

Wildlife Habitat Management Plan Sample

Wildlife Management Plan for Wynne-Wynne Corporation
New Harmony, Indiana

Prepared by: Wynne-Wynne Corporation Employee Wildlife Team
in cooperation with the Wildlife Habitat Council, the Indiana Conservation Club, and
the State Department of Wildlife Conservation
February 25, 1996

I. INTRODUCTION

Wynne-Wynne Corporation, the world's leading manufacturer of wooden spoons, is located in New Harmony, Indiana. After becoming incorporated in 1962, Wynne-Wynne purchased a 150-acre clear-cut lot in New Harmony and built a production area encompassing 55 acres. The remaining 95 acres have been left to natural succession, and some of the 320 employees have been interested in forming nature trails and benefiting the wildlife on the property. The extent of present habitat enhancement structures on Wynne-Wynne's property is limited to a bird feeder and birdbath in a courtyard area near Mirror Pond.

At the request of various employees, the plant manager contacted the Wildlife Habitat Council (WI-X) in May 1995 to obtain assistance in developing a wildlife management program for the company property. A site visit by a WHC biologist was conducted in September 1995, and management opportunities for the 95 acres available for enhancement were discussed, outlined, and compiled by November 1995. An organizational meeting for establishing a wildlife team was held, resulting in 11 team members.

The resulting wildlife management plan was compiled by the wildlife team based on recommendations from WHC and the State Department of Wildlife Conservation. Over time, the plan is designed to increase biodiversity on the property by implementing enhancement projects and linking existing habitats with adjoining habitats to provide a stable, more diverse ecosystem.

To work toward an increase in biodiversity, the plan includes one-, three-, and five-year goals. During the first year, the team will focus on protecting and enhancing the Mirror Lake area. In addition to maintaining the original projects, the three-year goal includes plans to improve habitat for bluebirds and purple martins and create butterfly gardens and wildflower meadows. In five years, the team hopes to build upon the success of the initial projects to develop and implement a forest management program for the 75 acre woodlot and pursue an agreement with the neighboring farmer to improve the quality of his pasture for both wildlife and his cattle. Specific objectives and prescriptions for the first-year goals are provided later in this plan.

II. SITE DESCRIPTION

When the Wynne-Wynne Corporation purchased the land for its corporate headquarters in 1962, the property was in the early successional stages of growth following a clearcut. Now, 31 years later, an even-aged stand of pole-sized American beech and sugar maple covers about 75 acres to the north of the office and production complex.

The site is bordered on the north and south by residential areas, and on the east by a town park consisting of mowed lawns with an abundance of large silver and sugar maples. The western portion of the property is adjacent to land owned by a farmer and used as a pasture for cattle. This pasture and streambank have been over-grazed, and the resulting vegetation is in poor condition.

Mirror Lake, a 4-acre pond, separates the forested area from the production area, and is stocked with largemouth bass and brown bullhead. The area immediately surrounding the pond is mowed lawn. The pond inlet, Moss Creek, empties into the east side of the lake. Improper forest management techniques have been applied along the shores of the Moss Creek upstream of the lake, resulting in a high amount of sediment washing into the creek, and thus poor lake water quality. The outlet flows from the west side of Mirror Lake.

The office and production area consists of approximately 25 acres of mowed lawn, half of which is a large flat lawn on both sides of the entrance road.

III. SITE INVENTORY AND PHOTO REFERENCE STATIONS

One of the first steps in managing the property was to conduct a site inventory and establish photo reference stations. These are tools used to measure the progress of the program. An inventory of plants and animals found on the property is included in Appendix B. (Refer *to page 3.12 for a sample inventory.*) This list is a result of an inventory walk done soon after the establishment of the wildlife team on November 23, 1995. Updates to the inventory list will be made during the course of the projects and scheduled inventory walks will be held seasonally to document wildlife using the property.

Photo reference stations were set up on the first inventory walk at locations noted on the site map (see Figure 1). (*Sample map not included.*) During subsequent inventory walks, pictures will be taken from these stations to document the results of the management projects.

IV. HABITAT ASSESSMENT TO DETERMINE-IF-THE PROGRAM'S GOALS

During the site inventory the wildlife team focused on identifying plant and wildlife species on the property as well as determining what habitat requirements were lacking for wildlife species present. In order for a species to occupy a particular habitat, the four basic needs of wildlife must be present: food, water, protective cover, and space for foraging and raising young. A well-developed wildlife habitat management program should address all of these requirements.

The ultimate goal of any well conceived wildlife program should include the protection and enhancement of biological diversity (biodiversity). Biodiversity is a measure of the number of species of plants and animals, their populations, distribution, and genetic composition, in a given area or ecosystem. Ecosystems with a high degree of biodiversity are better able to withstand and recover from disturbances. The habitat assessment of the Wynne-Wynne property determined that some habitat requirements were lacking, limiting the number of species on site,

It was determined during the site inventory/habitat assessment that there is a need for a greater diversity of plant species to provide more food and cover for wildlife. The shorelines of Mirror Lake and Moss Creek are particularly limited in the amount of vegetation available for food, cover, and good water quality. The lack of vegetation in and around Mirror Lake limits the amount of food, cover, and spawning habitat for fish. To enhance the lake for fish, the amount of aquatic vegetation should be increased and underwater structures should be added to the bottom of the lake to increase cover for the fish. Mirror Lake was also found to be lacking nesting sites for cavity nesting birds such as the wood duck. In order to attract cavity nesting birds, the habitat around the lake must be improved to provide nesting sites and a source of food. In order to improve the habitat for species that we are trying to attract, the wildlife team did some research into the life histories of those species. The research included the foods, nesting sites, and cover preferred. This research provided us with a better idea of what to focus on when we developed the goals of the wildlife program outlined in the next section.

V. GOALS, OBJECTIVES, AND PRESCRIPTIONS

The wildlife team will focus on three goals during the first year of this plan. To increase biodiversity in the Mirror Lake area, the following goals, objectives, and prescriptions will be implemented. Progress towards these goals will be documented in the activities journal, Appendix A. (Refer *to page 4.5.*)

- Coal 1. Increase the abundance and diversity of plant species.
- Goal 2. Provide appropriate habitat for wood duck.
- Goal 3. Enhance the quality of the lake for fish.

Goal 1: Increase the abundance and diversity of plant species.

Objective: Create three peninsulas on the shoreline of Mirror Lake by fall 1996 and an island by fall 1997 to provide more cover and food resources for wildlife.

Prescriptions:

- 1) Dredge coves in the shoreline and use fill to create peninsulas in July 1996. Points will be depicted on the site map. A backhoe will be used. Coves will be left at the resulting depth, but peninsula shorelines will be sloped at a 2:1 ratio.
- 2) Create an island by piling rock, crushed stone, and soil at the location depicted on the site map. An excavator will be used, and the island shorelines will be left at the resulting slope. This project will begin in summer 1997.

Objective: Improve the quality of the water within the lake by fall 1997.

Prescriptions:

- 1) Plant the disturbed areas of the Moss Creek shoreline with a **grass/forb** mixture. Seeding will be done in March 1996 using a broadcast seeder.
- 2) Plant cattail, bulrush, and sedges in the areas depicted on the map in May 1996. **Tubling** plants will be used and planted in a random, natural pattern.

Goal 2: Provide appropriate habitat for wood duck.

Objective: Construct and erect 6 wood duck nest boxes around Mirror Lake by spring 1996 to compensate for the lack of natural nesting cavities.

Prescriptions:

- 1) Construct 6 wood duck nest boxes over the winter of 1995-96 using the guide provided by WHC.
- 2) Erect the 6 nest boxes on randomly selected trees in the forest no more than 100 feet from the shore and 10 feet high. Placement should be done in February 1996.

Objective: Enhance food sources for wood ducks by planting beech and oak trees on the forest edge, and smartweed and arrow **arum** on the lake shoreline by spring 1996.

Prescriptions:

- 1) Plant 25 oak seedlings and 25 beech seedlings around the edge of the hardwood forest to the north of the pond in May 1996.
- 2) Plant 50 arrow **arum** rhizomes randomly along the entire shore of Mirror Lake, and seed smartweed along the northern shore of the lake in May 1996.

Goal 3: Enhance the quality of the lake for fish.

Objective: Provide bottom structures for cover, feeding, and spawning habitat throughout the lake by fall 1996.

Prescriptions:

- 1) Place 6 brush piles consisting of loosely tied bundles of dead tree limbs between 4 and 6 feet long at locations designated on the map in August 1996.
- 2) Place 3 piles of rocks at locations designated on the map in September 1996. Rocks should be of various sizes and placed in a pile at least two feet high and four feet across.

Objective: Provide aquatic vegetation on new and existing shore areas to increase spawning habitat, cover, and feeding areas for fish.

Prescriptions:

- 1) Install 100 eelgrass plantings in the new shoreline areas shown on the map in May 1997.
- 2) Plant native willow and alder upstream from the mouth of Moss Creek to reduce sedimentation on fish spawning beds.

VI. MONITORING AND MAINTENANCE

Maintenance and monitoring are crucial aspects of the management plan, and can be used to determine the success or failure of any projects. Each monitoring and maintenance action should be recorded in the wildlife team activities journal. Also, notes regarding any observations, wildlife use, and other interesting information should be recorded for future reference.

Goal 1: Increase the abundance and diversity of plant species. Monitoring includes:

1) Monitor the quality of the water at the inlet of the lake, in the center of the lake, and at the outlet of the lake before, during, and after the vegetation is planted on the shores of Moss Creek. Measurements and observations regarding dissolved oxygen, clarity, and temperature will be recorded.

2) Monitor the success/failure of the wetland vegetation plantings by first inspecting the growth daily until the plants are established, and then weekly. Observe the plants to determine success of any one plant species over another, wildlife use, and general appearance and record these observations.

Goal 2: Provide appropriate habitat for wood duck. Monitoring includes:

1) Monitor the wood duck boxes in accordance with WHC's Nest Monitoring Program. Check for signs of predations and take steps to reduce predation if it occurs. Repair damaged boxes and clean all boxes annually.

2) Monitor the plantings around the shoreline on a weekly basis. Maintain the areas immediately surrounding the planted trees to discourage grass and shrub overgrowth. Observe and record success/failure of any one species, wildlife use, and possibilities for future plantings.

Goal 3: Enhance the quality of the lake for fish. Monitoring includes:

1) Monitor the eelgrass plantings weekly to determine success or failure. Observe and record any wildlife use and possibilities for future plantings.

VII. IMPLEMENTATION SCHEDULE

The following schedule is subject to changes due to weather and other factors. Entries that have been accomplished prior to applying for certification and any changes in the schedule are included in the activities journal. It should be noted that although it does not appear in this schedule, maintenance and monitoring is and will be done constantly, and is also being thoroughly documented in the wildlife team activities journal.

Winter 1995-1996	Inventory walk. Establish photo reference stations. Construct six wood duck boxes.
February 1996	Place wood duck boxes.
March-April 1996	Inventory walk. Prepare and seed Moss Creek shoreline.
May 1996	Plant wetland vegetation and trees around Mirror Lake.
July 1996	Inventory walk. Dredge coves and create peninsulas in Mirror Lake.
August 1996	Place brush piles in Mirror Lake.
September 1996	Inventory walk. Placement of rock piles in Mirror Lake.
Winter 1996-1997	Inventory walk. Explore bluebird and wildflower meadow management objectives and prescriptions. Apply for WHC certification.
May 1997	Inventory walk. Plant eelgrass in Mirror Lake.
July 1997	Inventory walk. Create an island in Mirror Lake.
October 1997	Inventory walk. Complete bluebird and wildflower meadow management plan. Discuss objectives and prescriptions involved in increasing bottom depth and texture diversity.
Winter 1997-1998	Inventory walk. Explore purple martin management and butterfly garden project opportunities.

Monitoring of existing programs will continue as previously described. New projects will be implemented as specific objectives and prescriptions are developed and human and financial resources are available.

For more information on developing your management plan, contact:

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