

Form 1100-1
Rev. 5-91

NATURAL RESOURCES BOARD AGENDA ITEM

Item No. _____

SUBJECT: Kettle Moraine State Forest-Loew Lake Unit Master Plan and Environmental Assessment

FOR: OCTOBER, 1996 BOARD MEETING

TO BE PRESENTED BY: Therese Gripenrog, SED Landscape Architect

SUMMARY: The Department has completed a master plan for the 2,133 acre Loew Lake Unit of the Kettle Moraine State Forest in southeastern Wisconsin. The Natural Resources Board originally approved this area as a study area for acquisition, and about 1070 acres have been acquired (1045 acres were in five parcels that were approved for acquisition by the Natural Resources Board). The master plan proposes to use the study boundary as the acquisition boundary. The Department prefers to acquire the 1063 acres of unimproved land remaining in the boundary, but will acquire improvements when there is no alternative, and then sell the improvements.

The goal for the project is to protect and enhance the natural, scenic, historical, cultural and geological resources of the Loew Lake Unit while providing compatible low-use, low-impact recreation and environmental education experiences. Recommended recreational opportunities include hiking, cross-country skiing, horseback riding, snowmobiling, fishing, trapping, and various types of hunting. Development will include trails and facilities such as parking lots and restrooms. Resource management projects will include timber management, development of forest- and wildlife-management demonstration areas, the restoration of prairie species in upland grassland areas and the implementation of special management practices to protect endangered species in the project area. Estimated costs (1996 dollars) to implement the plan include acquisition of the remaining 1,063 acres at \$9,940,000, development at \$344,500, and annual maintenance at \$30,000. Based on the value of the land already purchased, and the estimated value of the property remaining to be acquired, the estimated payment in lieu of taxes is \$411,834. More than 260 citizens were involved in the development of the master plan since its inception. No known or potential controversies exist.

RECOMMENDATION: Approval of the Loew Lake Unit of the Kettle Moraine State Forest Master Plan, with an acreage goal of 2,133 acres.

LIST OF ATTACHED MATERIALS:

- | | | | |
|--|---|---|----------|
| No <input checked="" type="checkbox"/> | Fiscal Estimate Required | Yes <input type="checkbox"/> | Attached |
| No <input type="checkbox"/> | Environmental Assessment or Impact Statement Required | Yes <input checked="" type="checkbox"/> | Attached |
| No <input type="checkbox"/> | Background Memo | Yes <input checked="" type="checkbox"/> | Attached |

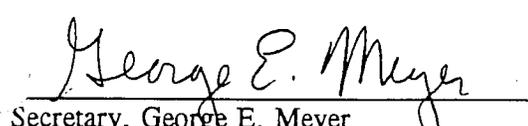
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10-7-96
Date


Administrator, Stan Druckenmiller

10/7/96
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10/9/96
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ACKNOWLEDGEMENTS

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In Memory

Department staff are especially grateful to Ed Trecker, former Supervisor of Parks, whose vision, commitment to, and involvement in this project was invaluable.

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INTRODUCTION AND EXECUTIVE SUMMARY

The land within the Loew Lake project boundary is a picturesque valley unique to the Kettle Moraine area. Roadways follow the ridges, providing views of the relatively undeveloped, pastoral valley below. The east branch of the Oconomowoc River winds through the valley, forming the 23-acre Loew Lake at the center of the project.

Goal Statement

The goal for the forest is to protect and enhance the natural, scenic, historical, cultural and geological resources of the Loew Lake Unit of the Kettle Moraine State Forest while providing compatible low-use, low-impact recreation and environmental education experiences.

Management and Development of the Forest

Recommended recreational opportunities include hiking, cross-country skiing, horseback riding, sight-seeing, fishing, trapping, and deer, turkey and waterfowl hunting. Development will include trails and support facilities such as parking lots, restrooms and hand pumps. Trails will be provided for non-mechanized uses.

Management and Development Proposals in the Plan

Land Acquisition

- * the proposed Kettle Moraine State Forest-Loew Lake Unit project boundary encompasses 2,133 acres, of which 1,070 are state-owned

Vegetation Management

- * thin conifer plantations
- * apply all-age management to northern hardwood stands, timber stand improvement to overstocked areas, and select-harvest management to the mixed conifer/hardwood stands
- * develop forest demonstration areas
- * restore native prairie species to upland grassland areas

Development and Operations

- * provide non-mechanized, low-impact recreational opportunities
- * develop trails and construct support facilities such as parking lots and restrooms
- * develop a hostel or other public/private partnership facility at the log house

Interpretation and Education

- * provide interpretation and education of the Loew Lake history, flora, fauna, and environment
- * develop outdoor skills training sessions in conjunction with hunting seasons

Wildlife

- * restore drained wetlands in small scattered wetland basins
- * create a separate turkey management zone to allow turkey hunting by first-time hunters including class A and C disabled hunters

- * provide trapping opportunities
- * create a separate Deer Management Unit for Loew Lake for muzzle-loading weapons, limited to permit holders for the unit
- * develop wildlife management demonstration areas

Endangered Resources

- * establish a Habitat Preservation Area along the Oconomowoc River and associated wetlands to preserve the riverine habitats
- * implement special management practices for several endangered resources, including the queen snake and the swamp metalmark butterfly

Fisheries

- * protect and, where feasible, enhance the habitat for both game and non-game fish species, emphasizing trophy-size game fish

Cultural Resource Management

- * consider cultural resource protection and preservation in any development project or land use change

Development of the Plan

The master plan was completed with assistance from the Department of Natural Resources (department) task force, various resource management specialists, citizens and organized groups. The master plan serves as a guide to the management and development of the Loew Lake property. Amendments to the master plan may be necessary due to changes in environmental or resource conditions, changes in legislation, or unforeseen circumstances, but all substantive changes will include working with the public and Natural Resources Board approval.

Citizen involvement in this project has been ongoing since its inception. After the department determined there was potential for a project in this area, personal contact was made with local landowners throughout the area. A series of meetings were held, and a survey was taken to establish the level of support for the project prior to any land acquisition.

During the development of the master plan several open forums were held to give the public an opportunity to share their ideas and concerns about the project, and to provide comments on the draft master plan. To further involve citizens in the development of the plan, six newsletters provided information on the planning process, and the department installed a 24-hour toll-free telephone hotline.

Implementation of the recommendations in this master plan will cost an estimated \$10,307,300. Acquisition costs for the remaining 1,070 acres total \$9,940,000, development costs are estimated at \$337,300, and annual maintenance figures at \$30,000. All estimated costs are based on 1995 dollars. Based on the estimated value of the property remaining to be acquired at \$9.94 million dollars, the estimated payment in lieu of taxes is \$411,834.

SECTION I - GOALS AND OBJECTIVES

Goal Statement

To protect and enhance the natural, scenic, historical, cultural and geological resources of the Loew Lake Unit of the Kettle Moraine State Forest while providing compatible low-use, low-impact recreation and environmental education experiences.

Objectives

1. Preserve and perpetuate the scenic qualities of Loew Lake, the east branch of the Oconomowoc River and the associated wetlands.
2. Locate, identify and protect the geological, archeological and historical features.
3. Protect and enhance the surface and groundwater quality of the Oconomowoc River priority watershed.
4. Preserve and enhance the habitats of the threatened and endangered species.
5. Provide limited rustic trail opportunities for non-mechanized uses such as hiking, cross-country skiing and horseback riding.
6. Accommodate the Ice Age National Scenic Trail corridor.
7. Manage for high-quality fishing opportunities, emphasizing trophy-size game fish.
8. Provide for a high-quality hunting experience.
9. Manage existing and proposed cover types for aesthetics, wildlife habitat and the continuous yield of forest products.
10. Provide opportunities for outdoor skills and environmental education to organized groups.
11. Provide other recreational opportunities including photography, birdwatching, wildlife observation, and the gathering of naturally occurring nuts and fruits.
12. Preserve open space in a rapidly developing residential area.

SECTION II - PROPOSED MANAGEMENT AND DEVELOPMENT PLANS

A. Land Acquisition and Ownership Goals

The Kettle Moraine State Forest-Loew Lake Unit project boundary encompasses 2,133 acres of which 1,070 acres are state-owned. The first department land purchase at Loew Lake took place in March 1987 with the acquisition of 594 acres authorized by the Natural Resources Board. Since that original purchase, the Board has authorized six additional acquisitions totalling 476 acres. All seven acquisitions are within the study boundary approved by the Natural Resources Board as part of a feasibility study completed in 1986.

The project will help preserve the rural character of the valley, minimize residential development within the project boundary, and provide an off-road connection for the Ice Age Trail. The Ice Age Trail is a 1,000-mile-long hiking trail which traverses the state following the terminal moraine left by the glacier some 10,000 years ago. The Ice Age Trail purposes include preserving some of the finest features of Wisconsin's glacial landscape, as well as other scenic and natural resources, while providing opportunities for low impact recreational and educational use. In addition, the trail connects six of the nine units of the Ice Age National Scientific Reserve and many other federal, state, county and local parks. The National Park Service, Wisconsin Department of Natural Resources, private citizen volunteers of the Ice Age Park and Trail Foundation, counties, local governments and private organizations are working to help build the Ice Age Trail.

The department only acquires land, either fee-simple or easement, from willing sellers within an approved project boundary. There are a few residences within the study area. This project has no impact on those landowners except to give them another potential buyer when they decide to sell their property. It also gives the department an opportunity to pursue acquisition of these parcels as they come on the market.

B. Timber and Vegetation Management

Forest management practices within the project boundary were implemented by previous landowners on lands now under department ownership. Contact with department foresters dates back to 1960. Conifer plantations totalling 49 acres of red and white pine, white cedar and white spruce were planted between 1965 and 1973. Selective timber harvests took place on 41 acres in 1981 and 35 acres in 1983. As of March 1994, there were 202 acres of private land within the Loew Lake project boundary under active forest management. This is the result of five landowners currently enrolled in various forest tax law programs.

Forest management activities, primarily selective cutting and fuelwood sales, will be used to improve wildlife habitat through promoting mast (nut) producing trees. Treatment of willow and other invading brush species by burning, mechanical control or chemical control will protect and enhance the quality of cattail and wetland types associated with the lake and river riparian zones.

Aesthetic management techniques are defined in the department's silviculture and forest aesthetic handbook will be used at this property. They are designed to minimize the negative affects on aesthetics and recreational values. In addition, timber harvesting techniques such as reduction of slash visibility, winter logging, and precautionary skidding are practices to minimize logging impact.

The Loew Lake property will be used as a demonstration area for the public to observe forestry management practices and land stewardship concepts that could apply to their own property. It could also serve as an outdoor classroom for organizations and school groups.

Techniques used to maintain or enhance unique plant communities such as prairie, emergent marsh, sedge meadow, and shrub, hardwood, and tamarack lowlands will be signed and interpreted along public use trails. Management techniques will include prescribed burning, brush/timber cutting, purple loosestrife control, and water level manipulation on small, restored wetlands.

Vegetation travel corridors for wildlife will be developed on open upland sites as part of the management of the proposed vegetative cover types. Corridors provide wildlife with food, cover and travel routes between larger blocks of wooded cover. They also provide windbreaks, and noise and visual buffers to interior access roads and trails. Clump plantings of conifers near vegetation corridor intersections will complement available winter cover. Conifer plantings will also be used as windbreaks and year-round visual barriers to parking areas.

Vegetation management in the Habitat Preservation Area will include mechanical brushing to control shrubs and saplings in the calcareous fen and sedge meadow and to control exotic species, mechanical brushing and burning of the shrub carr area, and allowing natural processes to take place in the emergent marsh.

Staff from the Bureau of Endangered Resources will be consulted before management practices are implemented that would disturb the habitat of endangered species in the communities outlined below.

Maps 3 and 4 show the existing and proposed vegetation cover types by letter code. Shaded areas on Map 4 show the areas where there is no recommended change to the existing plant community. Letter-coded areas on Map 4 show where change in cover type is recommended.

Management recommendations for the proposed vegetation types are:

Mixed Conifer/Hardwood. These plantations of conifer and hardwoods will be represented by several conifer species and several hardwood species including white pine, white spruce, norway spruce, red oak, white oak and black walnut. Periodic timber harvesting through select management will occur at intervals to maintain proper stand density. Select harvesting promotes mast producing hardwoods which benefits many wildlife species.

Conifer Plantations. Portions of the existing conifer plantations (comprised mainly of red and white pine, and norway and white spruce) have approached or will be

approaching density levels that require thinning to maintain healthy vigorous stands. This typically occurs at a stand age of 25 to 30 years. After initial thinning, successive periodic thinnings are required at 7- to 10-year intervals to maintain proper stand density. Pruning of lateral branches may also be done to reduce fire hazard, prevent disease, or improve timber quality.

Northern Hardwood. This timber type is represented by several tree species including red oak, white oak, sugar maple, white ash, aspen, basswood, cherry and hickory. Selective timber harvesting was implemented on 76 acres of the initial purchase to promote an all-age stand structure (a forest with many ages of trees present and considerable differences in the ages).

Continued all-age management is recommended for this timber type to maintain all size classes of trees (seedlings to mature trees) in the stand. All-age management will maintain aesthetic integrity as well as provide wildlife habitat and recreation potential. Cultural practices required for all-age management include timber stand improvement (TSI) and timber harvesting. TSI is conducted periodically to remove trees in the smaller classes which are overstocked. Timber harvesting is conducted to remove overstocked mature saw timber, taking into account factors such as species type, age, vigor, spacing and form. Timber harvest techniques will include selective, small patch clearcuts and shelterwood harvests. Selection harvests are conducted at 10- to 15-year intervals. Den trees (hollow), snags (dead standing), and mast (nut) producers are identified and retained for wildlife benefits.

Management practices will be modified (i.e., using small-patch regeneration clearcuts and shelterwood harvest) in portions of these stands to promote oak regeneration for wildlife benefits rather than promoting northern hardwoods. With small-patch regeneration, a 1/4- to three-acre area is cleared to promote even-age stands. With shelterwood harvesting, the size of which is dependent on the size of the stand, harvests which promote even-age stands are conducted over a 20-year period.

Tamarack and Swamp Hardwood. These stands consist of elm, green ash, black ash, birch and tamarack. Long-term management will focus on perpetuating the timber type through even-age clearcut management practices (forest management with periodic harvest of all trees on part of the forest at one time or in several small clear cuts over a short time to produce stands containing trees of all the same or nearly the same age).

Shrub Plantings. These areas -- once established with hazelnut, mixed crab, wild plum, and highbush cranberry -- will be allowed to develop through succession. These areas will be self-maintaining and may return to a natural timber type where no management occurs. Forest management activities on surrounding lands will minimize water and soil disturbance.

Lowland Brush. These areas will be maintained through periodic mowing, shearing and prescribed burning. Practices will take place as a whole or in part as strip, patch or meandering cutting treatments. Some of these areas may be allowed to naturally succeed. The lowland brush areas are mainly comprised of willow, tag alder, and redosier and silky dogwood.

Upland Grass. Existing grasslands, areas formerly pastured, and abandoned fields will be restored to native prairie types. They will be maintained through the use of prescribed burning, mowing, or, when necessary, chemical treatment to prevent succession to woody vegetation. Abandoned fields near the perimeter of the project will also be restored to native prairie. The prairie habitat will provide scenic qualities, buffer zones, and winter feeding areas for deer and wild turkeys.

Lowland Grass. These areas -- formerly pastures, open areas and fens -- will be maintained as lowland grass. Maintenance will occur through prescribed burns, mowing, or, when necessary, herbicide treatment to prevent succession to woody vegetation. The lowland grass areas encompass much of the proposed habitat preservation area plant communities (i.e., calcareous fen, sedge meadow, shrub carr and emergent marsh). The grasses growing here include blue joint, red top, cordgrass, big bluestem and firestemmed sedges.

C. Development and Operations

The recommended classification for Loew Lake is as an independent unit of the Kettle Moraine State Forest. The focus is on protection and enhancement of the resources while providing compatible low-impact, low-use recreational opportunities.

Proposed recreational development includes trails for non-mechanized uses such as hiking, cross-country skiing and horseback riding, as well as canoeing, hunting and fishing. Trails will not be designed and developed to accommodate grooming and track-setting equipment or skate skiing because that would necessitate wider trails and would result in a level of public use that would exceed what is intended under objective five -- provide limited rustic trail opportunities.

Since Loew Lake is less than 50 acres in size, department policy permits minimal facilities for public access. Access will be provided to the lake in both summer and winter. In summer, access will be by canoe or boat, via the Oconomowoc River upstream from County Highway Q. The lake will be designated for non-motorized use. Boaters with a disability may obtain a permit from the department to use an electric motor on the lake. Motorboats will be allowed on the river. Restricting motor use and instituting slow-no-wake zones on the Oconomowoc River are under the jurisdiction of the town of Erin. The department desires the town to implement such regulations. Winter access will be provided along Emerald Drive at the same location it existed under private ownership. Parking will be near the periphery of the property. Access from the parking lot to the lake will be for foot traffic only.

A bridge, essential for the appropriate management of the property, will be constructed across the Oconomowoc River.

Map 5 shows proposed development on both department-owned and privately owned lands within the project boundary. Development will only occur on the department-owned lands, but showing all proposed development is necessary to fully understand and appreciate the project.

Total estimated development costs, in 1995 dollars, is \$337,300. Proposed developments include prairie restoration, the removal of buildings, and the development of parking lots and trail facilities. The rate of development will depend on the availability of funds and statewide department priorities. Proposed development projects are outlined below, in priority order.

Priority Number

1. 10-car gravel parking lot and access to the river at Highway Q
Cost: \$17,000
2. 10-car/horse-trailer gravel parking lot off of St. Augustine or Monches roads
Cost: \$32,000
3. Trails for hiking, horseback riding and cross-country skiing, and a trail connection for the Ice Age Trail
Cost: \$20,500
4. Construct signage on the property (i.e., entrance sign, wildlife and forestry demonstration signs, parking lot signs and trail signs)
Cost: \$7,800
5. Removal of surplus buildings and foundations
Cost: \$4,000
6. Restrooms and hand pumps at the three parking lots
Cost: \$24,000
7. Replace bridge
Cost: \$87,000
8. Repaint barn and farmhouse
Cost: \$10,000
9. Convert one of the project buildings to an outdoor skills training classroom
Cost: \$30,000
10. 10-car gravel parking lot off Emerald Drive
Cost: \$15,000
11. Prairie restoration on 300 acres
Cost: \$80,000
12. A turn-off along Emerald Drive, the DOT-designated Rustic Road, that affords a scenic view of the valley
Cost: \$10,000

Total Estimated Development Cost: \$337,300

D. Facility Management

Loew Lake is currently managed by the Pike Lake State Park work unit five miles north of the project. Pike Lake staff will continue to take primary responsibility for law enforcement and maintenance. Currently, the staff for the Pike Lake and Loew Lake properties consists of a superintendent, assistant superintendent, ranger, and six limited-term employees (LTEs). With full development of the facilities (i.e., trails, parking and support facilities) at this property, an additional permanent ranger and additional LTE staff will be required.

The log house serves as a residence for the ranger. It will continue as a staff residence until a use which provides more of a public service can be developed (i.e., a hostel or other public/private partnership). The former caretaker's house serves as a residence for LTEs. It will continue to house staff until a public use for the log house is developed. The former caretaker's house will then become the ranger's residence.

Equipment used at Loew Lake is stored in the farm buildings located near the staff residence.

E. Wildlife Management

Because of the unique diversity of wildlife habitat types occurring at Loew Lake, future management will emphasize maintaining existing habitat components, and restoring or enhancing native upland vegetation and wetlands. Wetlands will be restored through subsurface tile breakage and ditch plugs. Also see Section II-B, Timber and Vegetation Management, for further information on proposed management of the wildlife habitat.

The department may also provide outdoor skills training at this property. The project goal statement expresses the department's intent to provide compatible low-use, low-impact recreation and environmental education experiences. An outdoor skills program associated with hunting opportunities would fulfill this goal. It is recommended that the department provide skills training when the arrangements can be made with local conservation organizations for these services.

The department could start with an outdoor skills program for turkey hunters. To hunt turkeys on the Loew Lake property, a hunter would first attend an outdoor skills training course. First-time and disabled hunters who attended the course would be ensured a hunting permit. Outdoor skills training to deer hunters and trappers should be used at the Loew Lake property when arrangements can be made with local conservation groups for these services. Due to the absence of a large flowage, the property is not well-suited for outdoor skills programs for waterfowl hunters.

The recommended management practices and hunting and trapping opportunities at Loew Lake are outlined below.

Deer. The overwinter deer population within the project boundary is currently about four times the department's recommended goal of 40 to 50 deer. During a January 1995 helicopter survey, 190 deer were counted within the project boundary, including 112 deer seen on the state-owned land. When deer numbers are not managed, native vegetation is damaged and the ecosystem is disrupted. An overabundance of deer in an area also causes vehicular hazards and increases crop damage.

We recommend that a separate Deer Management Unit (77D) be created at the Loew Lake property. The population will be controlled by hunting to reduce the potential for car/deer collisions, crop and vegetation damage, and over-browsing of natural vegetation.

Muzzleloader-only hunting will be permitted by holders of Hunters Choice permits during the regular nine-day firearm season and statewide seven-day muzzleloader season. Hunters will be provided with a map showing open and closed areas, and designated parking areas. The seven-day muzzleloader season typically runs from late November through early December.

Archery hunting also will be allowed to help control deer numbers and provide additional recreational opportunities. Future archery hunting may be limited to permit-only hunting if the initial season results in a high level of user conflicts or trespass-related incidents. Under the permit system, a lottery-type system would be developed to limit hunter numbers. The deer bow hunting early season is typically from mid-September to mid-November, and the late season is typically from early December to December 31.

Furbearers. Riverine and riparian habitats support abundant populations of furbearers including mink, muskrat, raccoon and beaver. River otter are likely to exist in these habitats, but are probably few in number. Upland furbearers such as fox and coyote are also present. The populations of these furbearers can sustain a trapping season harvest to provide for trapping opportunities. The trapping season is typically held from early November through early March.

Turkeys. The development of a separate turkey management zone (Zone 25A) is recommended. Permit numbers will be determined by the acreage of state-owned land available for hunting. First-time hunters, including those with Class A and C disabilities, would apply to attend an outdoor skills training workshop specifically geared to turkey hunting. Those who successfully complete the workshop will have the opportunity to hunt in Zone 25A. This set-up should provide a quality hunt where there is low hunter interference and an excellent overall hunting experience. The spring turkey hunting season is typically held from mid-April to late May. The fall hunting season is held from mid-October to early November.

Waterfowl. Future habitat development will be directed towards attracting and producing waterfowl including wood ducks, mallards, blue-winged teal, and other "dabbling" species. Restoring small scattered wetland basins will be emphasized. Wetland depressions will be surveyed to delineate drainage patterns and identify subsurface drain tiles and drainage ditches. Wetland basins can then be restored through subsurface tile breakage and ditch plugs. Signs will identify restored wetlands, and describe or identify management techniques (i.e., tile breaks, ditch plugs, silt removal), benefits of restored wetlands (i.e., wildlife benefits, species diversity, water quality enhancement), and agencies or groups contributing to the restoration.

Waterfowl hunting for ducks and geese will be allowed on Loew Lake and the Oconomowoc River, consistent with statewide waterfowl hunting regulations. The goose hunting season is typically in late August, late September through mid-December. The duck hunting season is typically early October through mid-November.

F. Endangered Resources

Habitat Preservation Areas are those lands and waters containing excellent natural habitat and characteristics that are conducive to perpetuation and production of fish and wildlife. A portion of the Loew Lake property has been designated a Habitat Preservation Area, where the restoration and protection of native calcareous fen and sedge meadow plant communities, and the protection of the native and endangered Queen Snake and threatened Swamp Metalmark butterfly, will occur. To maintain and reestablish a functioning ecosystem, reintroduction of species formerly a part of this local ecosystem may be considered. Exotic species control will be done, including the eradication of purple loosestrife. Proposed uses and use levels of the Loew Lake property should be compatible with the Bureau of Endangered Resources (BER) concerns. Staff in BER will be consulted before projects are begun that would affect water quality or quantity, or that would disturb the habitat of endangered species and resources.

Several rare species, two of which are identified and discussed below, occur within the project boundary and will receive special management. See page 24 for additional information on endangered resources.

Regina septemvittata (Queen Snake). This harmless species is listed as endangered in Wisconsin. The queen snake uses rocky areas for hibernation, feeding, hiding and basking. To protect this species, rock piles, bridge footings, old building foundations, rip-rap and other stone structures in or adjacent to the river or lake should not be removed or disturbed. The queen snake population will be considered and effects on the population understood before any manipulation of the waters in this area are undertaken. The queen snake feeds exclusively on freshly molted crayfish, which it hunts along rocky shorelines and cobblestone stream beds. Excessive sedimentation, primarily resulting from surface runoff, can bury these critical feeding areas.

In 1995 and 1996, BER will survey the extent of the queen snake range on the Oconomowoc River and its hibernating sites, and assess population numbers. This information will be used in management planning to help ensure the continued survival of this endangered snake.

Calephells muticum (Swamp Metalmark). This butterfly species is currently listed as state-threatened, but is being proposed as a species for the state-endangered list. The swamp metalmark has been extirpated from its traditional Loew's Lake fen area due to woody encroachment of its preferred open habitat and probably for other undetermined reasons as well. The traditional site on which this butterfly was found will be burned in April 1995. BER staff and Sue Borkin, curator of invertebrate zoology at the Milwaukee Public Museum, will conduct a swamp metalmark larvae survey in the nearby tamarack stands during 1995. Following the burn, Sue Borkin and BER staff will reintroduce swamp metalmark larvae, if not found in the tamaracks, from the only other known state site for this species -- the Aurora Road fen site approximately 10 miles north of the Loew's Lake project in Washington County. This effort will be carefully monitored for the next several years by Sue Borkin and BER staff.

In addition to these specific management activities, BER will undertake a breeding bird survey for the project area. Upland areas will be included in the survey.

Other management activities will focus on the eradication of the following exotic species:

Lythrum salicaria (Purple Loosestrife). This species is a very aggressive wetland weed which currently occurs in small, localized populations. A small colony was noted in a cattail marsh adjoining the east side of the Oconomowoc River in T9N, R18E, approximately at the common boundary between sections 25 and 26. This colony should be removed and the area monitored in subsequent years.

G. Fisheries Management

Efforts will be focused on protecting and, where feasible, enhancing the habitat for both game and non-game fish species in the project area.

Direct management of the Loew Lake fishery will promote quality fishing opportunities. This will be accomplished through the restoration of the fish population to some semblance of what it was before it was impacted by modern fishing techniques, but this will require more restrictive regulations. The population was large northern pike, large and smallmouth bass, and panfish. The existing fishery includes carp, largemouth bass, northern pike, walleye, dogfish and white sucker. In total, 44 species of fish are found in the project area, offering one of the most diverse assemblages of aquatic fish life in southeastern Wisconsin, if not the entire state. Species occurring at Loew Lake are listed in Appendix A.

We propose to manage the fishery to produce large, trophy-sized fish by significantly limiting the number of fish harvested. This will require additional regulations by separate administrative rules. Under current regulations, the "trophy" fish can be removed before they complete their life span. In order to produce trophy-size fish, most of the fishing enjoyment will need to come from catch and release of larger fish. In order for these fish to reach trophy size, each fish will probably be caught and released several times.

To achieve the desired state for Loew Lake, the department will pursue rule changes regarding the following proposed regulations as indicated below. The ice fishing regulation is needed because large gamefish, especially northern pike, are very vulnerable to over-harvesting during the ice fishing season.

- * 20-inch size limit on largemouth bass
- * 32-inch size limit on northern pike
- * panfish bag limit of 10 in aggregate
- * ice fishing for panfish only

The excessive carp population, and the interrelationship of the Monches Millpond (just south of County Highway Q in Monches) and Loew Lake is of concern to the department. Carp are bottom feeders that eat enormous amounts of native plant life. These plants are typically replaced with invasive, non-native plant species which disrupt the vegetation balance. In addition, carp stir up sediment making the water cloudy. This raises the water temperature and in turn reduces oxygen levels in the water. The department will study the fish population in both waterbodies with special emphasis on carp reproduction in the millpond. As data is gathered, the department will work with local decision makers in formulating water management plans that address these issues.

H. Education and Interpretation

Development of interpretive signage along the trails will explain cultural, historical and natural features found at Loew Lake. There are many educational opportunities in the Loew Lake area. School groups and others may wish to use the property for environmental education activities.

Loew Lake can also be used for Project Learning Tree workshops, as a scheduled stop on conservation tours, as a Wisconsin Conservation Corps project location, and as a special project site for volunteers. The volunteers and projects are dependent on the program areas involved (i.e., a forestry project to prune a pine plantation may use volunteers from a local school, service club or scout group). Projects will be developed when annual work plans for the property are completed.

I. Access and Use by People with Disabilities

Loew Lake will provide mainly low-use, low-impact recreation. The public use facilities will be fairly limited in nature. With the exception of some trails (because of excessive slopes or terrain conditions) all constructed facilities will be accessible to people with disabilities. A turnout along Emerald Drive will provide visitors a view of the lake and river valley from their vehicles, and existing hard-surfaced driveways with gentle grades will also give easy access to many of the features of the property. Access brochures and other written material will be protected in alternative formats, if requested.

J. Land Use Classifications

The lands within the project boundary will be managed primarily for Extensive Recreational Development. Under this classification, the primary recreational uses are trail related. No Intensive Recreational Development Areas, such as campgrounds and picnic areas are included as part of this project. Within the project boundary there are several Resource Management Areas and Resource Protection Areas. See Map 6 for further information on land classifications.

Resource Management Areas

Resource Management Areas are those areas whose primary use is for management, research, testing and demonstration of new resource management methods and techniques. These areas will be signed and are available to the public to observe management practices and land stewardship that they may be able to apply toward their own property. They may also be used as an educational tool by conservation groups and for Project Learning Tree workshops.

Forest Demonstration Area. The lands designated on Map 4 as proposed conifer, northern hardwood, mixed conifer/hardwood, and tamarack will serve as forest demonstration areas. Signage explaining forest management techniques will be placed along trails and in other areas accessible to the public.

Wildlife Demonstration Area. Signage explaining wildlife habitats and management techniques used to restore and enhance those habitats will be placed along trails and in other areas accessible to the public. Potential areas for signage include native grass plantings, prescribed burn areas, existing wetlands, wetland restoration areas (ie, tile breaks, ditch plugs, or wetland scrapes of silted-in areas), shrub, conifer, oak and

hardwood plantings for wildlife food and cover, areas such as hedgerows that serve as wildlife "corridors", areas where grazing has been eliminated, and dead snags left for wildlife cover.

Resource Protection Areas

Resource Protection Areas are those tracts of land or water where human influences are minimal and significant cultural and natural resources are prevalent. Habitat Preservation Areas, Historical Areas, and Archaeological Areas are examples of Resource Protection Areas on the Loew Lake property.

Habitat Preservation Area (HPA). Staff from BER conducted a vegetative survey of southeastern Wisconsin between 1991 and 1993. This survey identified endangered resources in the Loew Lake area and was used to designate an area located along the Oconomowoc River and associated wetlands as a Habitat Preservation Area (Map 6). New acquisitions of riverine land and associated wetlands will be classified as HPAs. BER should be consulted before any brushing or management of these lands takes place.

The management prescription for the vegetation cover types in the HPA is:

Calcareous Fen and Sedge Meadow. Shrubs and saplings should be controlled via mechanical brushing to maintain meadows in an open condition.

Shrub carr (willow and dogwood). Mechanical brushing and burning.

Emergent Marsh. Allow natural processes to take place.

Tamarack. Survey for exotic plants such as glossy buckthorn and, if present, remove by mechanical brushing. Survey results may dictate limited tree removal to maintain the swamp metalmark butterfly species, and the calcareous fen and sedge meadow plant communities. The stand on the southeast side of Loew Lake will be managed to protect the swamp metalmark, calcareous fen, and sedge meadow.

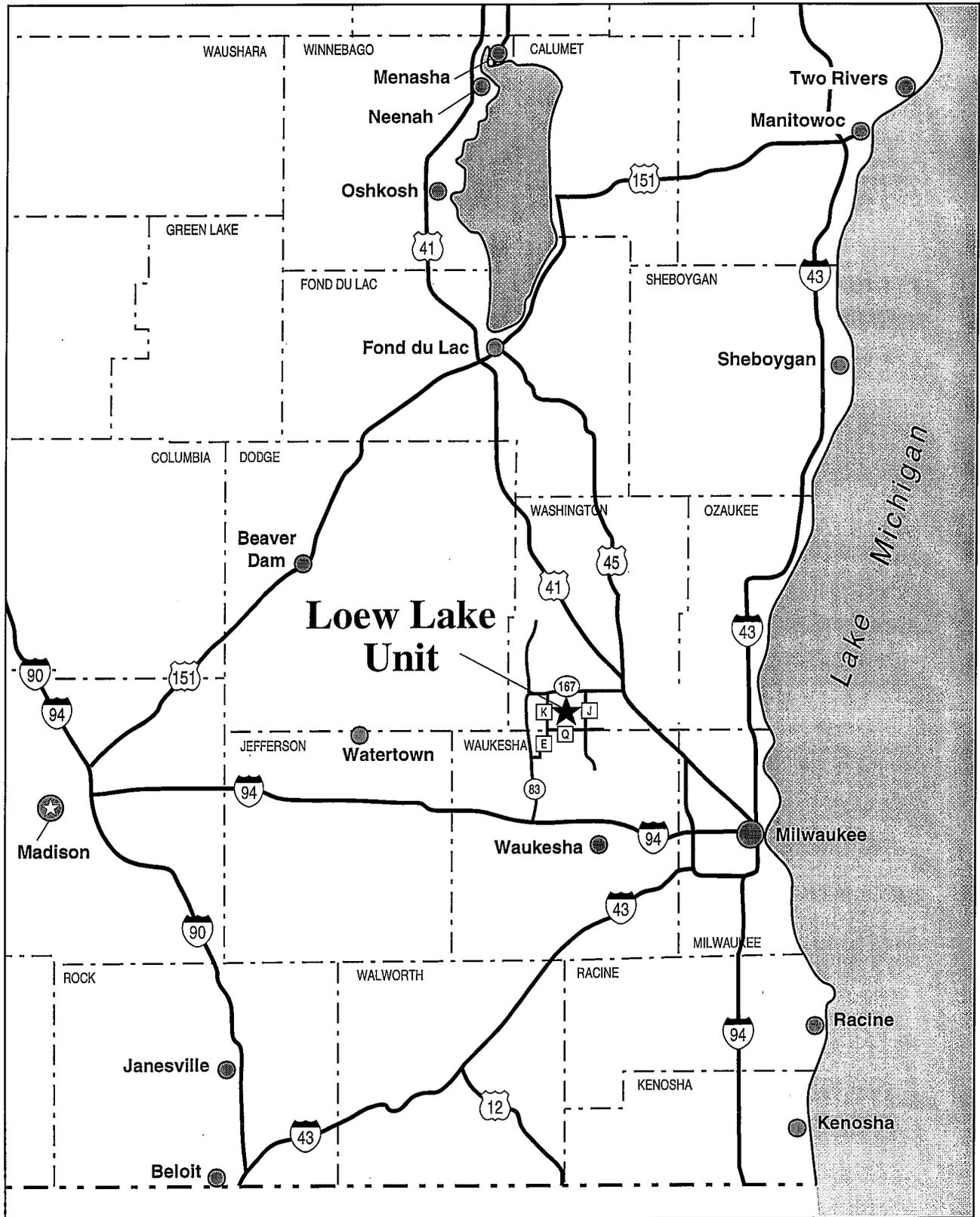
Swamp Hardwood (black ash, red maple and american elm). Survey for exotic plants such as glossy buckthorn and, if present, remove by mechanical brushing.

It is recommended that the meadows and tamarack stands below Loew Lake be thoroughly surveyed for rare plant species.

Historical and Archaeological Areas

As additional historical or archaeological sites are identified they will be evaluated for designation as such. The existing historical and archaeological sites are outlined in Section IV-F. The historical buildings in public ownership are shown on Map 5 as Administrative Areas. To protect the archaeological sites, we have not shown their location on the land use map.

Loew Lake Unit - Kettle Moraine State Forest

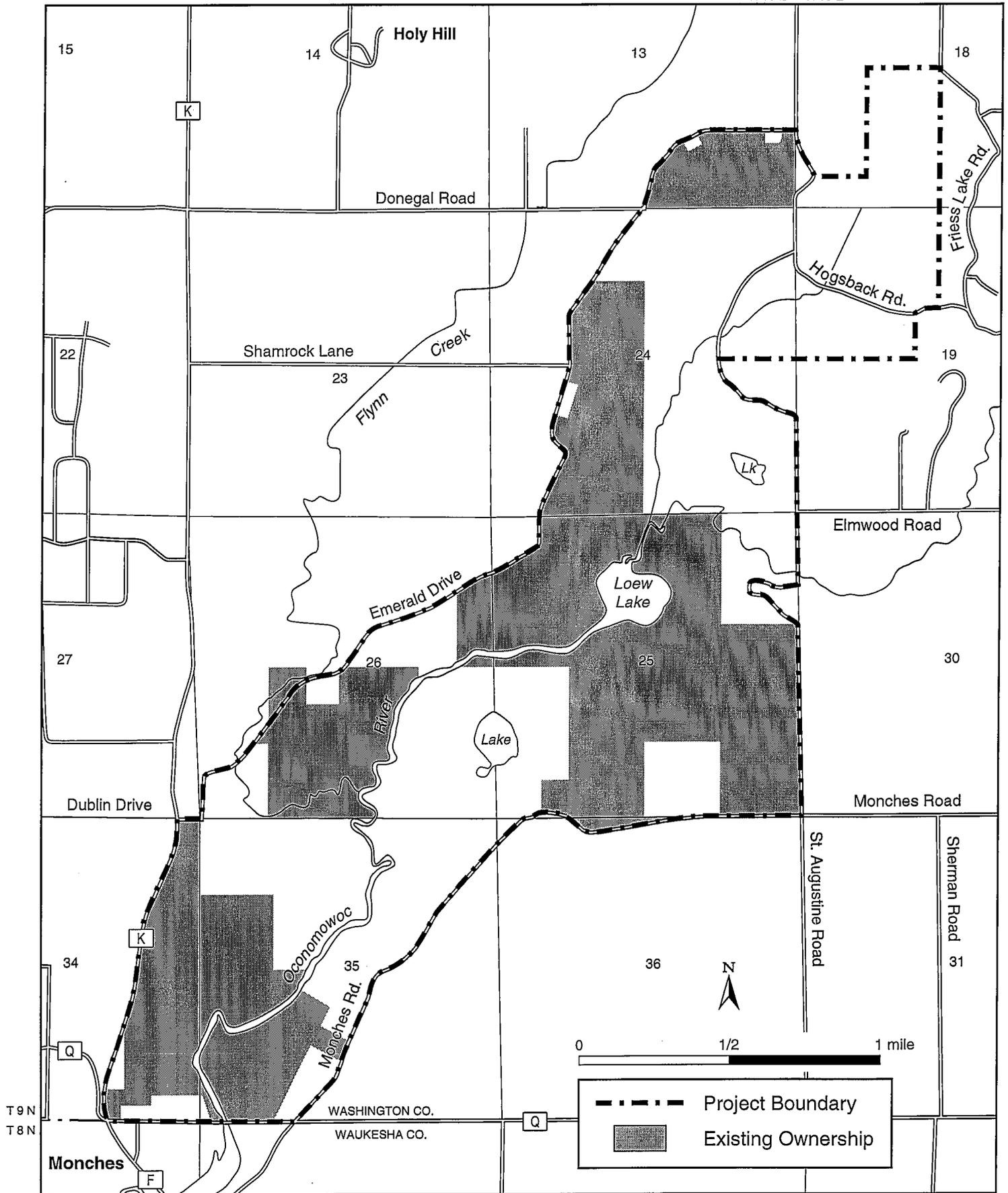


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MAP 1 – Locator

Loew Lake Unit - Kettle Moraine State Forest

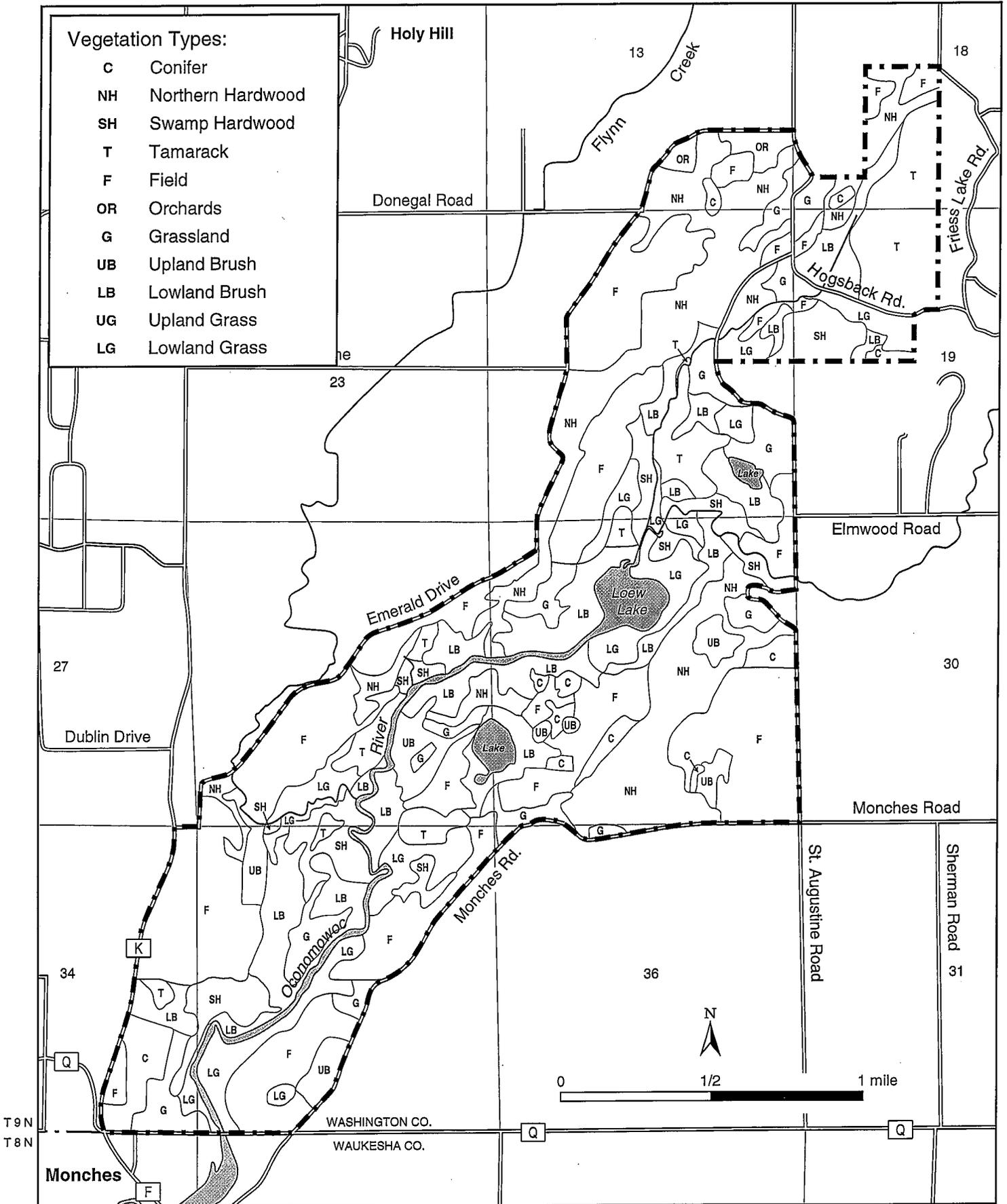
R 18 E R 19 E



MAP 2 – Project Boundary

Loew Lake Unit - Kettle Moraine State Forest

R 18 E R 19 E

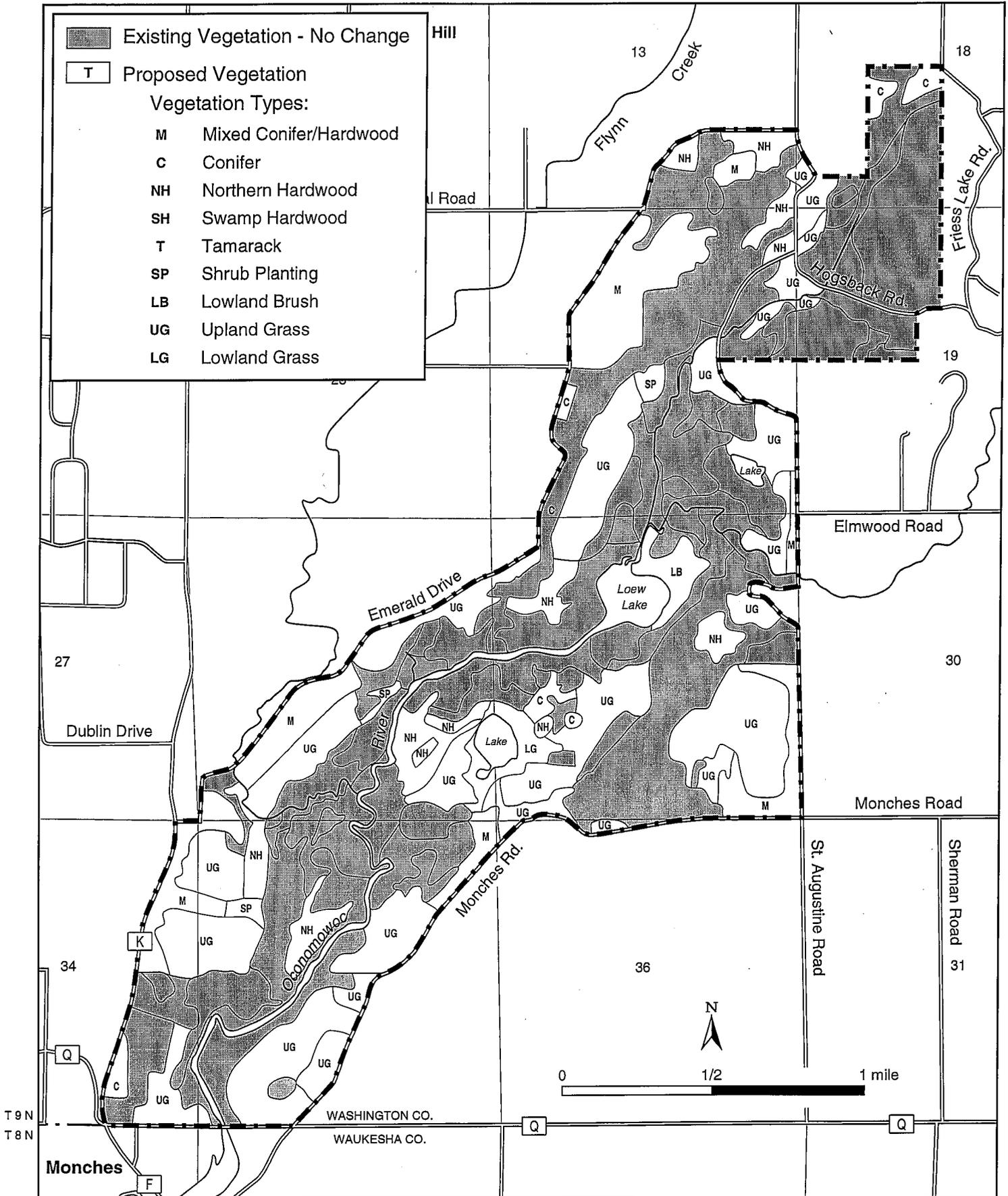


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MAP 3 - Existing Vegetation

Loew Lake Unit - Kettle Moraine State Forest

R 18 E R 19 E

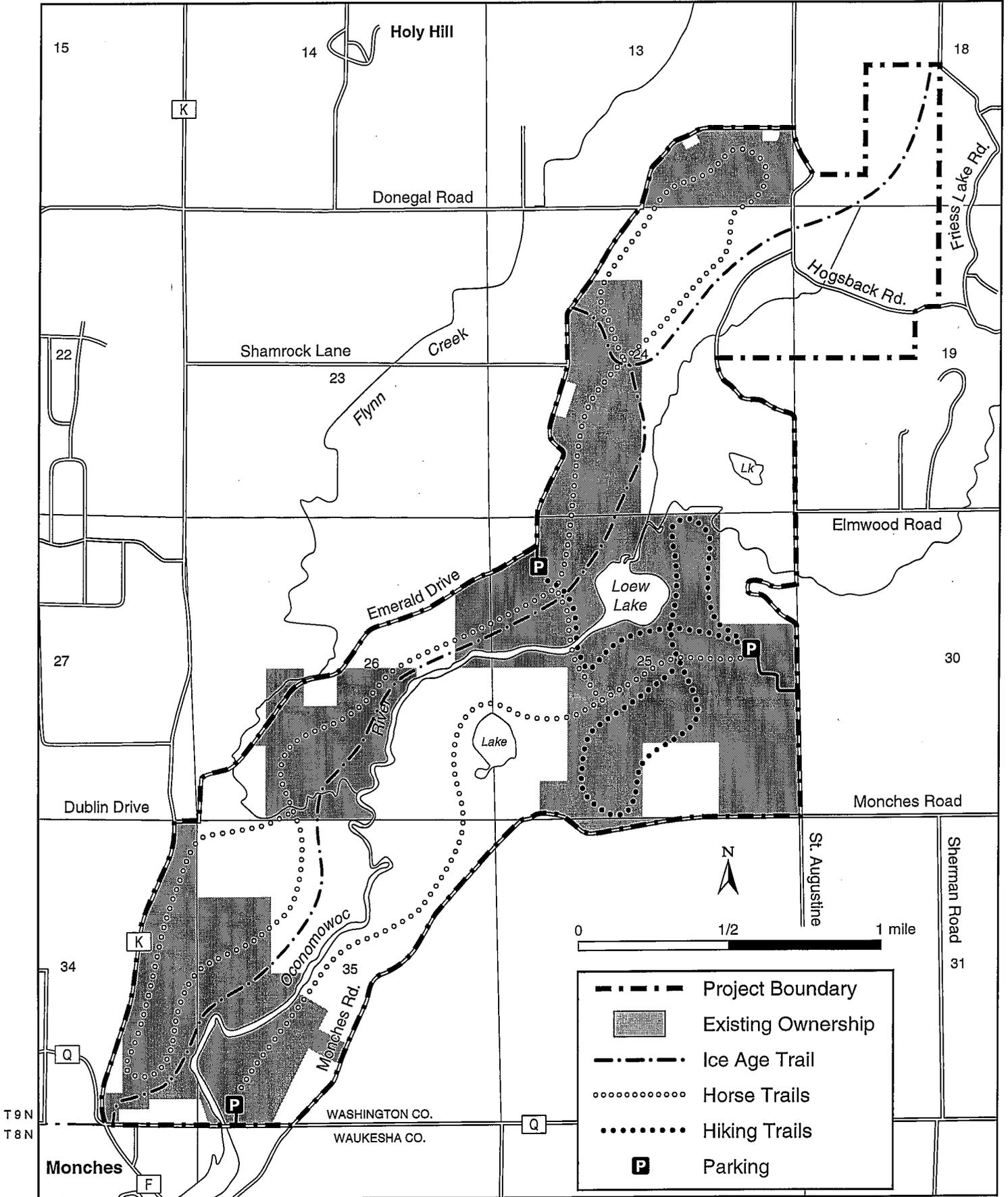


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MAP 4 - Proposed Vegetation

Loew Lake Unit - Kettle Moraine State Forest

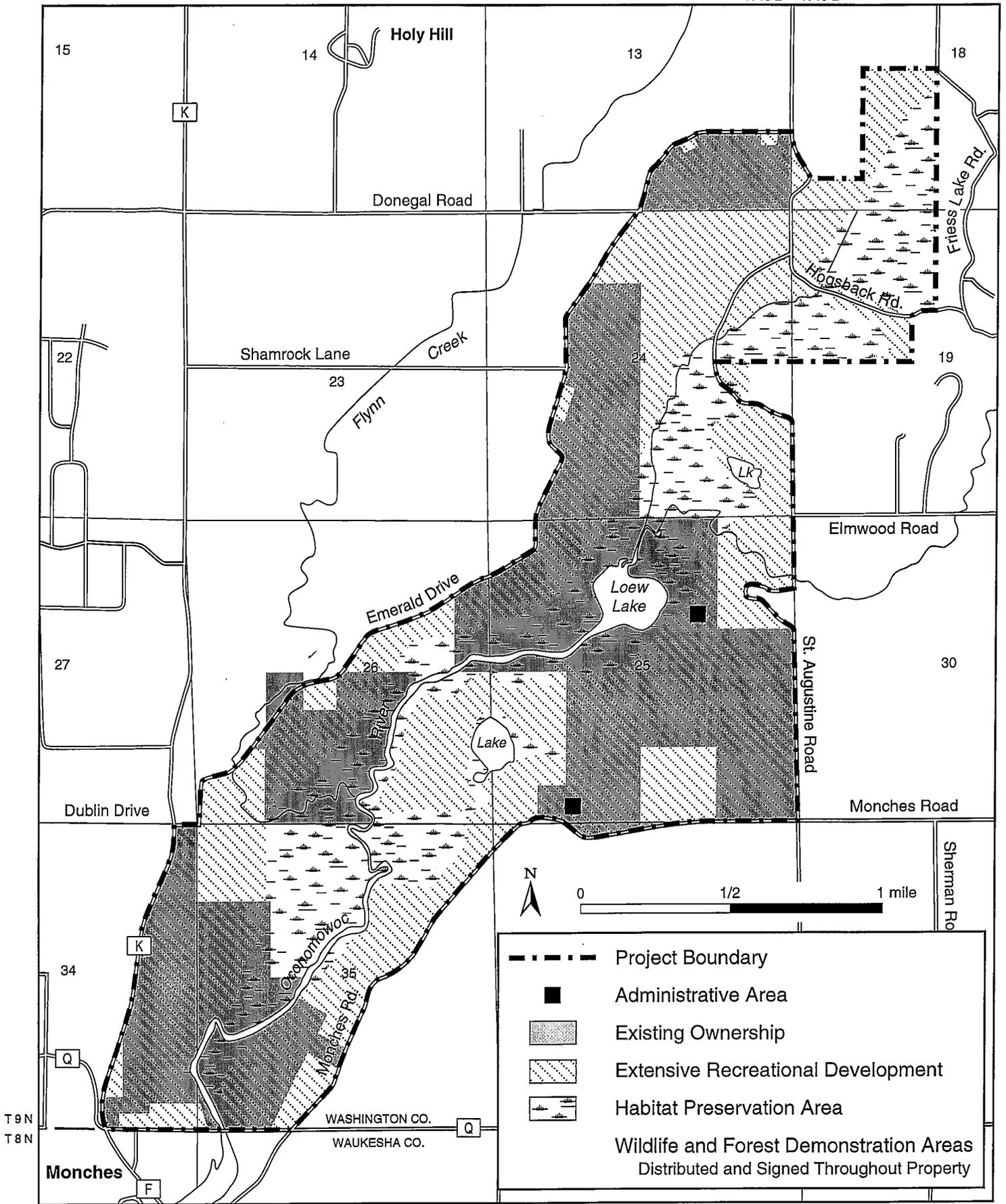
R 18 E R 19 E



MAP 5 – Development

Loew Lake Unit - Kettle Moraine State Forest

R 18 E R 19 E



MAP 6 – Land Use

SECTION III - BACKGROUND INFORMATION

A. Location

Loew Lake is in southeastern Wisconsin's Washington County. It is situated 25 miles northwest of Milwaukee between the city of Hartford and the village of Menomonee Falls. Good access is provided by State Highway 45, 10 miles to the east. Access off of Highway 45 is via County Highway Q, which runs along the southern edge of the project boundary. This site is roughly bounded by Highway Q to the south, Emerald Drive to the west and north, St. Augustine and Monches roads to the east, and includes a portion of the Hogsback Road area. Most of the project lies in the town of Erin, with some acreage located in the town of Richfield. More specifically, the project is located in Township 7 North, Range 18 East, in portions of Sections 13, 24, 25, 26, 34, 35, and 36 in the town of Erin, and portions of Sections 18 and 19 in the town of Richfield.

The Holy Hill Monastery is one mile northwest of the property and Washington County's Glacier Hills Park is adjacent to the project boundary to the northeast. Waukesha County's Monches Park is one-half mile south of the project boundary.

The Ice Age Trail passes through the Loew Lake property on the west side of the Oconomowoc River. This 1,000 mile-long hiking trail traverses the state from Potawatomi State Park in Door County to Interstate State Park in St. Croix Falls. The trail follows the terminal moraine left by the glacier about 10,000 years ago.

Cities within a one-hour drive of the project include Beaver Dam, West Bend, Fond du Lac, Milwaukee, Waukesha, Hartford and Watertown.

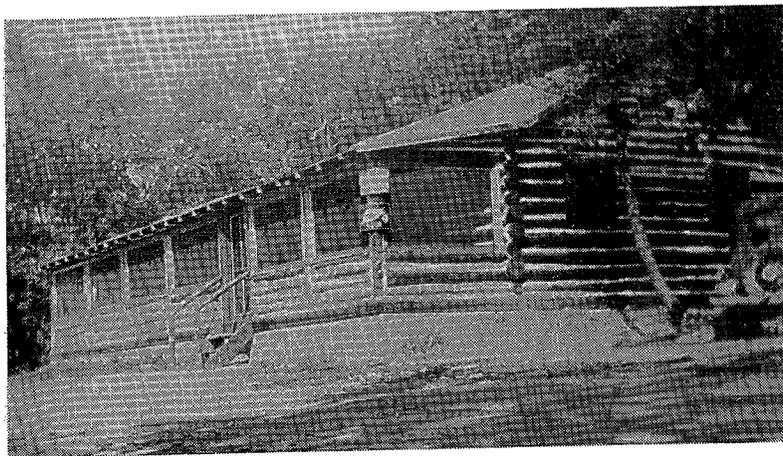
B. History of the Area

Before 1640, the Menominee Indians are believed to have lived in southeastern Wisconsin and Old Monches was the Chief of the tribe. Their camps were scattered along the Oconomowoc River valley from Loew Lake to Friess Lake in the town of Richfield. European immigrants arrived in the town of Erin in the early 1840s. The Irish Catholics were the first, hence the strong Irish influence that still remains. Michael Lynch was the first in the town of Erin to take up a government land contract in 1841. His land is now part of the Loew Lake project area. The last patch of land was taken in 1846 -- the year the town incorporated.

Logging operations reportedly took place in the valley in the late 1800s. A dam was constructed about one-half mile south of the lake, the remains of which are still evident. The dam was used to raise the lake level as much as three and one-half feet. The rise in lake level caused the tamarack trees surrounding the lake to perish. Saw logs were floated downriver to the lake. Each spring the gates were opened and logs were floated down to the town of Monches. From there the logs were hauled to a mill in the village of Lannon.

The Loew family held land in the Oconomowoc River valley since the mid-1800s.

During the early 1900s they operated a summer resort with a tavern, cabins, and boat rentals. The cabins are no longer there, but the tavern was renovated into the log home that still remains.



TAVERN AS IT APPEARED IN THE 1930s

C. Chronology of the Property's Establishment and Management

The Loew Lake project has been closed to the public since the first parcel was purchased. The lake is accessible by anglers who travel by boat from Highway Q, two miles to the south.

State ownership of land in the Loew Lake area began in 1987 with the purchase of 594 acres from James O. Wright. In 1989, The Nature Conservancy purchased an adjacent 253-acre tract and the Ice Age Park and Trail Foundation purchased 23 adjoining acres. These two parcels were sold to the department that same year. Since these purchases, the Board has authorized the acquisition of an additional 200 acres, for a total of 1,070 acres under state ownership. All seven acquisitions are within the study boundary approved by the Natural Resources Board as part of a feasibility study completed in 1986.

Limited sharecropping occurs on some of the fields. Cutting of hay and grazing of livestock have been the primary uses of the land under department ownership.

There are several buildings located on the property currently in department ownership. Most are farm outbuildings that are in various stages of disrepair. Many of these are not being used and are slated for removal. The log structure located on the interior of the project boundary is serving as employee housing for a ranger stationed at Pike Lake. Nearby, another small farmhouse is currently being rented by LTE staff.

D. Legislative Authorities and Approvals

Chapter 23.09(2)d of Wisconsin statutes gives the Department of Natural Resources authority to purchase lands for state forest purposes.

SECTION IV - RESOURCE CAPABILITIES AND INVENTORY

A. Soils, Geology, and Hydrology

The soils around the periphery of the project boundary are primarily in the Casco-Fox-Rodman Association. This association consists of soils underlain by gravel and sand. They are found on glacial outwash areas that were formed by meltwater from glaciers that converged on the sides of the interlobate Kettle Moraine. The interior is made up of soils primarily of the Houghton-Palms-Adrian Association. These soils are poorly drained organic soils found along drainageways, depressions and old lake beds.

Loew Lake is part of the interlobate Kettle Moraine. It was formed by the glacier some 10,000 years ago when two lobes of the Wisconsin glacier came together. As the massive ice lobes "collided", pressure, friction and buckling resulted. The colliding ice melted and deposited tremendous loads of rock, gravel, and sand. These actions formed the interlobate Kettle Moraine.

The Loew Lake area is a unique geologic feature as it is primarily a valley surrounded by the moraine. The resulting views depict a pastoral valley with little development. The area also lies over a sand and gravel aquifer. This aquifer is capable of yielding enough water for high capacity wells which require a minimum of 70 gallons per minute. Water from this aquifer is very hard and contains high concentrations of iron and manganese.

B. Aquatic Resources

Loew Lake is a small 23-acre kettle lake located in a marshy valley on the easternmost tributary of the Oconomowoc River. This tributary originates about ten miles upstream from the lake. The Oconomowoc River passes through Friess Lake, a 119-acre lake located three miles upstream from Loew Lake. From there the river flows through 14-acre Little Friess Lake, then on through Loew Lake and down to the Monches Millpond. It is navigable from the Monches Millpond dam north through Loew Lake. Between Loew Lake and Friess Lake the river is navigable only in spring.

Below Loew Lake, the Oconomowoc River flows for 32 miles through five natural lakes and five other natural lakes are connected through tributaries. The river eventually flows into the Rock River and ultimately, the Mississippi River. Near Loew Lake the Oconomowoc River is artificially impounded at Monches, just south of the project area.

As evidenced by the reduced current between the two waterbodies, the millpond at Monches appears to influence water levels and navigation upstream to Loew Lake. The department will work with the owner of the Monches Dam to address the water level issues in the Loew Lake project area.

C. Fishery Resources

The Oconomowoc River and its tributaries offer an abundance of fisheries habitat. This is largely due to the high gradient of the free-flowing reaches of the river near Loew Lake. Riffles and runs are home to unique and unusual species such as darters and madtoms.

A Wisconsin endangered species, the Slender Madtom (Noturus exilis) is common to the river near Loew Lake. It is a small catfish seldom exceeding five inches in length. It lives as a recluse under boulders and cobbles in riffles.

The river, pools and Loew Lake are home to a wide variety of minnows, suckers and sunfish. Fifteen species of minnows, all of which require good water quality, are found in the lake and adjacent river. These include the blackchin, blacknose, mimic and emerald shiner.

A small member of the sucker family known as the lake chubsucker (Erimyzon sucetta) is common in the lake and river. This fish rarely exceeds twelve inches in length. Statewide, it is considered to be of special concern since it is only found in remaining good-quality waters of southeastern Wisconsin.

For the angler, Loew Lake, and the mainstem of the river above and below the lake, offers largemouth and smallmouth bass, northern pike, bluegill, black crappie and yellow perch. The downstream impoundment at Monches probably detracts from smallmouth habitat, making the species less common than it would normally be. The common carp is abundant in the lake and in the river below. Most of these exotic pests are thought to originate in the shallow, mud impoundment at Monches which offers abundant carp spawning habitat.

In total, 44 species of fish are found in the project area, offering one of the most diverse assemblages of aquatic fish life in southeastern Wisconsin, if not the entire state. Species occurring at Loew Lake are listed in Appendix A.

D. Vegetative and Wildlife Resources

Glacial topography and the Oconomowoc River watershed combine to form abundant and diverse terrestrial, riparian and riverine habitats. These habitat types include oak and northern hardwood, tamarack, grassland, conifer plantation, riparian cattail and cattail wetland, upland and lowland grass, and open water (lake, river and ponds). A breakdown by acreage of the existing vegetative types appears in Appendix C. Discussion of the various plant communities is in Section II-B, and Maps 3 and 4 show existing and proposed cover types.

The diversity of habitat types provides living requirements for a variety of wildlife including game, furbearer, non-game, endangered and threatened species. Major species occurring at Loew Lake include white-tailed deer, wild turkey, ring-necked pheasant, raccoon, muskrat, mink, coyote, sandhill crane, heron, short-tailed weasel, badger, several hawk and owl species, and a variety of songbirds. Dispersing ruffed grouse probably frequent the area although this species is not common here. Wildlife species occurring at Loew Lake are listed in Appendix B.

E. Endangered Resources

Department files list Loew Lake as a natural area of local significance. Wetland communities bordering Loew Lake and the Oconomowoc River were surveyed by BER staff on July 10, 1991. These communities included emergent marsh, sedge meadow, shrub swamp, tamarack swamp and hardwood swamp. They are extensive and diverse communities, and have generally recovered well from past disturbances which included grazing, ditching, logging and water level manipulations.

Several rare species occur within the project boundary and deserve special mention. Endangered, threatened and special concern species identified in the project boundary include:

Endangered Species

Asclepias purpurascens (Purple Milkweed)

Noturus exilis (Slender Madton)

Regina septemvittata (Queen Snake). Once found in six counties in Southeast Wisconsin, only two populations are known to still exist in the state: Loew Lake, the entire length of the Oconomowoc River within the project boundary (but also including areas both upstream and downstream), and adjacent wetlands are important to this rare reptile. The most recent observation of queen snakes in the area were made in 1993 by Gary Casper, a herpetologist with the Milwaukee Public Museum.

Threatened Species

Calephells muticum (Swamp Metalmark). This butterfly inhabited semi-open alkaline meadow on the east side of Loew Lake, but as of 1994 was presumed extirpated. It was last observed nectaring on wildflowers on July 10, 1991. Shrubs and saplings had encroached on the open areas where the metalmark's larval food plant, Cirsium muticum, (Swamp Thistle) was most abundant. BER's Natural Areas staff removed much of the woody brush in 1994, apparently after the butterfly had disappeared. This species is planned for reintroduction by Sue Borkin and BER staff in 1995. A very similar meadow occurs on the south side of Loew Lake, and this should be included in the metalmark's habitat, as should portions of the adjacent tamarack swamp.

Special Concern Species

Erimyzon sucetta (Lake Chubsucker)

Erynnis lucilius (Columbine Dusky Wing)

Euphyes conspicua (Black Dash)

Rana catesbeana (Bullfrog). Found in permanent bodies of water -- lakes, ponds, rivers, creeks. Reproduces from May through July.

Other endangered resources occurring close to but not in the actual project boundary, and that may be impacted, include two fish that were found to occur in Section 24. They are Notropis texanus (Weed Shiner) and Etheostoma microperca (Least Darter). Both are on the state watch list and could occur in the lake and its drainage area.

Other endangered, threatened, or special concern species that may occur, or that have the potential to occur on the site include osprey, common tern, loggerhead shrike, great egret, Cooper's hawk, and Blandings's turtle.

F. Historical and Archaeological Features

Historical Sites

The Wisconsin Inventory of Historic Places at the State Historical Society of Wisconsin (SHSW) identifies eight structures or groups of structures within the Loew Lake project. Inclusion does not mean it is "historic", or historically or archaeologically significant. It means that the SHSW has documentation of the structure's existence. In the event that the department acquires land containing a documented structure(s), an evaluation of the structure's historical significance will be made.

Some of these structures may be eligible for placement on the State and National Register of Historic Places.

1. Log vernacular barn; no construction date indicated; not evaluated for National Register eligibility; located on private property.
2. Log vernacular farmhouse, barn; no construction date indicated; not evaluated for National Register eligibility; located on private property.
3. House; no construction date indicated; not evaluated for National Register eligibility; located on private property.
4. Log vernacular farmhouse; no construction date indicated; not evaluated for National Register eligibility; located on private property.
5. Former tavern converted to house; no construction date indicated; not eligible for National Register; located on public property.
6. House, barn, animal barn/stable; no construction date indicated; not eligible for National Register; located on public property.
7. Log vernacular farmhouse; no construction date indicated; not evaluated for National Register eligibility; located on private property.
8. No specific information in the SHSW records; only remaining structures are the barn and silo; not evaluated for National Register eligibility; located on public property.

Archaeological Sites

The SHSW records identify the following four known archaeological sites within the project boundary.

1. The Loew Lake Site, reported in 1979 - a prehistoric and historic Indian village site; site is state-owned.
2. The Whipp Site, reported in 1979 - a prehistoric cemetery; site is privately owned.
3. The Selzer Site, reported in 1979 - a prehistoric village, cemetery, and mound group; site is privately owned.

G. Local and Regional Land Use Analysis

The town of Erin officially recognizes the Loew Lake project and the Ice Age Trail as important natural resources and discourages encroachment of development into these areas.

The town recently developed a zoning ordinance and a land use policy plan. The plan includes the Loew Lake Unit as part of the Loew Lake Preservation Area. Lands adjacent to the project boundary (west of Emerald Drive) are designated as a Critical Watershed. Development within the Preservation Area and Critical Watershed is restricted. Maintaining aesthetics is also a standard for development. This policy will help to protect Loew Lake from encroachment by high density residential development which would detract from the area's character.

Most of the lands within the project boundary are designated as Primary Environmental Corridor in the town's Land Use Plan. The plan restricts recreational use within environmental corridors to passive and open space uses (i.e., campground, ski trails, hunting). The Loew Lake Master Plan designates uses that are compatible with the town's Land Use Plan.

The department's management philosophy for Loew Lake is low-use, low-impact, and non-mechanized recreation. This philosophy takes advantage of the environmental, natural and cultural resources unique to the area. These resources, within the heavily populated and highly developed southeastern region of the state, provide unique opportunities for quiet, solitary type activities. This compliments the high-use, high-impact and mechanized recreational opportunities available at other state and local recreational properties in the region.

The Loew Lake project boundary is made up primarily of large tracts of land with a residence on them. Over the past 20 years the area has seen an increase in single-family residences on small tracts of land. This occurs both within and adjacent to the project boundary. Most of these landowners were undoubtedly drawn to the area for its rural character and the presence of Holy Hill Monastery. The presence of a department project will ensure these qualities are perpetuated.

Public ownership of this property for limited recreational use will ensure public open space in an area rapidly developing as residential. The low-use, low-impact recreation proposed in this plan will not change the character of the area. Mountain bikes will be prohibited from the trails.

Major transportation routes close to the area are State Highway 167 two miles to the north, and County Highway Q to the south. They both connect with County Highway J, which runs north-south. County Highway J has direct access to I-94 near Waukesha (Map 1).

The roads that serve as the project boundary are designated Rustic Roads by the Wisconsin Department of Transportation. The prominence of Holy Hill and the fall color season make this area extremely popular in autumn. It is unlikely the presence of a departmental project would increase the amount of traffic on these roads during peak times. A pull-out proposed to be constructed along the rustic road would give visitors an opportunity to pull out of traffic and view the valley. This could ensure the flow of traffic along this road if "scenic overlook ahead" signs mark this opportunity.

Local area businesses should derive some economic benefits as a result of recreational users being drawn to the area. This will not amount to a dramatic increase due to the low number of users. The loss of some of the agricultural lands from production will also mean the loss of some economic benefits currently derived from that use.

SECTION V - ENVIRONMENTAL IMPACTS OF THE PROPOSED PLAN

Environmental Analysis and Decision on the Need for an Environmental Impact Statement (EIS)

Southeast District, Bureau of Parks and Recreation
Type List Designation - NR 150.03(6)(a)6.a.

This document is a department environmental analysis that evaluates probable environmental effects of the recommendations in the Loew Lake Master Plan, and determines whether an EIS is needed. The assessment includes a description of the proposal and the affected environment.

This is an environmental assessment of a master plan. The department will prepare more specific and comprehensive assessments with implementation of each recommendation.

Environmental Effects and Their Significance

The property has been closed to public use since the state began acquiring lands in 1987. Opening the property to public use, after approval of the master plan, will not overtax the resources because of the minimal number and nature of the facilities to be provided. The primary recreational opportunity will be trail use, and trail development will be minimal.

The development of facilities such as small parking lots, roadways and trails will cause some minor disruption to the soil, mainly through grading and compaction during the various phases of construction. In other areas, soils will be affected by such things as compaction caused by maintenance equipment, and foot and horse traffic. Erosion control practices will be used and disturbed soils will be revegetated. Also, horse trails will be designed to ensure minimum impact to the environment. The removal of buildings also will be a source of some disturbance to the soils. These areas, like those where development takes place, will be seeded to minimize the impact.

The low-use, low-impact nature of this project will potentially restrict recreational use on these lands. The number of hunters will be regulated by the permit systems, and those who hunt deer will be further limited to bow and muzzle-loader hunting and those respective seasons. This will assure the area is not over-hunted and should present opportunities for bagging trophy-sized game. That same reasoning was used in developing the fishing regulations. This should ensure that the extra effort it takes to fish and hunt at Loew Lake will pay off in terms of affording a more "wilderness-type" experience. Accommodations will be made for people with disabilities to provide them the opportunity to use the property and experience its seclusion. Nearby state properties (i.e., Pike Lake and the Kettle Moraine State Forest-Northern Unit) provide opportunities for recreational pursuits not allowed at Loew Lake.

The project will retain a large area of the Oconomowoc River valley in its present state. Adjacent landowners, forest users and wildlife will all reap the benefits of this action. The implementation of this project will prevent land uses which could be detrimental to the surface water quality of Loew Lake and the Oconomowoc River. The removal of lands from

agricultural production will reduce nonpoint source runoff and the amount of nutrients entering these surface waters. This project will reduce the amount of residential development in the immediate area, thus protecting the groundwater from the potential impacts from additional septic discharges.

The number and type of plant species at Loew Lake will change somewhat due to natural plant succession, interruption of succession, and the cutting, burning and planting of various plant stock. Some vegetative removal will occur to create vistas along trails and overlook sites. This will entail some tree removal, limb cutting and occasional mowing. Buffer strips, irregularly cut boundary lines, and other techniques will be used to reduce the visual impact of forest management practices.

This plan recommends the conversion of agricultural lands to prairies and woodlands. It does not include sharecropping agreements with local farmers to provide a food source for deer, turkey and pheasants wintering in the area. This may have a negative impact on farmers if the deer and turkey seek food sources nearby. Proposed wildlife management activities will maintain wildlife populations at levels that will result in low impact to adjacent croplands. Pheasants may be forced to travel farther to find food sources, which exposes them to predation.

Fish and other aquatic species will not be impacted significantly because the project will maintain or improve existing land use, and surface water and groundwater quality. No significant change is expected in the level of fishing or boating on Loew Lake or the Oconomowoc River.

The Bureau of Endangered Resources conducted the Southeastern Wisconsin Inventory between 1991 and 1993. The purpose of the inventory was to locate critical habitat that should be designated as part of a natural area, as well as to identify other lands that should be protected. This project will provide protection to endangered and threatened species which inhabit the area or which may migrate through the property. Increased presence of humans on the property may mean some plant damage and interference with wildlife habitat. The low number of users should keep this disturbance to a minimum. Some species, such as fox, that do not adapt to disturbance by humans may be displaced. However, most species present do adapt to human disturbance and should not be noticeably affected. Some species, such as deer, will use the trails as travel lanes. If these trails are seeded to grass and legumes, they will be used as feeding areas as well.

Development of the property is not expected to significantly affect Wisconsin's air quality. Minimal noise and air pollution might be expected during construction of the parking lots and restroom facilities due to the use of heavy equipment. Some minor disruption of surface conditions could be expected as well during construction. Best management construction practices will be followed. The management burns that will be conducted in select areas to control woody vegetation and simulate natural wildfires will be a temporary source of some air pollution. This action will be conducted primarily in the spring of the year. All burns for prairie maintenance will be conducted within prescribed conditions of burning permits to maximize safety and minimize air quality impacts.

Significance of Cumulative Effects

The project should have minimal impact on regional land values. The cumulative effect of protecting and enhancing the existing river corridor and geologic landscape and providing recreational facilities contributes to the commitment of resource protection and management in the Kettle Moraine geographic area.

It is the department's policy to acquire land within the project boundary only from willing sellers. If the landowner desires to sell her/his residence, relocation assistance is also available. All state purchases are based on land appraisals which use comparable land sales from the private sector to determine value. The project is not expected to have a negative impact on regional land values.

Acquisition will remove lands from the tax rolls. For property acquired prior to January 1, 1992, the state makes payments to the town in lieu of taxes (PILT), equal to 100% of the entire tax bill the first year after acquisition. The payment is made directly to the town and is not divided among other levels of government. The PILT will decline 10% each year over 10 years. After that, the payment will continue at the 10% rate in perpetuity. The loss in revenue to the school district is minimized through increased school aid paid by the state. County and state government will receive no tax revenue following state acquisition, but are not adversely affected because of the existing large tax base.

The formula for making PILT changed for all land acquisitions occurring after January 1, 1992. The tax year following acquisitions, the payment will be made to the treasurer of the tax district. The amount of payment is determined by multiplying the purchase price by the aggregate net general property tax rate for the jurisdiction that would apply if the property were taxable. In subsequent years the payment will be adjusted based on the increase or decrease of the tax rate of all land in the tax district. This payment will provide a continuing basis for recognizing increasing land values in a tax district.

Payments under the new PILT program are based on tax rates in the tax district and purchase price of acquired properties. PILT payments under the new formula will total \$40,973 by January 1, 1995. By January 1, 2000, these payments will total \$163,892. After January 1, 2000, the payment continues for both old and new PILT programs at \$43,159 per year for the property acquired to date. Based on the estimated value of the property remaining to be acquired at 9.94 million dollars, the estimated PILT under the new program is \$368,675 per year plus \$43,159 continuing from above for a total annual estimated payment of \$411,834.

Implementation of the recommendations in this master plan including acquisition, development and maintenance will cost an estimated \$10,307,300. Acquisition costs for the remaining 1,070 acres in the project boundary total \$9,940,000, development costs are estimated at \$337,300, and annual maintenance figures at \$30,000. All estimated costs are based on 1995 dollars.

Significance of Risk

The presence of archaeological and historical resources is known. This plan lists the known recorded sites, but there are undoubtedly many more unrecorded sites. The department's archaeologist and historic property planner will be consulted prior to any construction, and an archaeological survey will be conducted to determine the presence of sites.

The inventory work completed by BER, and previously mentioned in this document, identified the presence of threatened or endangered species and their habitat in the project area. This survey significantly reduces the risks associated with any development.

There is the risk of the property being exposed to gasoline and other fuels used by visitor's vehicles, as well as those from maintenance vehicles used on the property.

Significance of Precedent

The minimal amount of development and maintenance planned for the property is not precedent setting. Similar management practices discussed in the plan are being carried out on a statewide basis. This plan contains no known conflicts with other agencies that provide protection to the environment. This project is compatible with local zoning ordinances and the Southeastern Wisconsin Regional Planning Commission's (SEWRPC) recommended long-term goals of protecting land within primary environmental corridors. While cropland would be removed from production, future options on the use of that land would not be foreclosed because the land would not be developed.

Developing trails, providing hunting opportunities, enhancing educational opportunities of our natural and cultural resources, developing an outdoor skills program, and providing river access is not precedent setting.

The project is consistent with the goals in the SEWRPC's 1992 report "A Regional Land Use Plan for Southeastern Wisconsin-2010" and the department's Oconomowoc River Priority Watershed Plan.

In addition, this project will contribute to the well established Kettle Moraine State Forest system and the joint National Park Service and department Ice Age National Scenic Trail system.

Significance of Controversy Over Environmental Effects

An extensive citizen participation process was implemented over the past seven years, including open forums, a survey and personal contacts with nearby landowners. No controversial issues have arisen, nor are any anticipated.

Public use may cause some trespass problems. However, past experience at other department properties indicates this is not a major problem. The layout of trails and proper signing will help mitigate the problem. The department's policy on property line fences is to share the cost with adjacent landowners as provided by Wisconsin statutes.

Park rangers and conservation wardens have full law enforcement authority and, when necessary, will rely on assistance from the Washington County Sheriff Department. The department has adequate fire fighting equipment and trained personnel for typical grass and woodland fires. The department contracts with local fire departments for assistance with the occasional fires the department is not able to handle with its own resources.

SECTION VI - ALTERNATIVES TO THE PROPOSED PLAN AND THEIR IMPACTS

No Development - Status Quo

This alternative indicates no development of recreational facilities. This would severely curtail public use and appreciation. This alternative is not recommended.

Limited Development

This alternative allows for the limited development outlined in the master plan. It allows some access to the property, without placing a burden on the resource. Parking will be provided on the periphery with trail use being the primary activity. This is the recommended alternative.

Large-Scale Development

This alternative suggests more intensive recreational development such as camping and picnicking. This option would meet with a great deal of local opposition. This alternative is not recommended.

Much of the interior of the project boundary contains wetlands. The property is conducive to trail development, but not to intensive recreational development or an influx of a large number of users. Access to the lake would require the department to secure permits for filling wet areas. It is not the desire of the department to change the character of the Loew Lake area.

No Further Acquisition - Limited Use

This alternative would encourage residential development to infringe on the boundaries of the project area, and would consequently have a negative impact on the rural character of the Oconomowoc River valley. It would also preclude Loew Lake from being developed to its potential as a low-use, low-impact property. This action is not recommended.

Other Alternatives

The buildings that are still functional, primarily residential housing and outbuildings, will continue to be used. The residences will remain in use as staff housing until a purpose which has more of a public service is identified. Some possibilities might include use of the log house for environmental educational purposes or a warming house for cross-country ski groups by reservation only. The former caretaker's residence could be used as a hostel in partnership with Hostelling International or as a horse boarding facility.

SECTION VII - COMPLIANCE WITH THE WISCONSIN ENVIRONMENTAL POLICY ACT

Decision

In accordance with s.1.11, Stats., and Ch. NR 150, Adm. Code, the department is authorized and required to determine whether it has complied with s.1.11, Stats., and Chapter NR 150, Wis. Admin. Code.

EIS Process Not Required

The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the department on this project.

Theresa Griuntsov
Signature of Evaluator

8.07.95
Date Signed

Noted: Bureau Director

Date Signed

Number of responses to news release or other notice: _____

Certified to be in Compliance with WEPA

District Director or
Director of BEAR (or designee)

Date Signed

Notice of Appeal Rights

This notice is provided pursuant to section 227.48 (2), Stats. If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the department, to file your petition with the appropriate circuit court and serve the petition on the department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent. To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Note: Not all department decisions respecting environmental impact, such as those involving solid waste or hazardous waste facilities under sections 144.43 to 144.47 and 144.60 to 144.74, Stats., are subject to the contested case hearing provisions of section 227.42, Stats.

This notice is provided pursuant to section 227.48(2), Stats.

Summary of Issue Identification Activities

The following people were contacted on the dates outlined below for information related to this project. Also see Appendix D - Citizen Participation for additional information on public involvement. Department staff who contributed to the development of this plan are listed in the beginning of the document.

<u>Date</u>	<u>Contact</u>	<u>Comment Summary</u>
3/88	Bev Schroeder, Former Erin Town Clerk	Background Information
9/89	Roger Boelke, Area Resident	Historical Information
9/90	Milton Loew, Former Landowner	Historical Information
3/91	John Whalen, Area Resident	Historical Information
6/91	Arthur Lonergan, Area Resident	Historical Information
8/91	Southeastern Wisconsin Regional Planning Commission	Draft Plan Review

APPENDIX A - FISH FOUND IN THE LOEW LAKE PROJECT AREA

<u>Common Name</u>	<u>Scientific Name</u>
Longnose gar	<u>Lepisosteus osseus</u>
Bowfin	<u>Amia calva</u>
Central mudminnow	<u>Umbra Limi</u>
Grass pickerel	<u>Esox americanus vermiculatus</u>
Northern pike	<u>Esox lucius</u>
Stoneroller (unsp.)	<u>Campostoma spp.</u>
Common carp	<u>Cyprinus carpio</u>
Brassy minnow	<u>Hybognathus hankinsoni</u>
Silvery minnow	<u>Hybognathus nuchalis</u>
Honeyhead chub	<u>Nocomis biguttatus</u>
Golden shiner	<u>Notemigonus crysoleucas</u>
Emerald shiner	<u>Notropis atherinoides</u>
Common shiner	<u>Notropis cornutus</u>
Blackchin shiner	<u>Notropis heterodon</u>
Blacknose shiner	<u>Notropis heterolepis</u>
Spottail shiner	<u>Notropis hudsonius</u>
Spotfin shiner	<u>Notropis spilopterus</u>
Mimic shiner	<u>Notropis volucellus</u>
Bluntnose minnow	<u>Pimephales notatus</u>
Fathead minnow	<u>Pimephales promelas</u>
Creek chub	<u>Semotilus atromaculatus</u>
White sucker	<u>Catostomus commersoni</u>
Lake chubsucker	<u>Erimyzon sucetta</u>
Black bullhead	<u>Ictalurus melas</u>
Yellow bullhead	<u>Ictalurus natalis</u>
Brown bullhead	<u>Ictalurus nebulosus</u>
Stonecat	<u>Noturus flavus</u>
Banded killifish	<u>Fundulus notatus</u>
Brook silverside	<u>Labidesthes sicculus</u>
Rock bass	<u>Ambloplites rupestris</u>
Green sunfish	<u>Lepomis cyanellus</u>
Pumpkinseed	<u>Lepomis gulosus</u>
Bluegill	<u>Lepomis macrochirus</u>
Smallmouth bass	<u>Micropterus dolomieu</u>
Largemouth bass	<u>Micropterus salmoides</u>
Black crappie	<u>Pomoxis nigromaculatus</u>
Rainbow darter	<u>Etheostoma caeruleum</u>
Iowa darter	<u>Etheostoma exile</u>
Fantail darter	<u>Etheostoma flabellare</u>
Johnny darter	<u>Etheostoma nigrum</u>
Yellow perch	<u>Perca flavescens</u>
Logperch	<u>Percina caprodes</u>

APPENDIX B - PARTIAL LIST OF MAMMALS AND BIRDS KNOWN TO INHABIT THE
LOEW LAKE PROJECT AREA

Common Name

Scientific Name

Mammals

White-tailed deer	<u>Odocoileus virginianus</u>
Gray squirrel	<u>Sciurus carolinensis</u>
Red squirrel	<u>Tamiasciurus hudsonicus</u>
Southern flying squirrel	<u>Glaucomys volans</u>
Gray fox	<u>Urocyon cinereoargenteus</u>
Red fox	<u>Vulpes vulpes</u>
Coyote	<u>Canis latrans</u>
Skunk	<u>Mephitis mephitis</u>
Opposum	<u>Didelphis virginiana</u>
Mink	<u>Mustela vison</u>
Muskrat	<u>Ondatra zibethicus</u>
River otter	<u>Lutra canadensis</u>
Badger	<u>Taxidea taxus</u>
Meadow vole	<u>Microtus pennsylvanicus</u>
Deer mouse	<u>Peromyscus maniculatus</u>
Eastern chipmunk	<u>Tamias striatus</u>
Short-tailed weasel	<u>Mustela erminea</u>
Long-tailed weasel	<u>Mustela frenata</u>
Thirteen-lined ground squirrel	<u>Spermophilus tridecemlineatus</u>
Little brown bat	<u>Myotis lucifugus</u>
Pygmy shrew	<u>Microsorex hoyi</u>
Raccoon	<u>Procyon lotor</u>
Opposum	<u>Didelphis marsupialis</u>
Short-tailed shrew	<u>Blarina brevicauda</u>
Eastern mole	<u>Scalopus aquaticus</u>
Woodchuck	<u>Marmota monax</u>
Fox squirrel	<u>Sciurus niger</u>
Meadow vole	<u>Microtus pennsylvanicus</u>
Cottontail rabbit	<u>Sylvilagus floridanus</u>
House mouse	<u>Mus musculus</u>
Norway rat	<u>Rattus norvegicus</u>

Birds

Wild turkey	<u>Meliagris gallapavo</u>
Ring-necked pheasant	<u>Phasianus colchicus</u>
Woodcock	<u>Philohela minor</u>
Great blue heron	<u>Ardea herodias</u>

Common egret
American bittern
Sandhill crane
Red-tailed hawk
Rough-legged hawk
Barred owl
Great-horned owl
Hooded merganser
Mallard
Blue-winged teal
Green-winged teal
Bufflehead
Common goldeneye
Lesser scaup
Wood duck
American coot
Herring gull
American kestrel
Common screech owl
Canada goose

Casmeriodus albus
Botaurus lentiginosus
Grus canadensis
Buteo jamaicensis
Buteo lagopus
Strix varia
Bubo virginianus
Lophodytes cucullatus
Anas platyrhincus
Anas discors
Anas crecca
Bucephala albeola
Bucephala clangula
Aythya affinis
Aix sponsa
Fulica americana
Larus argentatus
Falco sparverius
Otus asio
Branta canadensis

Various songbirds and shorebirds

APPENDIX C - EXISTING VEGETATIVE COVER TYPES IN THE
LOEW LAKE PROJECT AREA

<u>Cover Type</u>	<u>Acreage</u>
Conifer	64
Northern Hardwood	362
Tamarack	178
Swamp Hardwood	149
Field	658
Lowland Brush	296
Lowland Grass	140
Grassland	129
Orchard	17
Upland Brush	69
River/Lake	71

TOTAL:	2,133 Acres

APPENDIX D - CITIZEN PARTICIPATION

This project has been the subject of an intensive citizen participation effort since its inception. The department was made aware of approximately 600 acres of land for sale at Loew Lake in November 1985. Contact was first made with the landowner to determine his interest in selling to the department. The town board chair and clerk were then apprised of our interest in the property. Personal contacts were made with all landowners within or near the established study boundary.

An open forum was held in September 1986 for participants to meet with department staff, ask questions and let us know if they supported the project. The proposal was met with a cool reception, especially in view of the department's unsuccessful efforts to establish a larger project in the same area in the early 1960s. A series of informational meetings followed.

In January 1987, after much discussion with individual property owners, a survey was sent to the public to measure support for the project. The survey was mailed to 220 households within or adjacent to the project area. The survey drew an 89 percent response rate. Of those responding, 71 percent favored the project.

In April 1987, the Natural Resources Board gave the department permission to begin negotiations with the landowner for the initial acquisition. In the fall of 1987 an option was signed, an environmental assessment prepared, and an open forum held to solicit public opinion on the acquisition. The governor approved the purchase in late 1987.

In 1988, the master planning process began. An open forum was held to get input on the type of uses the public would like to see included in the master plan. Goals and objectives were developed, and in August 1989, another open forum was held to give the public a chance to respond. After completion of the draft plan in July 1991, an open forum was held. After a final department review, the last open forum was held in [date will be added after we hold the forum] during the two week EA review process. More than 260 citizens have been involved in the development of this master plan.

We have maintained a dialogue with the public via a series of six newsletters and a toll-free telephone hotline. Public interest has been strong in this project since its inception. A workbook was included in one of the newsletters which generated some thoughtful ideas that were incorporated into the plan.