



Mannington Meadows Important Bird Area (IBA) Conservation and Management Plan

Site name: Mannington Meadows Important Bird Area (IBA)

Location: Salem County, New Jersey. The majority of the IBA is within the Mannington Township. Fringes of the IBA are located in Salem City, Pennsville, Woodstown, Carney's Point, and Quinton Townships.

Area: 18,593 acres

Ownership and Managing Agencies: The vast majority of land within this IBA is in private ownership. The NJ Department of Environmental Protection's (DEP) Division of Fish and Wildlife manages several tracts of public land, including the Salem River Wildlife Management Area (WMA), located within the IBA.

Description: The Mannington Meadows IBA is formed by the Salem River on its northern and western boundaries and encompasses stretches of Fenwick, Mannington, and Keasbey's Creeks. Agricultural land surrounds the waterways and wetlands of this IBA. The IBA is composed mainly of wetlands, agricultural lands, and rural development with the only significant development at the southern end in Salem City (see Fig. 1).

Historic and Current Land Use: The city of Salem was founded in the late 1600s. The township of Mannington, surrounding the northern and eastern boundaries of Salem, has mainly been in agricultural use with the exception of a few industries. Businesses such as Mannington Mills, PSE&G, and DuPont operate within or close to this IBA. The township's dedication to an agricultural lifestyle is apparent; with 22% of Mannington Township enrolled in land preservation programs (see Fig. 2). Agriculture and open space are still the main forms of land use within this IBA; however, development pressure is increasing throughout the area (see Fig. 3). As a result, the township has initiated a Transfer of Development Rights (TDR) study to plan where future development occurs within this community.

The Mannington Meadow itself has a long and varied history. The meadow is formed by the Salem River, running north-south, and the Mannington Creek which runs east-west. Much of the meadow is shallow because of the Salem River's proclivity to expand far beyond its banks. Historically, the meadow was diked and farmed to produce salt hay and wild rice. However, an early 1900's hurricane destroyed most of the impoundments, which were not rebuilt. Meadow companies still exist in the Mannington Township and still maintain areas of fresh water for farmland irrigation. One such area is known as Mannington Lake located on the Mannington Creek east of the County Route 540 Bridge. A sluice gate at the Route 540 Bridge keeps tidal water out of the lake. While most of the Mannington Meadow is brackish, waters upstream of sluice gates are fresh, except in times of floods where brackish water can spill over water control structures.



A sizeable proportion of land in the Mannington Township (as well as the IBA) is categorized as wetlands (Fig. 4). There are many more acres of wetlands that were drained and converted to farmland. However, regulations that protect wetlands and the use of incentive programs have resulted in farmland reverting back to natural wetland habitat (Fig. 3 and 4). Forested coverage within this IBA is increasing but is still minimal (Fig. 3). The amount of developed land is restricted in the township, but is also increasing.

Key IBA Criteria:

Criteria	*Species
1a Conservation Concern – State-endangered	Bald Eagle (B) <i>Haliaeetus leucocephalus</i>
1a Conservation Concern – State-endangered	Pied-billed Grebe (B) <i>Podilymbus podiceps</i>
1a Conservation Concern – State-endangered	Least Bittern (B) <i>Ixobrychus exilis</i>
1a Conservation Concern – State-endangered	King Rail (B) <i>Rallus elegans</i>
2 Regional Responsibility Species - BCR 30 Salt marsh/Wetland	American Black Duck <i>Anas rubripes</i> Clapper Rail <i>Rallus longirostris</i> Marsh Wren <i>Cistothorus palustris</i> Virginia Rail <i>Rallus limicola</i> Mallard <i>Anas platyrhynchos</i> Northern Pintail <i>Anas acuta</i>
3a Significant Congregations of Waterfowl	
3c Significant Congregations of Wading Birds	
3d Significant Congregations – Exceptional Single Species Concentration	Caspian Tern (FM) <i>Hydroprogne caspia</i>
3d Significant Congregations – Exceptional Single Species Concentration	Pectoral Sandpiper (SM) <i>Calidris melanotos</i>
3e Significant Congregations – Exceptional Diversity	
5 Long-term Research/Monitoring	

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

Essential Habitat Types: Open water, emergent wetlands, potential grassland and agricultural land, forested wetlands.

Vision Statement: To protect and conserve the Mannington Meadows IBA, we will strive to protect water quality, increase the quality of riparian habitat, restore natural wetlands and grasslands, maintain the agricultural character of the community, and engage the community in protecting its natural resources through education and outreach efforts and the establishment of habitat demonstration sites.

Operation and Management Considerations:

Habitat Management Needs

Riparian zone restoration: Much of the littoral zone of the Mannington Meadow is dominated by a monoculture of *Phragmites*. Restoration of native species of vegetation is recommended to increase diversity of habitat types to support the broad community of waterfowl and other avian species that depend upon the IBA for breeding, wintering, and stop-over habitat. In addition, funding is available from various incentive programs to take marginal crop land out of production and restore to riparian habitat.

Wetland restoration: Some of the farmland in the IBA is converted wetlands. In addition, the hydrology of many forested wetlands within the IBA has been modified by ditching. Funding is available from various incentive programs to engage farmers and landowners in wetland restoration.

Restore hydrologic flow: The hydrology of the Mannington Meadow has been altered over time by water control structures, diversion of the Salem River via a canal, and impoundments.

Management of grassland habitat: The majority of the Mannington Meadows IBA is agricultural land, which is modeled as potential grassland in the DEP's Landscape Project. Funding is available from various incentive programs to compensate landowners who voluntarily choose to engage in grassland restoration or management of hay fields for increased productivity of grassland birds.

Threats or potential problems

Invasive species (Phragmites): Habitat diversity has been reduced by an invasion of non-native species in the *Phragmites* genus.

Mute swans: A population of the non-indigenous mute swan resides in the Mannington Meadows. Mute swans are capable of reducing availability of food resources for native avifauna.

Development pressure: The Mannington Township is experiencing increased development pressure because of its proximity to Philadelphia, PA and Wilmington, DE.

Agricultural runoff (non-point source pollution): Given the amount of land in crop rotation in the Mannington Township, agricultural runoff may be a concern.

Education, Outreach, and Research Considerations:

Access to opens space is currently limited. Recommend developing interpretative trails and watchable wildlife areas.



Education and outreach

Private lands biologists will work to increase awareness of incentive programs and to assist landowners in engaging in conservation practices that conserve soil, improve water quality, and increase availability of wildlife habitat.

Build partnerships with public and private landowners to increase opportunities for outdoor education and recreation. Seek funding to establish watchable wildlife areas.

Establish demonstration sites to increase awareness of the importance of grassland habitat for soil conservation and biodiversity. Demonstration site will also serve to educate land managers about grassland management techniques.

Research

Potential research questions include:

What are the effects of *Phragmites* on biodiversity and water quality?

What are the effects of competition with Mute Swans on native fauna?

What are the sources and effects of non-point source pollution?

Implementation Strategies:

1. Increase the use of soil, water, and wildlife conservation practices on private lands.
 - Build partnerships with resource management agencies, private land owners, and farmers to facilitate enrollment in voluntary incentive programs.
 - Increase the proportion of Landowner Incentive Program (LIP) and Farm Bill dollars allocated to NJ, and specifically to the Mannington area.
 - Provide landowners with information about the various incentive programs for which they may qualify.
 - Assist landowners who are interested in incentive programs with designing grant proposals and provide support during the application and implementation process.

2. Maintain agricultural character of the community by encouraging sustainable growth.
 - Encourage nature based tourism by promoting utilization of NJAS' Birding and Wildlife Trails Guide and supporting the leasing of hunting rights.
 - Work with partners to support development of heritage trails and identification of cultural values.
 - Work with land use planners to prioritize areas for farmland preservation and open space.
 - Work with land preservation partners to direct more funding to private lands within the IBA.



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3. Engage community in stewardship of its natural resources

- Implement educational programs about the value of the communities' natural resources
- Facilitate opportunities for volunteer activities at restoration projects.
- Enlist citizen scientists to monitor IBA (habitat, threats, populations)
- Empower community to advocate their natural resources

4. Provide outdoor educational and recreational opportunities

- Increase access to open space
- Increase educational programs
- Increase access to bird-watching areas and other recreational opportunities

5. Establish demonstration sites for model stewardship activities

- Riparian restoration: identify contiguous area of degraded shoreline for riparian restoration.
- Grassland restoration and/or management: identify parcel at least 50 acres in size for grassland restoration; or identify a hayfield at least 50 acres in size for delayed mowing. Mowing after July 15 greatly increases grassland bird productivity because by that date the majority of hatching have fledged.
- Interpretative trails: seek funding to provide recreational and educational opportunities on demonstration sites.

Appendices

- A. Riparian Restoration Plan
- B. Grassland Breeding Bird Objectives

Figure 1. Boundaries of the Mannington Meadows Important Bird Area in Salem County, New Jersey.

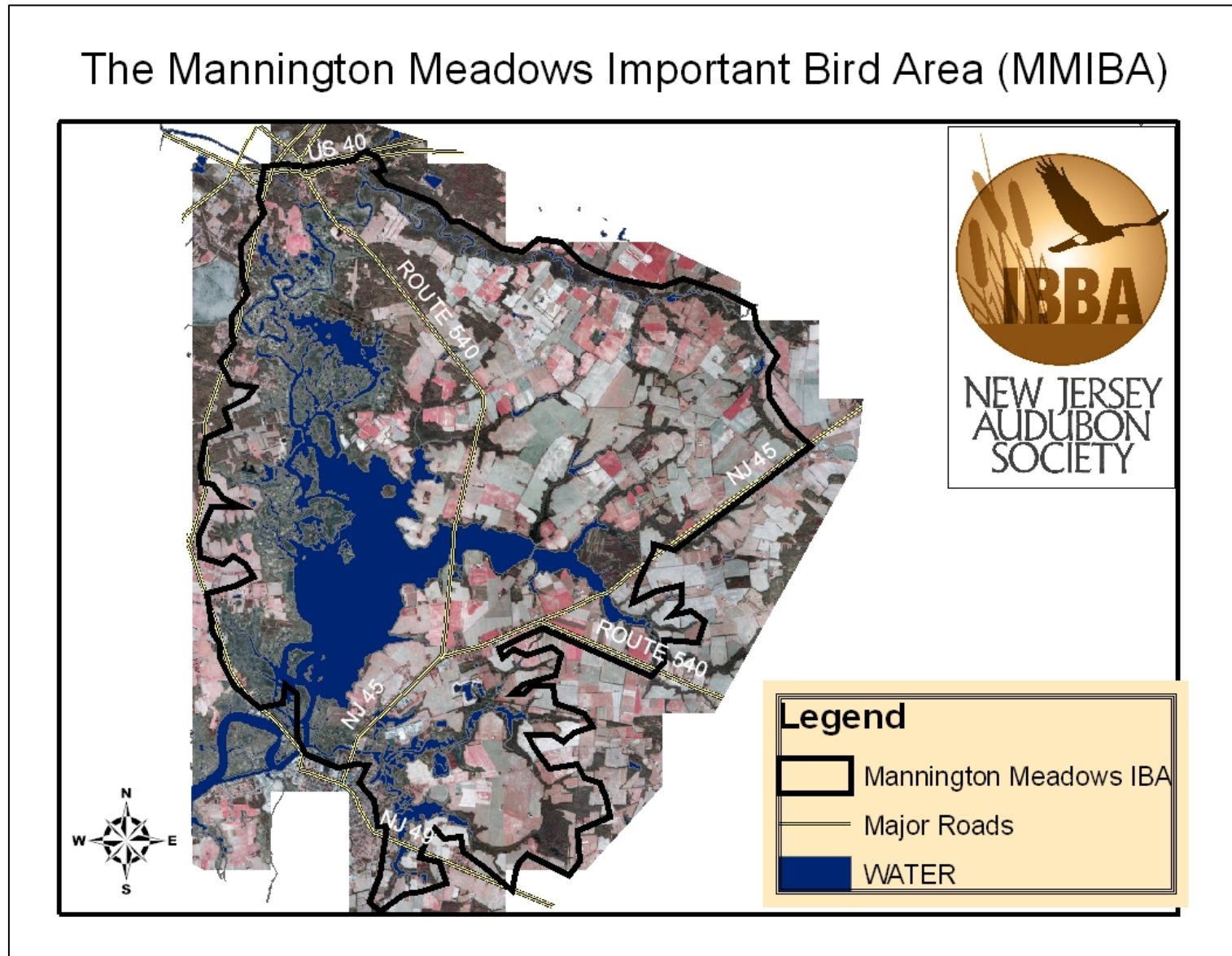
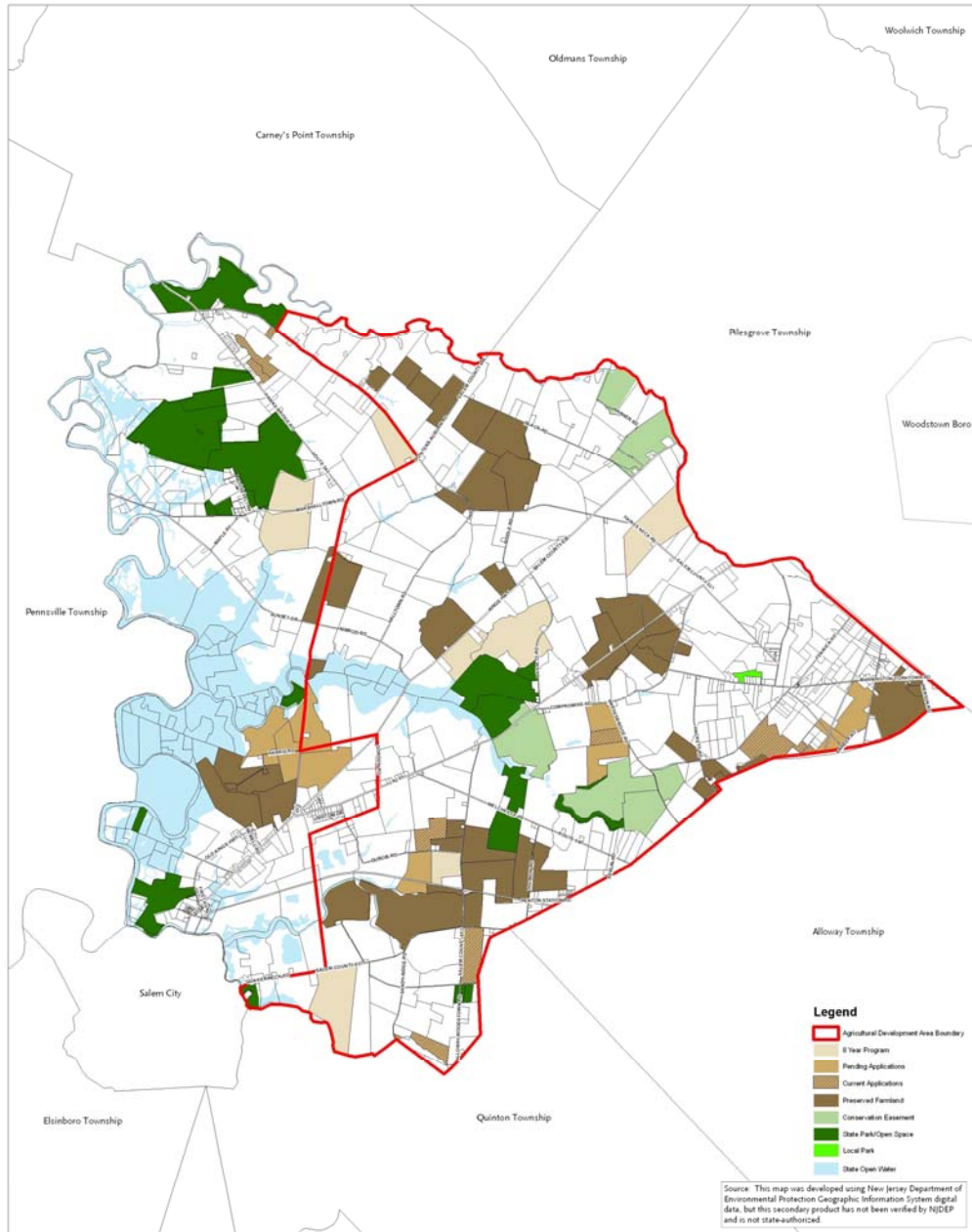


Figure 2. Preserved land and open space in Mannington Township, Salem County, NJ.
(Provided by *Clake Caton Hintz*)



Source: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

Figure 3. Land Cover change in Mannington Township 1972-1995.

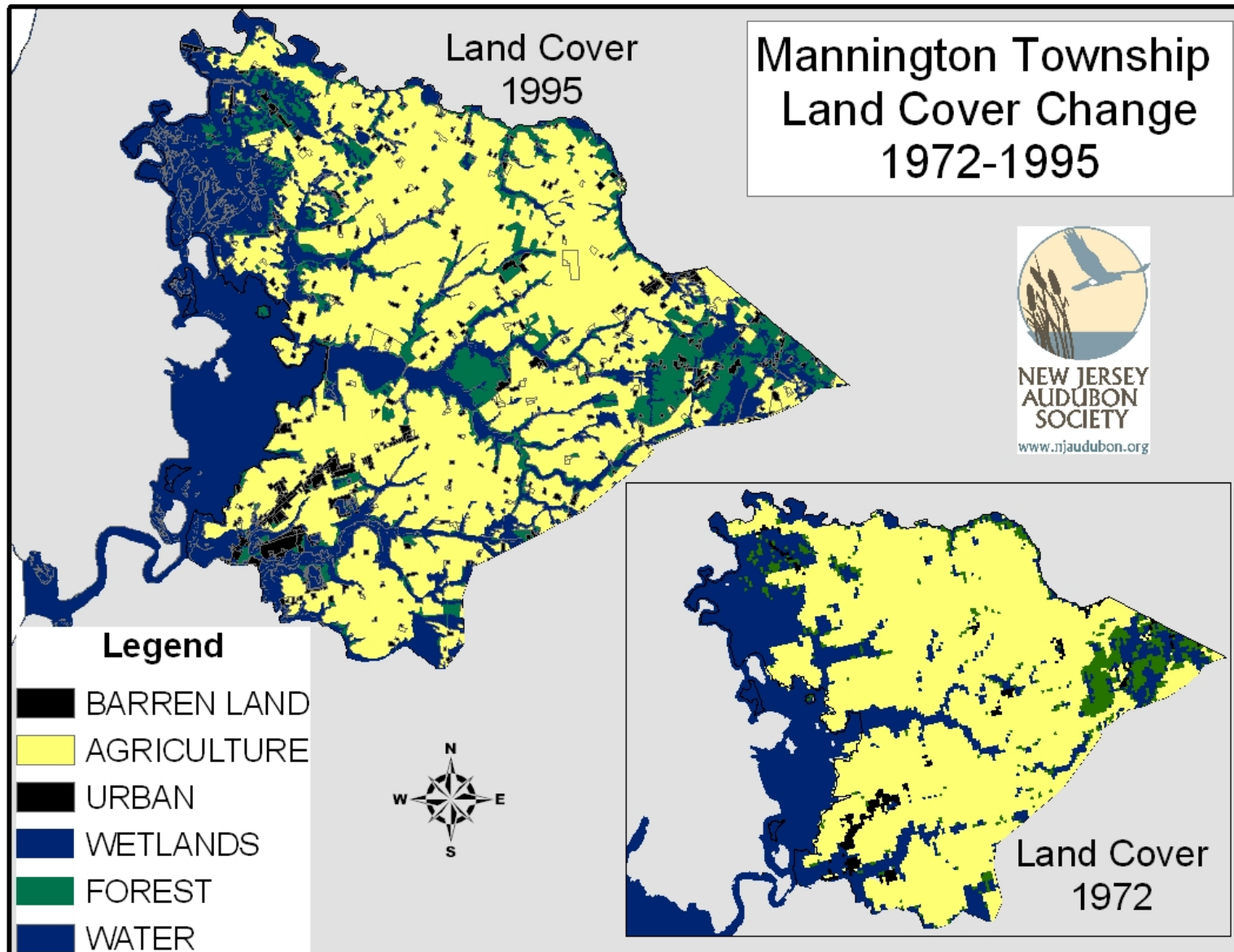


Figure 4. Distribution of existing wetlands in the Mannington Township, Salem County, New Jersey.

Mannington Twp Wetlands

