kilometers) of a mid-winter raptor survey route traverses the site (M. Leahy pers. comm.). Raptors are attracted to the small rodent populations present in the grasslands. Apparently no small mammal studies have been conducted within the IBA and yearly fluctuations in the prey base are undocumented. Although some habitat management practices (e.g., burning and late season mowing) have been experimented with, the focus of these studies has been to evaluate the impacts on the songbird nesting densities. No effort has been directed at ascertaining the impact of these management activities on the raptor prey base.

Estimated Breeding Population of Grassland Birds

Species	Total Estimated Breeding Population
Northern Harrier	2 pairs
Upland Sandpiper	1-4 pairs
Short-eared Owl	1-2 pairs
Henslow's Sparrow	1000+/- pairs
Grasshopper Sparrow	1000+/- pairs

Vesper Sparrow	30+ pairs
Savannah Sparrow	1000+/- pairs
Clay-colored Sparrow	Irregular breeder
Dickcissel	Irregular breeder
Bobolink	100+ pairs
Eastern Meadowlark	100+ pairs

Education/Recreation/Ecotourism Activities and Opportunities:

The site has considerable potential for outdoor oriented recreational usage including: hunting, cross-country skiing and snowmobiling. A proposal to develop all-terrain vehicle trails has been circulated. Due to its past history of mining activity, the site is easily accessed by road and is a frequent stop for birdwatchers interested in seeing numbers of grassland species that are rare in most of the remainder of the state. Backpacking, picnicking and sightseeing are potential warm weather activities throughout the area.

The site is identified as one of the 150 Important Bird Areas of America selected by the Commission for Environmental Cooperation (Chipley 1999). McWilliams and Brauning (2000) list it as one of 85 significant sites in the state. Ford (1995) gives bird watchers directions to access the site by foot.

Management/Conservation Issues and Opportunities:

Although the site has maintained its grassland character for two decades, there are a number of threats to its continued status as Pennsylvania's best post-mining reclamation grassland bird area. First, the current owners of the property are interested in selling off parcels for development as private residences. However this form of development may not be feasible due previous mining activities which could affect foundation stability, well development and septic system function. The availability of unmined land in the region with a higher development potential has probably prevented greater development activity of the site. However, unless the state or a conservation-oriented group acquires the property, the continued erosion of parcels will continue, almost certainly at an accelerating rate. The current owner is anxious to divest the property and relinquish the responsibility of maintaining the acid mine drainage treatment facilities.

Second, although the area is 70 percent open land, at present there is growing evidence that the natural progression of field to forest is gathering momentum. The successional advancement will soon affect the grassland character of site in ways that spell the end to its relatively rare avifauna. Although many tree species have lacked seed sources or proven unable to tolerate site conditions, those few species, which can thrive on relatively sterile, often acidic conditions are beginning to encroach. Perhaps an even greater threat comes from invasive shrubs. Species such as multiflora rose, which was frequently planted as wildlife cover has proven to be a bane once fully established. Spread by birds, multiflora rose can dramatically change the successional status of a field in a few years. Retardation of succession by trees and shrubs can only be achieved by mowing or burning the site periodically. Since Henslow's Sparrows appear to be sensitive to any disturbance that reduces the litter layer (Swanson 1996, Herkert 1998), any management

practices implemented should monitor subsequent fluctuations in breeding populations to ensure the management strategies are viable on a long-term basis. Only a small portion of the grassland is mowed, mostly occurring in late season for use in post-construction reseeded. The PGC has tested mowing and burning regimes to determine the effect on subsequent nesting populations of Henslow's Sparrows (Brauning et al. 2001) from the removal of cover and litter. Initial results indicate some depression in nesting density the subsequent year. Consequently management practices to control tree and shrub growth need to be carefully and infrequently applied.

Other issues that could influence the quality of the habitat for grassland birds include development and resulting associated disturbances. Development of inholdings and adjoining properties are potential threats that could impact nesting species that are sensitive to disturbance. Commercial, residential and vacation home development are a constant drain on natural land. Activities of humans and their pets have a marked influence on the composition of avian populations in nearby areas. Areas (particularly inholdings) where development would jeopardize nearby sensitive habitats need to be identified and purchased or placed in conservation easements. All species of concern on the site are ground nesters susceptible to nest disturbance by ATV's, hikers, and feral animals. Management activities such as burning or mowing should be conducted beyond mid-august, well after the breeding season is completed. Areas known to harbor ground nesting raptors or Upland Sandpipers should be closed to entry during the critical nesting period.

White-tailed deer populations are high in the region and their browsing activities may have helped retard invasion of trees and shrubs. Maintenance of the local deer herd within the carrying capacity of the site should be encouraged.

Conservation Actions: *The following conservation actions describe **current and ongoing** efforts by the owners in cooperation with interested organizations and the PGC:*

- Nominating several of the rare breeding species for special status identify if known
- Conducting grassland breeding bird surveys (PGC)
- Promoting acquisition of the tract by advancing the recommendation
- Testing succession retardation methods to determine those least detrimental to critical nesting species

*The following conservation actions describe **proposed** recommendations for consideration by the owners, state officials 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:*

- Development of a brochure for public distribution that describes the site and includes a bird checklist that should be updated every five years
- Placement of a sign identifying the site as an IBA
- Prioritization of land recommended for acquisition

- Acquisition of the property by state or a dedicated conservation group
- Implementation of an aggressive practice to manage and control invasive species especially multiflora rose
- Seek long term solutions to the acid mine drainage issue
- Develop a habitat management plan using periodic mowing, burning and grazing to enhance grassland conditions for target species
- Identify sources to fund habitat management plans and site maintenance plans
- Restrict intrusive access (e.g. ATV's) during the breeding season
- Greater emphasis on importance of the site to wintering raptors monitor, protection, habitat management???

Institutional Partners and Key Contacts:

- Alliance for Wetlands & Wildlife (AWW), Bernie Spozio (NRCS), Route 3 and I-80, Clarion PA 16254. 814-228-4070, ext. 3
- Clarion County Federation of Sportsmen (CCFS), Pete Dalby, 221 Ponds View Ln. Marble PA 16334
- Mill Creek Chapter, National Wild Turkey Federation (NWTF- MC), Bud Wills, 1212 Kable Rd. Summerville PA 15864 814-379-3759
- Pennsylvania Game Commission (PGC) Dan Brauning 570-547-6938
- Seneca Rocks Audubon Society (SRAS), Deb Freed, 208 Briar Hill Rd., Clarion PA 16214. dhfreed@csonline.net
- Margaret Buckwalter 814-782-3925
- Western Pennsylvania Conservancy (WPC) Cynthia Carrow, 209 Fourth Ave. Pittsburgh PA 15222-3925

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