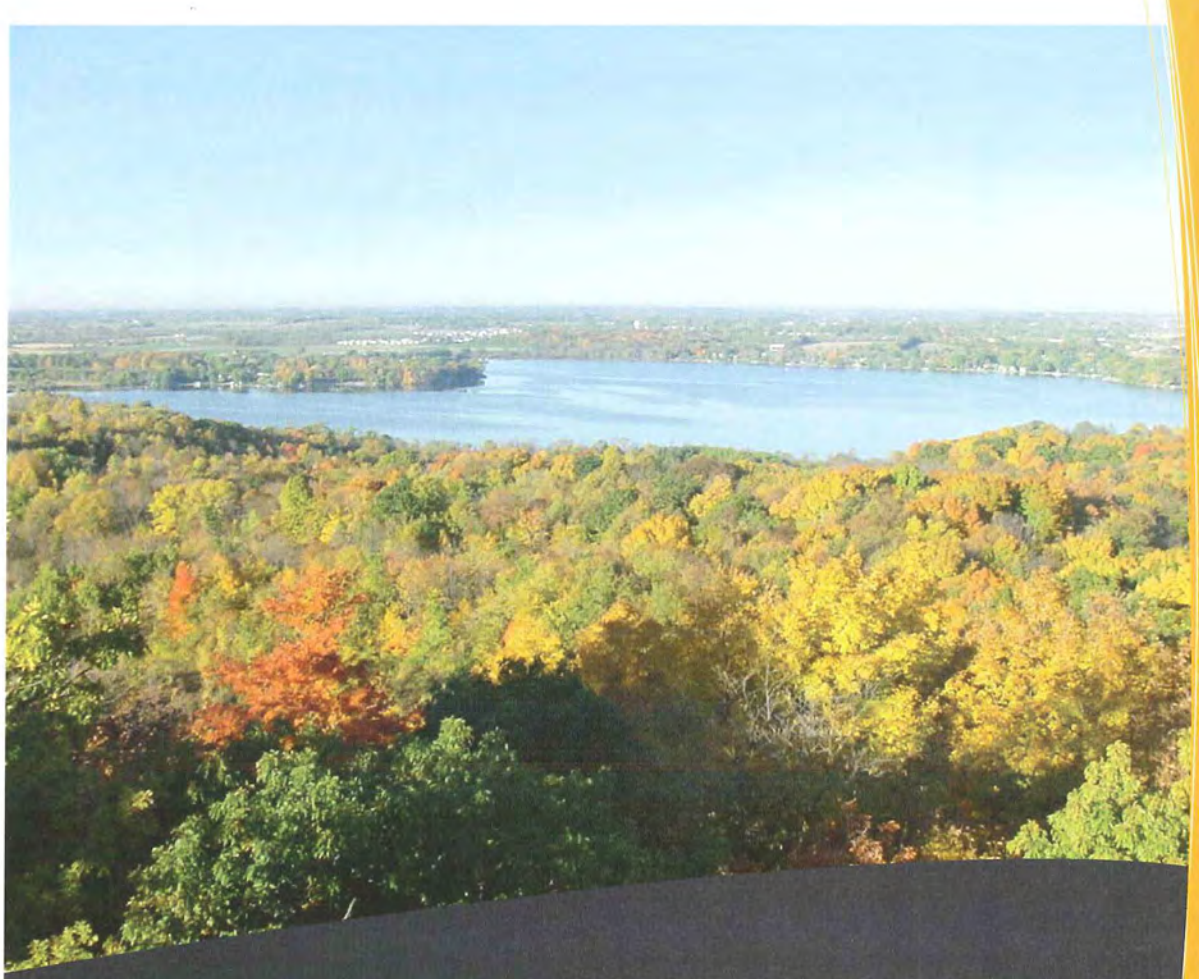

Kettle Moraine State Forest - Pike Lake Unit Master Plan and Environmental Assessment

Draft August 2009

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Chapter One – Executive Summary

Location and Access

The 678-acre Pike Lake Unit of the Kettle Moraine State Forest (Pike Lake Unit) is located in Washington County, approximately 25 miles northwest of Milwaukee. The property abuts the Village of Slinger on the east and the City of Hartford on the west, and a portion of the Pike Lake Unit lies within the city. The area is a mix of agriculture, urban, rural residential, forest, and wetland. Ready access to the area from urban centers in southeastern Wisconsin is provided by State Highways 60 and 83, and Interstate 41. See Map A – Regional Location Map.

Pike Lake Unit Management, Development, and Use

The Pike Lake Unit will provide a wide range of nature based outdoor recreation opportunities consist with the property's vision and goals. There are a number of modifications proposed to the day use (beach) area that will provide expanded access to the waters of Pike Lake. Additional types of camping and expanded indoor/outdoor group picnic facilities will be provided to accommodate the increasing demand of these activities. There will also be an educational center built to provide enhanced nature interpretation programs for the general public and school or other youth groups. It will especially highlight geological features and the Ice Age National Scenic Trail.

The Environmental Assessment

An Environmental Assessment (EA) has been prepared for this Master Plan. The EA assesses the potential impacts of actions recommended in the Master Plan, ranging from land acquisition and facility development to management and operation of the Pike Lake Unit. The Environmental Assessment concludes that the implementation of the Master Plan will provide positive recreational, ecological, social, and economic benefits to the region with minimal adverse impacts.

The Public Involvement Process

Public involvement has been crucial to the development of this plan. A variety of tools, including news releases, newspaper articles, public meetings, radio interviews, and a web site, were used to give information on the planning process and solicit public input. Generally, the public has expressed support for the recommendations in the master plan. There was strong support for the proposed expanded boundary and for most of the proposed facility developments. A number of questions regarding the proposed motorized boat launch were asked at the public meeting on June 24, 2009, with the biggest concern being the number of boats on Pike Lake – both now and in the future.

Chapter Two – Management, Development, and Use

Property Designation and Authority

This Master Plan is for the development and management of the Kettle Moraine State Forest - Pike Lake. From its creation in 1971 until 1997, the Pike Lake property was designated as a State Park. In 1997 its administrative designation was changed to incorporate it into the Kettle Moraine State Forest.

Acreage Goal:
Current 722 acres
Proposed 3,540 acres

Current State Ownership: 678 acres

Statutory Authority: The authority to acquire and manage land within the Pike Lake Unit is described in sections 23.09, 23.11, 23.14, and 27.01, Wis. Stats.

Vision

The Kettle Moraine State Forest-Pike Lake Unit contains a diversity of ecosystems and unique glacial features along the globally significant interlobate moraine. The Pike Lake Unit will be managed to provide a variety of recreational, cultural, educational, economic and ecological opportunities and benefits for present and future generations. In an increasingly urban setting, the forest offers an atmosphere of solitude, reflection, and learning. Within this setting, the forest staff will provide the best possible service to all visitors and partners.

Goals

- Provide a natural appearing and attractive setting for outdoor recreational and educational pursuits, including minimally developed places for quiet, solitude and the enjoyment of nature.

- Provide a variety of high quality forested, wetland, and open grassland habitats, with an emphasis on ecologically functional natural communities, and with the production of wildlife and forest products as additional benefits.

- Provide compatible year-round, primarily non-motorized outdoor day-use recreational opportunities, including but not limited to hiking and skiing, picnicking, swimming, and fishing.

- Provide watercraft access to Pike Lake for motorized and non-motorized boating and fishing.

- Provide a wide variety of high quality camping opportunities at a level that is in balance with other property uses.

- Provide hunting opportunities consistent with established seasonal frameworks and recreational activities.

- Provide interpretive, educational, and demonstration programs for the public and school or youth groups that build on knowledge and appreciation of the natural environment and resource management activities, while enhancing an understanding of broad environmental and natural resource issues.

Proposed Project Boundary Changes

A project boundary delineates an area where the Department is authorized by the Natural Resource Board to acquire land and easements from willing sellers. The current property acquisition goal is 722 acres and 678 acres have been acquired to date.

This plan proposes a large expansion to the south and west of the current property. The areas proposed to be included within the State Forest boundary were selected because of their ability to provide additional ecological and social value for the property and the region. This area contains significant acreage of wetland, some agricultural land and the remaining undeveloped shoreline on Pike Lake. The shoreline would be kept in an undeveloped state. The proposed expansion area is shown on Map B, it totals 2,810 acres. The primary objectives for acquisition of lands in this are:

- To protect the headwaters of the Ashippun River and wetland habitat.
- To increase forest and grassland block sizes to better accommodate area-sensitive wildlife species.
- To provide an important open-space buffer between the current Pike Lake Unit and residential and commercial development.
- To provide additional public space for future recreational trail uses and hunting.

The deletion of a six-acre parcel from the current project boundary is proposed. This parcel lying to the north of State Highway 60 and is recommended for deletion from the boundary because it is developed and no longer needed as a buffer to a formerly proposed entrance to the Pike Lake Unit.

These proposed boundary changes are shown on Map B and summarized on Table 2-1.

Table 2-1: Project Boundary Acreage Goals for the Pike Lake Unit

Existing Acquisition Goal	Proposed Expansion	Proposed Deletion	New Proposed Acquisition Goal
722 acres	2,810 acres	6 acres	3,540 acres

An additional 19.3 state owned acres lie outside of the current boundary but within the proposed expanded boundary area. Included within the19.3 acres is a 4.7 acre Ice Age Trail Area that will be redesignated as State Forest and included within the Pike Lake Unit.

The draft Pike Lake Unit Master Plan is based on this proposed revised boundary.

Land Management Classifications

The Pike Lake Unit is divided into three primary management areas as shown in Map C and listed in Table 2-1. Each management area has distinctive characteristics and unique management and use attributers. Each area is referenced at strategic locations within the management descriptions in the following pages.

Table 2-2: Land Management Classifications – Pike Lake Unit

Management Area Name	NR 44 Land Management Class	Acres
Pike Lake Management Area	Recreation Management Area: Type 4 recreation setting	725
Headwaters Management Area	Recreation Management Area: Type 3 recreation setting	2,810
Administrative Management Area	Special Management Area - Administrative/Facility Operations	4

Management and development for each management area is discussed in the following pages.

Pike Lake Recreation Management Area (725 acres)

The Pike Lake Recreation Management Area includes the most developed and intensively used recreational lands within the property (primarily the 2009 ownership area). This management area is classified as Recreation Management – Type IV Setting.

Recreation Management and Development

The recreation management settings for the Pike Lake Management Area are to provide for a wide range of nature-based outdoor recreational opportunities and experiences. The enhancements and additions proposed in this plan will complement the existing recreational facilities. General locations of the proposed recreational facilities are shown on Maps C and Figure 1, and summarized in Tables 2-2 and 2-3.

Trails

A variety of trails are provided within this management area, including a segment of the National Scenic Ice Age Trail. Some expansion of the trail system is planned to provided improved biking connection between the campground and day-use area, and to separate a section of the Ice Age Trail from the ski trail system. Map C shows the locations of existing and planned trails and Table 2-2 lists the NR 44 development classification and mileage for each.

Trail objectives:

- Provide approximately eight miles of hiking and groomed cross-country ski trails
- Provide approximately three miles of family bike trails, including trails that connect the major public use areas.
- Provide for a segment of the National Ice Age Scenic Trail that meets Ice Age Trail Alliance (IATA) trail standards.
- Accommodate a short, pass-through segment of snowmobile trail in a location that does not conflict with the primary uses of the property

Trail Management/Development Prescriptions:

The existing and planned trail system, including the Ice Age Trail, traverses approximately eight miles of woods and shoreline within the management area. A few minor connector trails will be added in the day-use area to connect various facilities. Additionally, a new hard-surfaced bike/pedestrian trail will be constructed connecting the campground to the beach/picnic area. The Ice Age Trail will be relocated and redeveloped on a new, dedicated route and will be only open for hiking and snowshoeing. Most of the trails are designed for

hiking and are groomed for cross-country skiing in the winter. (See the General Property-wide Management Section of this plan for additional details.)

The final "on the ground" alignment of the new trails will be determined during the facility design process and included in the Department's Capital Development Program Statement site plans.

Table 2-3: Existing and Proposed Designated Trails - Pike Recreation Management Area

Trail	Existing Mileage	Proposed Additional Mileage	Total Mileage	Designation
Ice Age National Scenic Trail	2.6 (2.4 mi. are on the hiking/ski trail system)	0.4 (a relocation off of existing trails)	3.0	Primitive trail – Ice Age Trail Standard
Hiking / Skiing / Astronomy Trail	8.0	0	8.0	Lightly developed trail
Nature Trail	0.8	0	0.8	Moderately developed trail
Disabled Access Trail	0.5	0	0.5	Moderately developed trail
Bike Trail	1.7	1.3	3.0	Fully developed trail
Snowmobile Trail	2.0	0	2.0	Lightly developed trial
Total	**13.2 (net)***	**1.7**	**17.3**	

** This total excludes the 2.4 miles of Ice Age Trail that follow the existing property trails*

Camping

The Pike Lake Management Area currently has one campground with 32 family campsites. Ten sites have electricity and one is ADA accessible. The campground also has a flush toilet and shower building and a dump station. Additional camping opportunities are planned, including walk-in sites, a separate group campground, and a new, modern campground loop. They are summarized by camping type in the prescriptions section below and their approximate locations are shown on Map C.

Camping objectives:

- Provide opportunities for rustic and modern family camping in a quiet, natural setting.
- Provide opportunities for outdoor group camping in a setting apart from other uses.
- Provide opportunities for primitive, walk-in camping for Ice Age Trail Hikers and other property visitors seeking a more secluded, less developed camping experience.
- Provide indoor ADA camping, with support from the Pike Lake Friends Group and others.

Camping Management/Development Prescriptions:

Family Camping
The existing, largely wooded, modern campground is a 32-unit loop with a shower building, flush toilets, and pressurized water. Ten sites have electricity. Its small size and layout give it a rather rustic feel, even with the many modern conveniences it offers. This campground loop will be maintained and managed to continue to provide campers a sense of solitude and closeness to nature.

An additional campground loop with 30 sites will be constructed. This new loop will be designed to provide a modern family camping experience with a flush toilet, a shower building, and electricity at all sites. This loop will more easily accommodate the larger camping vehicles common today. In total, 40 sites on the property will have electricity when the new loop is completed.

Rustic Walk-in Camping
Three semi-primitive walk-in campsites will be developed north of the existing campground near the Ice Age Trail. The campsites will have a minimum separation distance of 300 feet and be within 300 feet of the Ice Age Trail, and a vault toilet and drinking water within 400 feet of each campsite.

Group Camping
A separate group campground will be developed to accommodate up to 30 campers in 2-3 camping pods with a centralized gathering area. Electricity, a two unit unisex flush toilet building, and pressurized drinking water will be provided here.

Accessible Cabin
One accessible cabin will be developed for use exclusively by people (and their family or attendants) whose physical disability makes use of traditional camping facilities very difficult or impossible. Development will follow Department ADA cabin design and construction standards.

Day Use

The Pike Lake Management Area currently has a beach, large picnic area, two rentable shelters and a small non-motorized boat access site. Water-based recreation is one of the primary attractions for Pike Lake Unit visitors. There are a number of improvements and additions recommended for the day use facilities. All shoreline developments will meet or exceed the requirements of NR 1.15 Wis. Adm. Code and Washington County shoreland ordinances for vegetative buffers and building setbacks.

Day Use objectives:

- Provide high quality opportunities for beach use, swimming, and picnicking at Pike Lake.
- Provide motorized watercraft access to Pike Lake with an accessible mooring pier. The total number of vehicle/trailer parking spaces shall not exceed the maximum allowed under NR 1.91 Wis. Adm. Code
- Provide dedicated facilities for non-motorized watercraft access to Pike Lake.
- Provide shore-fishing opportunities for all persons (ADA accessible).

Day Use Management/Development Prescriptions:

Beach and Picnic Area

A redevelopment of the beach and picnic areas will provide for better access, and will address visitor capacity and environmental sustainability. The entire area will be redesigned to better direct water flow away from the lake. The sand beach is currently long and narrow. This configuration, along with the rotting retaining wall, does not provide an adequate sand beach and play area. Each year there is also a loss of the sand beach through wave and ice action. The sand beach will be constructed to better accommodate users and to provide for a more sustainable design. It will be deeper, though not as long as it is now. The picnic and sunbathing area will be redesigned to provide for adequate open space for visitors. The parking lot will be redesigned and enlarged to provide up to 325 parking spaces (including up to 10 pull-through parking spaces) and to improve traffic and pedestrian circulation. A new restroom will be constructed on the north end of the picnic area. The existing south picnic shelter will be replaced by the new education/interpretive center. A conceptual layout of these and other facilities of the day-use area is shown on Figure 1.

Day-use Area Non-motorized Boat Access

Continue to provide a small non-motorized boat access to Pike Lake at or near the picnic area. (This is in addition to the non-motorized boat access site with parking will be developed near the proposed motorized boat access site. See the Non-motorized Boat Access section for additional details.)

Pet Swim Area

An area will be designated north of the beach that will allow for pets to access Pike Lake. A platform will be built upon the shoreline that will allow a pet to jump into the water. This site will also have picnic tables and grills. Pets will be required to be on leash while on land in this area.

Group Picnic Area

A new group picnic area will be developed north of the current picnic area to serve approximately 300 people. This facility will have a separate access road and parking lot. It will have two shelters. One shelter will be an enclosed, heated, year-round facility, approximately 40 ft. x 60 ft., with a capacity of up to 200 people. The other shelter will be an open-air building, approximately 30 ft. x 40 ft., and serve up to 100 people. Outdoor picnic

facilities, an open play area, and playground equipment will also be provided. Two parking lots with a total of 150-200 stalls will be built to serve this facility.

Both shelters will provide a venue for group social events such as corporate gatherings, wedding receptions, banquets or private parties. The open-air shelter will be located near the shoreline of Pike Lake and offer vistas of the lake. Water access will not be offered directly at this site because of the steep banks along the shoreline. Both hiking and biking trails connect this area to the beach and other day-use areas. The addition of these shelters should alleviate some of the capacity issues that currently exist at the day use area.

Motorized Boat Access and Landing

There is a need for a motor boat launch at the Pike Lake Unit to provide lake access for property visitors. Pike Lake access is currently provided by two public and two private boat access sites. Parking is not provided at the two town road end public landings. Private landings provide beneficial access to the lake, but their future availability is uncertain. The Pike Lake Unit will develop a boat access site at the southern end of the property, providing access in perpetuity. This access site will provide two boat ramps with parking that will meet boating access standards under NR 1.91 Wis. Administrative Code. The site will be lighted, have a two-stall restroom with pressurized water, and a boat washing station. The development of the boat launch facility will depend on available funding and an assessment of reasonable motorized boat access to Pike Lake.

Non-Motorized Boat Access Site

A new carry-in boat access site will be developed north of the new motorized boat launch. This site will provide up to nine vehicle only parking stalls, one being an ADA stall. Other site amenities will include an open, grass boat staging area and shoreline modifications such as a grass path to the shoreline and with a gravel/sand mix surfaced launching pad on the shoreline. Restrooms and water will be available near the motorized access site, a path will connect the two sites.

Fishing Platform / Pier

A fishing platform of a universal design (i.e. ADA accessible) that will accommodate all users will be developed. It will extend out 40'to 60' from the shore and have a "platform" approximately 8' x 15' to 18'. An ADA compliant will link the fishing platform to the Day Use Beach and Picnic Area and parking lot.

Educational/Interpretive Center

An educational and interpretive building will be constructed to provide year-round indoor space for educational and interpretive activities and displays. (See the Interpretation/Education Program section of this plan for additional information on the use of this building.) The educational center will be located where there is easy access to the Management Area's highest concentration of interpretive and educational features and to provide scenic vistas, if possible. The educational center building will include public restrooms, a nature center exhibit area and an outdoor deck with table seating. The building may also include a modest Friend's concession space for the sale of pre-prepared food, beverages, nature literature and merchandise, a water craft and winter sports equipment rental area, and a meeting/classroom

space to accommodate groups up to 80, with a sink, projection screen, audio-visual equipment and an equipment/storage room. The building would also serve as a warming shelter for ice angers, skiers and other winter recreational users of the property. Hunter and Boat Safety education classes would be held at the center.

Use of or rental of the meeting/classroom space will be limited to interpretive/educational gatherings, Department and State Agency meetings, non-profit recreational /park events and use by park-related organizations, including the Friends of Pike Lake.

Amphitheater
An amphitheater to accommodate 50 to 75 people will be constructed on the north end of the beach picnic area for outdoor educational programs and other gatherings.

Table 2-4: Summary of Existing and Proposed Facilities - Pike Lake Recreation Management Area

Facility	Existing	Proposed	Total
Non motorized water access sites	1	1	2
Motorized water access site / landing	0	1	1
Accessible Fishing Pier	0	1	1
Beach / Day Use Area	1	0	1
Camping sites:			
Modern Campground			
Non electric	22	0	22
Electric	10	30	40
Accessible	1	0	1
Group Campground	0	1	1
Rustic Hike in campsites	0	3	3
Picnic Shelters	1	2	2*
Interpretive Center	0	1	1
Dog Swim Area	0	1	1

* One picnic shelter site will be removed and be replaced by the interpretive center.

Hunting

The Pike Lake Management Area will be closed to all hunting and trapping because of the high intensity of other recreational use on this portion of the property.

Deer and other wildlife numbers and their impacts will continue to be monitored. If conditions warrant hunting, shooting, or removal by other methods to control wildlife numbers may be allowed in the future. Such hunting, shooting or other methods would only be done during time periods and at locations that would ensure public safety and minimize conflicts with recreational users.

Interpretation / Education Program

The Pike Lake Unit has a current property interpretive plan. The current interpretive facility at the property is a kiosk near the beach house that covers the glacial history of the region. The interpretive plan recommends the following themes be promoted:

- Wisconsin glaciation and the Ice Age National Scenic Trail,
- Bird migration experienced at the property and along the lake.

Other types of themes that often are addressed in Department interpretive/educational programs include, but are not limited to, historical/archeological resources, environmental or ecological issues, resource management topics, and general nature interpretation.

This property master plan does not direct the focus, content, or the specific ways interpretive/educational programs will be carried out on the property. That is determined by the property Interpretation/Education Plan, which may be revised from time to time. The master plan supports the interpretive/educational program by providing a variety of facilities and resources. Two property facilities whose primary purpose is for interpretation/education are the planned education building and the nature trail. Other interpretive/educational elements, such as signs or kiosks, may be incorporated into property trails and facilities as directed by the interpretive/educational program implementation plan. Future expansion of the nature trail, or establishment of a new nature trail is authorized if it is detailed in the property interpretation /education plan and if it does not conflict with other established facilities, uses, or sensitive resources.

Vegetation Management

The primary focus of vegetative management in the Pike Lake Management Area is to provide complimentary recreational and conservation opportunities in a forested environment. See Maps D and E for existing and future vegetative coverage of this management area. Vegetative management on the Pike Lake Management Area emphasizes management for natural communities for ecological benefits and the maintenance of a natural appearing and safe recreational environment. This area is classified as a Recreation Management Area: Type 4. Management of this area is described below.

Management Objectives:

<u>Long-term Resource Management Objectives (50 yr +):</u>

Provide a high quality recreational setting with an attractive, natural appearing forested setting featuring a large contiguous block of closed canopy northern hardwood forest with old growth characteristics, including abundant larger trees of older age classes, snags, and downed coarse woody debris and smaller tracts of grassland/oak savanna, wetlands, and shoreline habitat.

<u>Short-term Resource Management Objectives (0 - 50 yr):</u>

- Protect and enhance the natural, scenic character of the area. Expand and maintain the acreage of predominantly closed canopy, northern/central hardwood forest to

approximately 400 acres for enhanced habitat for forest interior bird species, particularly threatened, rare or special-concern birds such as Acadian Flycatcher and Cerulean Warbler. On appropriate sites establish and maintain old growth forest characteristics, including abundant larger trees of older age classes, snags, and downed coarse woody debris.

- Maintain approximately 25 acres of oak aspen dominated stands.

- Establish and maintain approximately 80 acres of oak savannah and approximately 15 acres of grassland/shrub community type in areas that do not fragment forest blocks.

- Protect and maintain 37 acres of open canopy wetlands and 27 acres of lowland hardwood wetland communities. Protect and maintain permanent and ephemeral ponds.

- Maintain and enhance the shoreline of Pike Lake (outside of developed recreational use areas) to provide fish and wildlife habitat.

Resource Management Prescriptions by Habitat Type

Northern\central Hardwoods

- Use uneven-aged selection harvests and group harvests to maintain and expand this forest type and to establish larger trees and closed canopy conditions. The following management tools may be used, as appropriate - shelterwood, group selection, and single-tree selection.

- Use intermediate treatments, such as release or thinning, to develop uneven-aged stands and improve composition and timber quality.

- Artificial regeneration from seed or seedlings may be used to establish desirable trees where seed source and advanced regeneration is lacking.

- Except for developed sites, retain 70% crown closure of the forest canopy, using selective cutting or timber stand improvement practices.

Oak

Maintain oak stands through management techniques appropriate for the stand and site conditions. Both natural and artificial regeneration systems may be used and needed.

- Use natural regeneration systems for oak include even-age management techniques, clearcutting, and shelterwood harvesting.

- Artificial regeneration from seed or seedlings may be used to establish oak reproduction prior to or after timber harvests when natural regeneration is not adequate.

- Other management techniques that may be used to help regenerate oak stands, including soil scarification, herbicide treatments and prescribed fire, where feasible and safe.

- Use intermediate treatments, such as release or thinning, to develop young stands and improve composition and timber quality.

Aspen

- Achieve natural regeneration of aspen primarily through coppice (i.e., root sprouts).

General Management Prescriptions for All the Above Types of Forest Stands

- Follow the DNR Silviculture and Forest Aesthetics Handbook for additional guidance on selecting the appropriate regeneration system based on stand composition, advanced regeneration, site, and other factors.

- Give aesthetic and recreational values preference when making decisions on timber and other management with primary focus on the timing of management actions to minimize negative visual and audio impacts on recreational users.

- Retain abundant snags and dead/downed trees for wildlife habitat, except near designated public use facilities.

- To maintain or restore scenic values, conduct salvage harvests and take other actions as necessary to restore sites following natural disturbances. Planting appropriate native tree species may be used.

- Trees and shrubs may be removed as needed for the development or redevelopment of designated public use areas or sites.

- Planting and maintenance of native trees, and shrubs may be done on these sites for screening, scenic enhancement, wildlife habitat enhancement or to enhance recreational use of the site.

- Conduct management activities so as to minimize and forest fragmentation and maintain interior forest habitat conditions. Give a high priority to reforesting openings within or between larger wooded tracts.

Lowland Hardwood

- Due to the variability of local site conditions, the selection of the most appropriate silvicultural system to use for these forest stands is very site-specific and must be determined based on the judgment and experience of the managing forester.

Emergent Marsh

- Remove invasive and woody species through the use of mowing, cutting, burning, herbicide, or a combination there of.

- Maintain or restore original hydrology of wetland where applicable.

- Maintain health of vegetative community through the use of prescribed fire where possible.

Open Canopy Wetland

- In areas that are undergoing conversion from open sedge meadow/wet prairie to shrubs and brush use prescribed fire, mowing, and herbicide to remove the woody vegetation.

- On sites that are dominated by monotypic stands of reed canary grass, where practicable use prescribed fire, mowing, and herbicide treatment to reduce competition to the native vegetation.

Grassland/shrub, Prairie and Oak Savanna

Land management in areas of prairie restorations and oak savanna primarily focuses on simulating the natural disturbances (primarily fire) that historically functioned to maintain structure and diversity in these communities.

The following management practices are to be applied on grassland/shrub, prairie restoration, and oak opening restoration sites:

- Where possible, use prescribed fire to invigorate native grasses and forbs to suppress the encroachment of woody species, and in some cases to control non-native invasive plants.

- Use cutting, mowing, brushing, and herbiciding (when necessary) to remove invading trees and shrubs and exotic or invasive grasses and forbs.

- On prairie and savanna restoration sites, plant a diversity of native prairie grassland species.

- On sites to be targeted for cool-season grass habitat, plan a variety of cool-season grasses or legumes.

- Oak may be planted to increase or establish oak on oak opening restoration sites.

- Locate prairie restoration sites to maximize grassland block size and minimize forest fragmentation.

Other Authorized Resource Management Activities:
In addition to the management activities that are included in the prescriptions above, the following may be used, as deemed appropriate by the property manager:

- Hazard tree removal, shrub cutting or shearing, mowing, prescribed fire, chemical treatment, mechanical site preparation (tilling), and planting native trees and shrubs and cool season or prairie grasses.

Headwaters Recreation Management Area (2,810 acres)

The Headwaters Recreation Management Area is the expanded project boundary area as shown on Map C. This management area is classified as Recreation Management – Type III. A Recreation Management –Type III Area provides readily accessible areas with modest recreational facilities offering opportunities at different times and places for a variety of dispersed recreation.

Recreation Management

The primary focus of recreation management in the Headwaters Management Area is to provide for a variety of compatible non-motorized recreational uses, including hunting, to compliment the more intensive uses on the Pike Lake Management Area.

Recreation Management Objectives:

- Provide for compatible, non-motorized trail uses (including but not limited to hiking, skiing, and biking) as may be appropriate for the capability of the lands acquired.
- On a route that are compatible with natural resources and other recreational uses, accommodate a "pass-through" connector snowmobile trail when it is essential for the function of the regional snowmobile trail network.
- Provide for a segment of the Ice Age National Scenic Trail.
- Provide a broad range of hunting and trapping opportunities
- Provide wildlife viewing where opportunities are available.

Recreation Management/Development Prescriptions:

Non-motorized Trails

Establish trails for hiking/skiing, wildlife observation, hunting access and other compatible non-motorized recreational uses based on opportunity and demand. Decisions on the types and locations of trails must be based on consideration of potential conflict with other uses, such as hunting, and impacts to sensitive wildlife habitat. Trail locations and use designation may change over time as lands are acquired and circumstances change. All these trails will be built to the NR 44 standard appropriate for the designated uses. Construct ADA accessible trails where appropriate.

The National Scenic Ice Age Trail is discussed in the General Property-wide Management Section of this plan, because it traverses more then one management area on the property.

Snowmobile Trails

The Department recognizes there is a potential future need for a southerly extension of the existing county snowmobile trail which may require crossing the Pike Lake Unit - Headwaters Recreation Management Area. Therefore, as existing trails across private land become inaccessible, the Washington County Association of Snowmobile Clubs can request access to Department-owned lands in the Pike Lake Unit Headwaters Management Area under the following conditions:

- That the trail be developed on a Department-approved trail corridor on the Department-owned lands in the Headwaters Management Area, as outlined in the KMSF-Pike Lake Unit master plan,
- That the Washington County Snowmobile Alliance obtain permission from private landowners within the Headwaters Management Area boundary whose property the trail would be crossing,
- That the trail on Department-owned lands be developed in an environmentally sensitive manner that minimizes impacts on the natural resources,
- That the trail be a corridor/connector trail -- not a looped trail -- to other public trails,
- That the trail be designed to minimize conflicts between users of the Headwaters Management Area.

Hunting and Trapping

Provide a range of hunting and trapping opportunities per established seasonal frameworks consistent with statewide rules, Department policy, and local ordinances.

Vegetation Management

The primary focus of vegetative management in the Headwaters Management Area is to compliment recreational use and conservation opportunities. Vegetative management in this area will emphasize the maintenance and enhancement of plant native communities. Once lands are acquired, management objectives will be determined to provide the appropriate ecological setting or habitat. General guidelines are listed under the management objectives.

Long-term Resource Management Objectives (50 yr +):

- Provide wildlife habitat and a high quality recreational setting featuring forested areas, grasslands and prairie/oak savannas, wetlands, and shoreline habitats. Maintain and enhance existing forested lands, and expand where practicable.

- Protect the quality and extent of the wetlands, and increase the protection of water quality of the Ashippun River and Pike Lake.

- Convert and maintain acquired agricultural lands to native grasses and forbs or cool season grasses, or to forest cover.

Resource Management Prescriptions:

Follow the habitat type management prescriptions for the Pike Lake Management Area.

Administrative Management Area (5 acres)

The administrative management area includes facilities such as the Forest Entrance Visitor Station (FEVS) building and the office for state forest and other Department staff. It also includes the shop building and adjacent area serves has facilities for repair, maintenance and storage of forest equipment and infrastructure for the state forest, wildlife and warden staff

Management Objectives:

Provide areas and facilities to support operations and administration needs and provide facilities to help deliver public services.

Management/Development Prescriptions:

- Maintain the Forest Entrance and Visitor Station (FEVS) building to provide visitor services and office space for state forest, wildlife, forestry, and warden staff.
- Provide shop/storage buildings and adjacent areas for safe and efficient maintenance of State Forest equipment and facilities. Also, provide shop/storage building space, as necessary, for other Parks, Forestry, Wildlife, and Law Enforcement Programs.
- Provide shop/storage building(s) for use by State Forest staff and staff from other department programs in locations that do not conflict with the primary purposes of the property. Facilities may be redeveloped or new facilities constructed as deemed appropriate by the Department.
- Maintain native landscape plantings around these buildings to provide screening, improved aesthetics, and visitor education through interpretation.
- Maintain small, appropriate turf areas around the buildings. Manage the non-turf areas according to the Recreation Management Area objectives and prescriptions.

General Property-wide Management Elements

The following management elements apply to all management areas of the Pike Lake Unit excluding lands in private ownership and easement areas, unless otherwise stated below. This part of the plan contains sections related to:

- Real estate management
- Ice Age National Scenic Trail
- Property-wide management policies
- Operations, administration and development

Real Estate Management

Real Estate Acquisition Policy:

All property purchases are on a willing seller basis. The Department is required by state and federal laws to pay "just compensation," which is the estimated market value of a property based on an appraisal by a certified general licensed appraiser. At times, it is in the interest of the Department and the landowner for the Department to acquire partial rights to a property, in the form as an easement. The WDNR has a number of easement alternatives available to address these situations. Landowners within the Pike Lake Unit boundary will be contacted periodically by Department staff to explain the Department's land acquisition program and to see if they have an interest in selling their property for state forest purposes.

Payment in Lieu of Taxes:

For all new properties purchased, the Department makes an annual payment in lieu of real estate taxes to replace property taxes that would have been paid had the property remained in private ownership. The payment is made to the local taxing authority where the property is located. More detailed information on how the Department pays property taxes may be found in a publication titled *Public Land Property Taxes*, PUB-LF-001.

Ice Age National Scenic Trail

The Pike Lake Unit will provide an estimated 4.5 mile segment of the Ice Age National Scenic Trail across the property. Within the Headwaters Management Area the trail will generally follow the route shown on Map C.

In the Pike Lake Management Unit, relocate and redevelop the trail to a new route to be used only by the Ice Age Trail. It will be a primitive hiking trail built to standards established by the Ice Age Trail Alliance (IATA) to comply with " Ice Age National Scenic Trail: A Handbook for Trail Design, Construction and Maintenance".

General Property Management Policies and Activities

Vegetation Management:

- Conduct educational programs on vegetation management objectives and practices.

- Conduct periodic inspections for invasive exotic species, such as spotted knapweed, purple loosestrife, garlic mustard, honeysuckle, and buckthorn, etc. Control infestations by appropriate, approved methods, including, but not limited to, hand pulling, mowing, cutting, girdling, tilling, herbicides, and fire.

- To the degree practicable, locate logging roads and skid trails to minimize the impacts on campsites and designated recreational trails. Temporary or permanent logging roads may not be sited on the Ice Age Trail. Minimal crossings of the Ice Age Trail are allowed when other routes are not feasible.

- Except in the case of catastrophic events where diseased or downed trees negatively affect human health, safety, and welfare, tree removal will primarily be performed when the ground is frozen to minimize soil compaction and disturbance.

- Conduct vegetation management at times that would generate minimal impact to recreational use and breeding wildlife populations

Wildlife Management:

From time to time some wildlife may become overabundant. Overabundant wildlife such as raccoon, Canada geese, and other species can cause nuisance problems and, in some cases, health hazards for property visitors. Management of these species within the Pike Lake Unit may include the controlled removal of nuisance animals during high population periods, or when excessive human exposure and/or danger exists. Live trapping and relocation of these species to other areas is not a viable option due to their overpopulation throughout the region as a whole. Animals may be removed by contract trapping or shooting and/or removal by staff.

Fee Areas:

A vehicular annual admission sticker or daily fee payment is required for property access.

Trail Development:

The specific footprint location and design of the designated trails will be determined in the facility design process during the initial plan implementation. Trails will be sited and designed for long-term sustainability. Existing trails and roads will be evaluated for their suitability for the intended use. If they cannot be redeveloped to be sustainable, or if they cannot be readily redeveloped to provide the intended visitor experience, then the trail should be developed in a new suitable location. In the future, if any trail segments are found not to be sustainable under intended use, they will be redeveloped to be sustainable or closed and relocated on a more suitable site and, in either case, the assigned design level will be maintained.

Refuse Management:
Day-users in the Pike Lake Unit areas are required to carry out all refuse and recyclables they bring in. No trash receptacles are provided. In the campground, campers are provided with refuse and recyclable waste disposal containers.

Operations and Administration

Emergency Action Plan:
Maintain an emergency action plan that describes staff response to natural disasters and outlines Department coordination with other agencies. The suppression of fires at the Pike Lake Unit is addressed in the emergency action plan for the property. This plan should be reviewed on an annual basis for possible revision. Department responses to natural resource impacts resulting from natural disasters will be determined by specific interdisciplinary evaluations following such an event.

Response to Catastrophic Events:
Catastrophic events; such as, but not limited to, forest disease or insect infestation, or blow-down, or fire will be managed on a case-by-case basis as needed. Specific management options will be chosen after considering multiple factors, including visitor safety. The normal response to wildfire on the property will be to protect life, property, and natural resources by extinguishing the fire with initial attack. Forest pests will be controlled, as necessary, and as required by Wisconsin Statutes 26.30.

Endangered and Threatened Resources:
All management actions occurring on the property will be conducted in a manner that avoids negative impacts to threatened / endangered resources.

Municipal Jurisdiction within the State Forest (County and Township roads):
Several county and town roads pass through the property. These roadways will continue to be managed by the respective municipalities outside the scope of this master plan.

Best Management Practices (BMPs):
All land management and development activities within the property will follow the standards for Best Management Practices for water quality.

Inspections of Designated Use Areas:
All designated use areas must be inspected semiannually (Wis. Statutes s. 23.115). Vegetation inspections in designated use areas must be performed semi-annually with one of the inspections performed by a person trained in the identification of hazard trees. Monitoring will pay particular attention to forest infestations that pose a serious threat to forest resources, such as oak wilt, pine bark beetles, gypsy moth, forest tent caterpillar, two-lined chestnut borer, and emerald ash borer. Control measures will be performed as needed.

Protection of Historic and Archaeological Features:
Approved future facility development sites (parking lots, buildings, etc.) will be inspected prior to construction to locate and evaluate any evidence of significant archaeological or historic material in compliance with federal laws and state guidelines on historic preservation.

Facility Development Standards:
All approved future facilities, roads, and structures providing either public recreation or supporting public recreation activities or other administrative services will be designed and constructed in compliance with state building codes and DNR design standards. All forest facilities will be constructed with colors and materials that complement the aesthetic of the property. All new facilities and buildings, whether for use by the public or by employees, will comply with the Americans with Disabilities Act (ADA).

Public Communication Plan:
The Property Manager will serve as the public contact official for this property. The manager will maintain a mailing list of persons or groups interested in the Pike Lake Unit's on-going management and development. Mailings, news releases, and other means may be used to notify the public of significant issues or events that occur on the property.

Yearly Management Assessment:
The property manager will conduct a yearly meeting to document and assess progress on the management actions accomplished during the previous year and plan management activities for the upcoming year. A file documenting these yearly assessments is maintained for implementation of the Manual Code 9314.1(C), which calls for formal plans to determine progress on implementation and assess whether the plan is accomplishing the intended results.

Uniform Property-Wide Signage Plan:
The WDNR will develop and implement a property-wide signage system plan in compliance with the Sign Handbook-Manual Code 8672.05 and the Design Standards Handbook-Manual Code 8605.1. Signs will have a unified aesthetic character that is harmonious with the area's natural surroundings. Signs to be developed in this plan include property trail markers and regulatory, directional, informational, interpretive and boundary signs. Signage and trail markings related to the Ice Age National Scenic Trail will be designed and installed by the IATA in compliance with the 2001 *Ice Age National Scenic Trail: A Handbook for Trail Design, Construction and Maintenance.*

Projected Costs for Facility Development, Improvements, and Construction:
The rate of development will depend upon the availability of funding and the approval of the improvement projects as part of the Department of Natural Resources' Capital Development Process. It is estimated that the total cost of all phases of Pike Lake Unit improvements will be approximately $4.4 million (in 2009 dollars), as shown in Table 2-5.

Table 2-5: Pike Lake Unit Proposed Facility Developments and Improvements

Pike Lake Management Area	Facility Developments and Site Improvements	Cost Estimate
Group Picnic Area	Open-Air Picnic Shelter, Parking, Picnic Tables, Grills	$125,000
	Enclosed Picnic Shelter, Parking, Picnic Tables, Grills	$235,000
	Restroom, Drinking Fountains	$200,000
	Road to Group Picnic Area	$175,000
	Playground	$35,000
Beach and Day-Use Area	Pet Swimming Area and Platform	$15,000
	Carry-In Boat Access Site	$12,000
	Re-Designed Beach and Shoreline Restoration	$350,000
	Restroom	$175,000
	Outdoor Amphitheater, Stage, Seating	$55,000
	Interpretive/Education Center and Restrooms	$500,000
	Sustainable Re-Design of Parking Lot	$475,000
	ADA-Accessible Trail, South Shoreline	$9,500
	ADA-Accessible Fishing Pier	$25,000
	Bike Trail, Campground to Beach/Day-Use Area	$120,000
Motorized Boat Access Area	Road to Access Sites and Parking	$240,000
	Boat Access Parking Lot – Motorized and Carry-In	$90,000
	Motorized Boat Launch, Restroom, Boat Wash	$300,000
	Carry-In Access and Parking	$30,000
Campground	30-Unit Electric Campground Loop	$475,000
	Entrance Re-Design	$75,000
	Toilet-Shower Building	$225,000
	Dump Station Upgrade/Re-design	$135,000
	ADA-Accessible Cabin	$150,000
	Outdoor Group Campground and Flush Toilet Building	$425,000
	Three Rustic, Walk-In Campsites and Uni-Sex Vault Toilet	$65,000
Administrative Management Area	Cold Storage Building – Multi-Program Use	$150,000
TOTAL	**Estimated Total Cost**	**$4,866,500**

Note: Costs for the development are based on 2009-20011 dollar-values and assume full completion of all construction. In actuality, work may be phased over several state capital biennial budget cycles.

Funding Constraints:

The ability to implement any Master Plan element will depend on the budgetary authorization granted to the Department of Natural Resources by the Wisconsin Legislature and the Governor of the State of Wisconsin, as well as the availability of state, federal, or other funding sources.

Chapter Three – Supporting and Background Information

Material for this chapter is taken from the *Kettle Moraine State Forest – Pike Lake Unit, Property and Regional Analysis (WDNR 2009);* http://www.dnr.state.wi.us/master_planning/pike_lake/ra.html. Refer to this document for additional data and analysis on this property and its ecological and socio-economic context.

The Pike Lake Unit was designated as a State Park from it creation in 1971 until 1997, at which time its administrative designation was changed, it was incorporated into the Kettle Moraine State Forest. The 678-acre Pike Lake Unit of the Kettle Moraine State Forest is located in Washington County, approximately 25 miles northwest of Milwaukee. The area has a mix of agriculture, forest, wetland urban, and rural residential, Ready access from urban centers in southeastern Wisconsin is provided by State Highways 60 and 83, and Interstate 41.

Washington County's landscape was shaped by glaciers and consists of wooded hills, valleys, rivers and lakes, wetlands, and abundant farmland. Rugged kettle moraine features define the central portion of the County, including the Pike Lake Unit. The 522-acre spring-fed kettle lake, from which Pike Lake is named, attracts tourists and day use visitors to the property to motorboat, ski, swim, windsurf, and fish. Hiking, cross-country skiing and rustic camping is also popular at this rolling, forested property. The National Ice Age Trail follows the glacial moraine through the county and is an important feature of the Pike Lake Unit.

Land Use and Trends

Washington County lies within the seven county Southeastern Wisconsin region and is part of the Milwaukee metropolitan area. It is the most densely populated region of the state, with over 1.9 million people in 2000. Washington County lies in the northwestern portion of this region, and contains a mix of urban areas, small villages, rural subdivisions, and areas of farmland, forest, and wetlands. While agricultural and other undeveloped lands are still common here, this area is rapidly developing as cities and villages push outward and more rural subdivisions are platted as shown on Map F.

The County has experienced significant population growth and increased urbanization in recent decades, and it is projected to grow by nearly 34 percent (39,800 people) by 2035. This is the third highest percentage increase in region (*Multi-Jurisdictional Comprehensive Plan for Washington County: 2035*). Between 1970 and 2004, the population increased by 93.6% (See Table 1)[1]. Population is projected to increase to 149,500 in 2025 and grow to 157,300 by 2035[1]. Recently, the city of Hartford, situated next to the Pike Lake Unit, between 2000 and 2002 saw the highest growth in Washington County. The city gained 532 residents during that

1 SEWRPC, 2004 A Park and Open Space Plan for Washington County, Washington County Planning and Parks Department, Southeastern Wisconsin Regional Planning Commission, March 2004

two year span. Farming has been on a steady decline in Washington County with a loss of 31% of its farms and 34% of its agricultural land[2] between 1980 and 2002.

Geology and Soils

The Kettle Moraine Landscape near Pike Lake is distinguished by its rugged glacial features – kames and eskers. Powder Hill, a large glacial kame, rises 1350' above sea level and is the second highest point in southeastern Wisconsin. The beach and picnic area are at approximately 1000' above sea level, and provide a flat recreational plain

Soils of the Pike Lake Unit are predominantly Hochheim-Theresa. This is a well-drained soil that has a subsoil of clay loam, formed in loess and the underlying sandy loam to loam glacial till. On both the northern and southern edges of Pike Lake the soil is classified as Houghton-Palms-Adrian. This is a very poorly drained organic soil typically found along drainageways, in depressions, and in old lakebeds.

The United States Department of Agriculture's Soil Survey for Washington County indicates that there are moderate limitations of Hochheim-Theresa soil for recreational trails. The soil becomes muddy and slippery when wet and it is erodible. There are very slight limitations of this soil for the development of playgrounds, picnic areas, and utility buildings. There are both severe and very severe limitations to Houghton-Palms-Adrian soils for all development, including recreational trails, buildings, play areas, and campsites.

Vegetative Cover

The Pike Lake Unit has a variety of plant communities including mixed hardwood forest, conifer plantations, wetlands, restored native prairies and agricultural fields. Existing vegetation on the property is shown on Map D and listed on Table 3-1. About 50 percent of the current state-ownership is forested with about 93 percent being upland forest with a mix northern\central hardwoods, sugar maple, beech, basswood, white ash, and yellow birch. Oak dominated stands comprise only 25 acres. A small amount of lowland hardwoods are also present. The non-forested lands are primarily grass, brush, marsh, cropland, and maintained ground. Several small permanent ponds and a number of ephemeral ponds are also present. Table 3-1 summarizes the various vegetation cover types occurring in the Pike Lake Unit.

2 A Park and Open Space Plan for Washington County, Washington County Planning and Parks Department, Southeastern Wisconsin Regional Planning Commission, March 2004

Table 3-1: Vegetation Cover Type - Pike Lake Unit (managed lands)

Vegetation Type	Acres	Percent
Northern\central hardwood	344	51
Oak	25	4
Grassland/shrub	178	27
Lowland hardwood	28	4
Open canopy wetland	37	6
Open water – deep water marsh	9	1
Ponds/ephemeral ponds	13	2
Maintained active use grounds	28	4
Ag land	8	1

Conservation Needs and Opportunities

Another record of species with special management needs is the Departments "Wildlife Species of Greatest Conservation Need (SCGN)" list. This appears in the Strategy for Wildlife Species of Greatest Conservation Need in Wisconsin (WDNR 2005). SGCN include species already recognized as Endangered, Threatened, or Special Concern on state or a further decline. In total, 43 species are potentially associated with the Kettle Moraine landscape. A complete listing of needs and opportunities can be found in the Property and Regional Analysis.

Endangered Species

As of June 2009 (WDNR 2007), NHI data indicates that two species of fish, one turtle, and three types of natural communities are present or may likely be found on the Pike Lake property as listed in Table 3-2. The records also show several others that might be on lands within one mile around the property and they are also listed.

Table 3-2: Documented Rare / Threatened Wildlife Species and Native Communities - Pike Lake Unit

Common Name	Scientific Name	Status
Banded Killifish	Fundulus diaphanus	SC/M
Pugnose Shiner	Notropis anogenus	THR
Blanding's Turtle	Emydoidea blandingii	THR
Acadian Flycatcher	Empidonax virescens	THR
Cerulean Warbler	Dendroica cerulea	THR
Wood Thrush	Hylocichla mustelina	SC/M
Brown Thrasher	Toxostoma rufum	SC/M
Blue-winged Warbler	Vermivora pinus	SC/M
Southern Dry-mesic Forest	na	na
Forested Seep	na	na
Hardwood Swamp	na	na

THR = threatened; SC = Special Concern. WDNR and federal regulations regarding Special Concern species range from full protection to no protection. SC/H = take regulated by establishment of open closed seasons; SC/FL = federally protected as endangered or threatened, but not so designated by WDNR; SC/M = fully protected by federal and state laws under the Migratory Bird Act. LT = Federal listed threatened. GC = Greatest Conservation Need

Water/Fisheries Assessment

Pike Lake is a 522-acre natural lake that formed approximately 10,000 years ago during the Wisconsin glaciation with a maximum depth of 45' and a mean depth of 13.5'. It is classified as a mesotrophic–eutrophic lake with fairly large areas supporting abundant rooted plants and algae. The lake generally has a muck bottom but also has areas of more course material such as sand and gravel. Several shoreline areas in the southeastern and southern parts of the lake have gravel and rubble shorelines that provide excellent habitat for walleye spawning. Most of the western and southern shores are developed into year-around homes. The north shore is largely undeveloped wetland fringe. Most of the eastern shore is state owned, lying within the Pike Lake Unit property.

Walleye is the most abundant and sought after game fish in Pike Lake. Other species found in the lake include yellow perch, bluegill, rock bass, and northern pike. Due to moderate levels of mercury contamination, the lake falls under the general state mercury advisory.

The Rubicon River feeds and drains the Pike Lake. A small dam, on land owned by the Wisconsin Department of Transportation, is located at the lake's outlet; it is used to control water levels in the lake. Several small feeder streams also contribute to the lake.

From Pike Lake the Rubicon River flows west from the city of Hartford to the Rock River. Rural and urban pollution has adversely affected water quality and habitat. Rough fish, particularly carp, dominate the fishery in the river's lower portion[3]

Pike Lake Unit - Recreation Use and Facilities

Recreational use of the Pike Lake Unit is year round and quite broad, including trail-based activities such as hiking, snowshoeing, and skiing (traditional and skaters); water-based activities such as swimming, wind surfing, canoeing/kayaking, and cold and warm water fishing; picnicking; camping; and nature-based activities such as birding, nature study and photography. The property does not provide a public motor boat access to Pike Lake. The Unit offers 32 campsites, eight miles of trail and a very popular beach / day use area along with a 60' observation tower as shown on Map G.

Due to its proximity to Milwaukee and Interstate 41, the Pike Lake Unit has a high demand for camping, particularly on summer weekends, with an average occupancy rate close to 95%. The weekday occupancy rate is lower at 42%. About 60 percent are in tents and 40 percent in an RV or trailer. A similar pattern is also exhibited at the campgrounds in the Northern Unit of the Kettle Moraine State Forest. The demand for electric sites is especially high at both state forest units.
Visitation at the Pike Lake Unit is estimated at more than 190,000 visitors annually. The numbers have been climbing steadily recording a 22 percent increase over the last 10 years.

3 Eagan, Lloyd L. 1989. Upper Rock River Basin Areawide Water Quality Management Plan. Wisconsin Department of Natural Resources

Pike Lake Motorized Boat Access

Pike Lake has four motorboat access sites, none of which are located at the Pike Lake Unit. The four motorized boat access sites include two town road ends and two private launches. People routinely launch canoes, kayaks and similar craft from the Pike Lake Unit's day use and picnicking area.

The public boat launch sites are unimproved Town of Hartford road ends on the west side of the lake. No off-street parking is provided and parking is not allowed on the street. People who use this site typically launch their boat, then one person drives the vehicle and trailer to the Pike Lake Unit's beach parking lot on the east side of the lake while another person boats across the lake and picks up the driver. These road end launches are also used by lake residents who do not need on-site parking.

The two private access sites on the west shore of the lake are Reef Point Resort and Johnny's Landing. They have hard-surfaced launches with both gravel and paved parking lots, with some grass overflow parking areas. The Department has an agreement with Reef Point to provide 17 + 1 ADA car/trailer parking stalls to the public. Johnny's Landing provides parking for numerous car/trailer units. The use fee at both sites is $7.00 to launch and park.

The Department, in keeping with State Statutes and regulations which seek to assure that all Wisconsin residents have access to publicly owned inland waters, has administrative rules regarding lake access, and has surveyed all the major lakes in the State to determine if adequate public access to each is provided and maintained. Public water access standards are set by Chap. NR 1.91 Wis. Administrative Code. The public access standard for the 522-acre Pike Lake is a minimum of 17 + 1 ADA and a maximum of 33 + 2 ADA vehicle/trailer parking spaces. The Department has a two-year private providers agreement with Reef Point Resort to provide 17 + 1 ADA public launch parking spaces. This meets the minimum standard; therefore, 16 more public access spaces could be provided to meet the maximum access standard.

Public Lands and Recreation Supplies

Both the Department and SEWPRC have inventoried all park and open space sites owned by a public agency, including State, County, or local units of government and school districts. There are a wide variety of public lands available for outdoor recreation and conservation near Pike Lake. The major land areas are highlighted below.

Kettle Moraine State Forest- Northern Unit

The Northern Unit of the Kettle Moraine State Forest is located 45 minutes north of Milwaukee and 30 minutes north of Pike Lake. Amid almost 30,000 acres of hills, lakes, grasslands and woods, visitors can camp, swim, boat, hike, and hunt. The forest is known internationally for its unique glacial features

Horicon National Wildlife Refuge/Horicon Marsh Wildlife Area

Horicon National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service, is located on the west branch of the Rock River in southeastern Wisconsin and encompasses 21,000

acres. The southern 11,000 acre Horicon Marsh State Wildlife Area is managed by the Wisconsin Department of Nature Resources. Both agencies work together to manage the marsh as one 32,000-acre wetland ecosystem. It is the largest freshwater cattail marsh in the United States. Renowned for its migrant flocks of Canada geese, it is also home to more than 260 kinds of migratory birds.

Jackson Marsh Wildlife Area

Jackson Marsh is approximately 2,500 acres and features a southern wet forest of silver maple and a white cedar-tamarack swamp, a community type more common in northern Wisconsin. The silver maple forest is a mature, seasonally inundated wet forest with typically northern elements such as yellow birch and black ash. The cedar swamp is a white-cedar-tamarack tract. Both cedar and tamarack have good reproduction -- an indication of low deer browse. The ground layer contains sphagnum moss and boasts an excellent northern flora including twinflower, gay-wings, false mayflower, three-leaved goldthread, tall northern bog orchid, and numerous sedges. A large area of wet-mesic forest with yellow birch and black ash borders the conifer swamp. Bird life is diverse with sharp-shinned hawk, broad-winged hawk, northern water thrush, white-throated sparrow, scarlet tanager, winter wren, and Canada and black-throated green warblers. The state-threatened Kentucky warbler (*Poorness Formosans*) is also found here.

Theresa Marsh State Wildlife Area

Approximately 5,800 acres, the Theresa Marsh Wildlife Area is located 30 miles north of Milwaukee. The habitats consist primarily of marshland, flowages, streams, and lowland forests. Principal wildlife found in the area includes ducks, geese, deer, pheasants, rabbits, squirrels, great egrets, raptors, shorebirds, and common terns. Primary recreational opportunities include hunting, wildlife viewing, fishing, trapping, hiking, and snowmobiling.

Allenton State Wildlife Area

Like the nearby Theresa Marsh State Wildlife Area, the 1,100 acre Allenton State Wildlife Area, located in Western Washington County, offers a variety of upland and marshlands and stream habitats, including a trout stream. The property is used for a variety of hunting, fishing, and wildlife viewing pursuits, pheasant hunting and trout fishing are especially popular. State Highway 41 provides easy access to the property for residents of the Milwaukee Metro Area.

Ice Age National Scenic Trail Corridor

The Ice Age Trail, which is planned to extend approximately 1,000 miles across the State of Wisconsin along the terminus of the continental glacier, was designated as a National Scenic Trail by the United States Congress in 1980. The Trail is administered by the National Park Service in cooperation with the Wisconsin Department of Natural Resources and the Ice Age Trail Park and Trail Foundation. In Southeastern Wisconsin, the Trail is located or is proposed to be located in the western portions of Walworth, Waukesha, and Washington Counties. About 25 miles of the proposed 37-mile length of the Trail within Washington County had been completed by 2002. Existing segments of the Trail are open to pedestrian travel only which includes hiking, snowshoeing, and cross-country skiing.

Washington County Parks

In 2002, Washington County owned 15 park and open space sites, including seven major parks encompassing 1,245 acres; six other park and outdoor recreation sites encompassing 125 acres; and two other special outdoor recreation sites, not considered part of the county park system, encompassing 141 acres. In all, these 15 sites encompass 1,511 acres or about 0.5 percent of the total area of the county.

Chapter Four – Assessment of the Environmental Impacts of the Master Plan

This chapter explains the potential primary and secondary environmental effects of the management plan for the Pike Lake Unit. Chapter Two describes the preferred management alternative. An analysis of environmental impacts is an important element of the Environmental Assessment (EA) for the Master Plan. The intent of the EA is to disclose the environmental effects of an action (the Master Plan) to decision-makers and the public, and to determine if the action would have a significant impact on the natural and man-made environment. If such an impact is determined, the development would require the preparation of an Environmental Impact Statement would be required. This environmental analysis has been prepared to meet the requirements of the Wisconsin Environmental Policy Act (WEPA) and Chapter NR 150 of Wisconsin Administrative Code.

Environmental Effects and Their Significance (long and short-term)

Impacts to Air Quality

The primary impacts to air quality would come from smoke from prescribed burns that may be used to maintain grassland cover. When grassland areas are burned, the occurrence of these impacts are infrequent and of short duration (less than one day). Impacts on nearby residents would be reduced through staff notifying the public in advance of a planned burn.

During construction periods, dust may be present in the air surrounding project areas. Dust control measures would be employed to reduce the level of impact. Impacts on air quality, whether from fugitive dust particles or construction equipment exhaust emissions, would be finite and short-lived. When construction is complete, no residual impacts to air quality would be detectable from dust-creating activities.

Impacts to Groundwater Resources

The Pike Lake Unit currently has four separate wells. These wells are low capacity that service the campground and day use area. It is possible that another well may needed with the recreational facility expansion. Because these wells are dispersed throughout the property, their effect on the local water table is expected to be minimal.

Impacts to Surface Water Resources

A negligible amount of increased sheet runoff would result from the impervious surface area of the new developments and from some trail improvements. Appropriate run-off mitigation measures would be incorporated into the design of parking lots to promote infiltration of run-off and prevent flow into surface waters. The amount of run-off from new roadways and trails

would be small and it would quickly infiltrate the soil. The risk of water pollution from water-transported materials from these sources would be very small.

Impacts to Geological Resources

No geological resources would be impacted by the proposed project.

Impacts to Visual/ Scenic Resources

Negative impacts on the visual/scenic resources in the area would be minimal or strongly positive. There would be a small increase in the overall level of facility development on the property. However, the expanded campground would not be highly visible from the trail system and the redevelopment out of date day-use area would be more attractive. All developments would, to the degree practicable, be designed to harmonize with the natural environment, and the style would retain the classic "rustic look" people associate with Wisconsin State Parks.

The current visibility of property developments on the Pike Lake Shoreline would not change as significantly as the existing shoreline screening would be maintained. The Department would meet or exceed the standards of the Washington County shoreland ordinance and NR 1.15 Wis. Adm. Code. New buildings and most parking lots would largely be located where they are screened from view from the lake. The visible "footprint" of the beach would be narrowed, but the addition of the fishing pier and boat landing would add small new visible elements to the shore. The visual impact of these would be reduced by using a design and materials that allow the structure to blend into the landscape to the degree practicable.

The proposed forest management would, over time, create a strong positive visual effect due to producing larger trees and forest blocks. Overall, visual evidence of vegetation management activities would be low and of short duration due to the use of special management techniques that minimize aesthetic impacts. To the degree practicable, management activities would be conducted at times of lower public use to minimize impact.

Impacts to Land Use

The main impact would be an anticipated small increase in the level of active recreation. These impacts would be managed like other state parks and forests with resource protection and management.

Most neighboring land use in the vicinity of Pike Lake properties is residential or agricultural, and residential development is rapidly progressing. If additional lands are acquired, thee lands would be permanently converted to conservation and recreation uses. Those lands suitable for development would permanently remain in open-space. Up to 1,814 acres of agricultural land would be converted to these uses, and potentially not be developed.
Some areas of commercial business development also exist. It is not unlikely that some increase in service sector business could occur as spin-off of Pike Lake uses. It is anticipated that some growth in recreation-oriented business development could take place in the vicinity the Pike Lake Unit. Local planning and zoning codes would regulate such development.

Impacts to Infrastructure and Transportation

After all facility development is complete, it is estimated that an additional 10,000 visitors in 300 vehicles would visit Pike Lake, for an annual projected attendance of 200,000 visitors. The increased traffic would not generate enough new traffic to upgrade the existing roads. Local area residents may notice a slight increase in traffic; however, the increase would not likely cause significant safety or congestion impacts.

The Pike Lake Unit is a generator of solid waste. Wisconsin State Parks and Forests promotes and participates in recycling programs to mitigate generation of non-recyclable material that must be disposed of in sanitary landfills. A licensed sanitary waste contractor is hired to pick up recyclable waste and non-recyclable materials.

Noise Impacts

Noise impacts from the proposed project would be negligible. Construction noise resulting from capital improvements such as campsite, road and building construction, vegetation management, and other development activities, could have a slight and temporary impact on the properties' users, wildlife, and neighbors. This noise would peak (high level, short duration) during construction periods, and would not be continuous. Noise generated by recreational users should not be noticeable by nearby residents.

Impacts to Recreational Resources

The additional of a boat landing, expanded camping, additional picnic shelters would increase opportunities a number of popular recreational activities that are highly limited in this region. Construction of the proposed education center would greatly expand and enhance nature-based education opportunities for visitors and areas school groups.

The proposed level of development together with a rustic style would enable and compliment the existing recreational opportunities. The focus of facility developments is two-fold. The first focus is to provide improved and upgraded amenities for campers, hikers and picnickers preferring more modern facilities. The second focus is on reducing the heavy use and impacts within the beach and picnic area by providing greater dispersion for visitors' to other sites on the property.

The planned development, visitor dispersion and vegetative management would provide an improved, more nature-based recreational experience, thus reinforcing the mission of the DNR to provide nature-based, environmentally-sensitive outdoor experiences that are resource protective.

The addition of a motor boat access site at the Pike Lake Unit would not significantly increase boating traffic on the lake. Construction of a public motor boat launch at the Pike Lake Unit would guarantee permanent public access to Pike Lake. Further, this access would substantially improve the convenience of property visitors who wish to boat on the lake. The capacity of the access would be within the maximum allowed under NR 1.91. Wis. Admin Code for a lake of this size, which is 33 car-trailer parking stalls plus 2 ADA parking stalls.

Impacts to Human Health

By providing hiking trails, canoe and kayak access, and hunting opportunities the state forest provides for increased exercise and aerobic activities. Increased outdoor exercise has been shown to reduce individual weight, increase overall endurance, and allow for better cognitive skills. Improved physical fitness also reduces the incidence of many diseases such as congestive heart disease, cancer, and diabetes, while also working to extend overall life expectancy.

Impacts to Biotic Resources

Vegetation and Natural Communities

On the current managed lands a number of vegetation changes would gradually occur over time. The acreage of northern/central hardwoods would increase by about 20 percent (from 344 to 411 acres), and the fragmentation of forest within the forest block would be substantially reduced from present levels. This would greatly enhance the habitat value for interior forest dependant birds and other species. The current extent of grassland/shrub habitat would be substantially reduced from about 178 acres to 15 acres, largely due to its conversion to oak savanna and northern/central hardwoods, important habitat types that are limited within the ecological region. All wetland habitats (open canopy wetlands, deepwater marsh and lowland hardwoods) and ephemeral ponds would be protected and maintained. Due to adding several new recreational facilities and expanding others, there would be an increase of developed and maintained land from 28 acres to an estimated 54 acres.

On lands within the proposed project expansion area that are acquired, forested areas would be maintained and possibly expanded over time, the high quality wetland habitats would be protected and degraded wetlands would be restored or enhanced. Agricultural land would be placed in permanent vegetation cover (forest or grassland). Overall, the proposed habitat management would be a positive benefit to threatened, endangered species and other species of conservation need.

Exotic Plants

A program of regular monitoring and inspection for other invasive exotic species would be implemented. Both aquatic and terrestrial species are included. Some common invasive exotics that would be monitored are garlic mustard, spotted knapweed, wild parsnip, sweet clover, purple loosestrife, tatarian honeysuckle, buckthorn, black locust, and Eurasian water millfoil. Department policies in place that address these threats to the resource base would be followed. Control measures appropriate to the species of invasive would be used. Additionally, the potential introduction and spread of invasive species into the most sensitive habitat areas would be minimized by the proposed limiting of access to or through these areas.

Aquatic invasive species are found in many inland lakes in Wisconsin and are found in more lakes every year. The Department will require the construction contractor to decontaminate equipment adequately to prevent the introduction of invasive species. Educational signage on invasive species, identifying requirements on removing aquatic vegetation from boats and trailers, as well as draining lake water to prevent the transfer of invasive species, will be posted for boaters.

Impacts to Endangered or Threatened Species

Some rare, uncommon, and declining animal species, particularly birds like the Cerulean Warbler and Acadian Flycatcher, have been documented within and near the Pike Lake Unit. Some of the species that are sensitive to size, isolation, context, and quality of their habitat, both forest and grassland. This proposed plan would have no known adverse impacts on threatened and endangered species. The threatened, endangered and other rare species listed below would benefit and receive long-term protection by the habitat management proposed.

Rare / Threatened Wildlife Species that would Benefit Under the Proposed Plan

Common Name	Scientific Name	Status
Banded Killifish	Fundulus diaphanus	SC/M
Pugnose Shiner	Notropis anogenus	THR
Blanding's Turtle	Emydoidea blandingii	THR
Acadian Flycatcher	Empidonax virescens	THR
Cerulean Warbler	Dendroica cerulea	THR
Wood Thrush	Hylocichla mustelina	SC/M
Brown Thrasher	Toxostoma rufum	SC/M
Blue-winged Warbler	Vermivora pinus	SC/M
Southern Dry-mesic Forest	na	na
Forested Seep	na	na
Hardwood Swamp	na	na

THR = threatened; SC = Special Concern. WDNR and federal regulations regarding Special Concern species range from full protection to no protection. SC/H = take regulated by establishment of open closed seasons; SC/FL = federally protected as endangered or threatened, but not so designated by WDNR; SC/M = fully protected by federal and state laws under the Migratory Bird Act. LT = Federal listed threatened. GC = Greatest Conservation Need

Impacts to Historical and Archaeological Features

A number of historic and prehistoric sites have been found around the lake and several on the Pike Lake Unit. The Pike Lake Unit sites include a workshop site and campsite/village of an unknown prehistoric period; mounds, cemetery/burial sites, and corn hills/garden beds of Woodland – Historic Indian origin; late woodland period campsite/village and redeposited artifacts; and a Historic Indian campsite/village site. These sites are the ones that have *previously been identified and recorded.* Additional cultural resources almost certainly exist within the area, but are yet to be identified and recorded. When required, site-specific archeological surveys would be conducted prior to construction of development projects following Wisconsin State Historical Society and DNR procedures. Appropriate protection measures would be followed if any historical or archaeological features are found.

Economic Effects and their Significance

Economic benefits are anticipated to result from the influx of visitors to the Pike Lake Unit. The anticipated increase in approximately 10,000 tourists annually would increase economic activity at local business establishments. Recent data indicates that, in the southeastern region of Wisconsin, local resident park visitors contribute an average of $36.48 per day to the economy, while non-local park visitors contribute an average of $27.32 per day. The projected 200,000 total annual visitation to the Pike Lake Unit creates an estimated economic impact of

approximately $6.1 million per year. The proposed increased visitation contributes approximately 6 percent, or $366,000 of this amount.

Economic benefits during construction of the park facilities would accrue to building trade members, laborers, and suppliers, some of whom may be local. Competitive bidding procedures would be followed. Total development cost for the Pike Lake Unit is expected to amount to several millions of dollars over the life of the projects. No estimate of dollar amounts to the local area is available, as extent of local contractor involvement is not yet known. Some employees working on development would probably live in the vicinity of the forest. Those employees would participate in the local economy and expend a significant amount on their daily needs as members of the community.

Fiscal Effects – State Government

Estimated Cost of Proposed Developments

The total estimated cost of the proposed developments and redevelopments of facilities at the Pike Lake Unit is 4.9 million dollars.

The Wisconsin State Park program budget for capital development facilities is determined on a biennial basis. Because of the significant cost of developing facilities for the Kettle Moraine State Forest - Pike Lake Unit, funding priorities within the Department's capital budget would necessarily be adjusted to accommodate the proposed development. If the proposed developments were funded without an increase in capital spending authority and/or an increase in the property's operating budget, it would cause other Department developments and operations to be delayed or deferred.

Estimated Cost of Land Acquisition

DNR policy is to purchase land only from willing sellers. The purchase price is set by an appraisal prepared in compliance with state and national guidelines, unless the seller chooses to make a gift or partial donation of land.

This Master Plan proposes a 2,810 acre addition of uplands and wetlands to the Pike Lake Unit with a current estimated undeveloped average value of $3,000 - $7,000 per acre. Individual parcel values vary depending on the individual qualities of the site, as well as whether any improvements or buildings existed on the parcel. If all lands were purchased, the total estimated cost of acquisition at current value would be $16.3 million It is unlikely that all tracts within the boundaries would be available for acquisition simultaneously, and some may never be. Expenditures would therefore likely be spread over a considerable span of time.

Lands purchased for addition to the Pike Lake Unit would likely be acquired using State Stewardship funds or a similar bonding fund. The cost to the state of bonding for land acquisition and project development occurs when the interest or dividends must be paid on the bonds. Several methods of making these payments could be used, the main one being General Program Revenue (GPR).

Projected Staffing and Annual Operations Cost and Revenue

Operations Costs:
An additional staff position (FTE) would be required for the maintenance of the added campground facilities, shelter buildings and boat launch. An additional $45,000 a year in management funds would also be needed. Funding for habitat improvement projects may be available through Waterfowl and Turkey Stamp funding, as well as Federal habitat-related grants.

At this time, additional staff are not projected to be hired for forest and wildlife habitat work on the property; however, this potentially may cause comparable reductions or delays in management work on other DNR properties in the region.

Revenue Projections:
The State Park Access and Camping Fees are the main revenue source for the Pike Lake Unit. Currently the Pike Lake Unit averages $200,000 a year in revenue. With the expansion of camping and the addition of a boat access and other improvements, yearly revenues are expected to increase by $65,000 to $265,000.

Fiscal Effects – Local Government

Property Tax Revenue:
According to State Statue 70.114, effective January 1st, 1992, on all lands the Department of Natural Resources acquires, the agency must pay aids-in-lieu-of-taxes equal to the property taxes that would have been paid had the land remained in private ownership. According to State Statute 70.11 (1), property acquired by the DNR is removed from the tax roll. In lieu of the loss of tax base, each taxing jurisdiction receives an aid payment equivalent to property taxes. This applies to all lands within the Kettle Moraine State Forest – Pike Lake Unit.

The only difference between the DNR payment-in-lieu-of-tax (PILT) program and private land relates to the assessed value. To avoid the need for local assessors to continually assess DNR property, and for the DNR to review and possibly appeal assessments, the initial assessed value is set at the DNR purchase price of the property, which is based on the appraised market value. Subsequently, this value is adjusted to reflect the change in the assessed value of land in the taxation district. The first year payment is actually based on an adjusted purchase price. All other aspects of the DNR aid-in-lieu-of-tax payments under this program are the same as those for a local taxpayer. Under this program the Department of Natural Resources pays a fair share of aid on lands it purchases. *(Note: Land purchased prior to January 1st, 1992 is on separate aid payment schedules and procedures.)*

When the state acquires land, the land is removed from the tax rolls for the purposes of calculating state aid to local governments. How the state aid formula reacts to this change may result in an increase or decrease in local taxes. For example, if aids increase as a result of public land purchases, local property taxes would be decreased to compensate for this increase in local revenue. The largest impact is on the school, township and county tax portions of the property tax. The State of Wisconsin (Forestry Mill Tax) and VTAE have little or no change.

In previous tax impact studies for DNR land acquisition projects, the change on an average residential property tax bill has been +/- $1-$2.00 for the overall tax bill. This assumes that there are no changes in spending, tax rates, or aid formulas for the townships.

Significance of Cumulative Effects

Acquisition of additional lands for the forest is expected to produce a cumulative benefit, as it would additionally complement the other public conservation and recreation properties in the area. Protection and management of rare, threatened, and special concern species; wildlife and fish habitat; natural aesthetics; and archeological sites would contribute to the overall quality of the human and natural environment in the region. Additional acquisition projects of this type in the future would improve conditions for wildlife and provide added public land for a variety of recreational activities. The cumulative effects from the preferred alternative for the Kettle Moraine State Forest – Pike Lake Unit would have a long-term positive effect on the quality of human life in the region. In particular, the public has recognized the need to preserve land to benefit present and future generations. They have demonstrated this support verbally and in writing.

Tax impact of state ownership of lands would be negligible because the Department of Natural Resources pays aids-in-lieu-of-taxes equal to the properties' assessed values to each taxing jurisdiction. Payments would be adjusted annually to reflect changes in assessed value in the taxation district.

Significance of Risk

Management and development of the Pike Lake Unit presents a low overall potential risk to the environment. Environmental impacts associated with facility construction would be minimal a new construction affects less than 10% of total property acreage. Other than trail and related facilities, all construction would be located outside sensitive habitat sites. The presence of motor vehicles and other equipment during the construction phase may pose an increased risk from spills and erosion. These risks would be mitigated by best management practices and procedures outlined in the bid documents and at preconstruction meetings with contractors.

There would be minimal increased risk to the resources of the property that result from human activity (public use or Department management). There would be a slight risk of increased introduction or spread of invasive exotic species across the property due to public use of the trails. Fire may be used as a vegetative management tool for the grassland sites, risk is managed to a low level by following required safety procedures and conducting all burns with trained personnel.

The risk of wildfires from campers and other users is low. During periods of high fire danger, restrictions are put into effect and enforced. During exceptionally dry weather, a complete fire ban may be implemented.

Significance of Precedent

No aspect of the proposed plan is not precedent setting in the county or state. It is continuing the general types of long established uses and management on the Pike Lake Unit. This project has a sound basis in applicable statutes and codes, and state project expansions such as this one are not uncommon. Approval of this plan would not significantly influence future decisions on other WDNR property Master Plans as all recreational uses described are currently allowed within other WDNR state parks and southern forests.

Significance of Controversy over Environmental Effects

No significant controversy has been identified to date during public review of this project. There has been minor controversy over the potential for increased motor boat traffic on Pike Lake resulting from the construction of the moat landing on the property.

Conclusions

Implementation of Master Plan goals for management and development of the Pike Lake Unit of the Kettle Moraine State Forest would provide positive recreational, ecological, social, and economic benefits to the region by providing an expanded public property that provides access to a variety of popular outdoor recreational activities and facilities. This property also provide for the protection of unique, rare, and endangered species, and the expansion and enhancement of habit for interior forest birds, a highly limited habitat type in the region. The proposed project would not cause any significant, adverse environmental effects.

Decision on the Need for an Environmental Impact Statement

Project Name: Kettle Moraine State Forest – Pike Lake Unit Master Plan County: Washington

DECISION (This decision is not final until certified by the appropriate authority)

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 Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A. 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.

B. Major Action Requiring the Full EIS Process ☐

The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator	Date Signed
	7/23/08

Number of responses to news release or other notice:

Certified to be in compliance with WEPA	
Environmental Analysis and Liaison Program Staff	Date Signed 9/14/09

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, ss. 227.52 and 227.53, Stats., establish criteria for filling a petition for judicial review. Such a petition shall be filed with the appropriate circuit court and shall be served on the Department. The petition shall name the Department of Natural Resources as the respondent.

Chapter Five – Alternatives and Their Environmental Impacts

A Master Plan alternative is a grouping of a number of compatible options for resource management, recreational development, and public use of a property owned by the Department of Natural Resources. The content of an alternative should be compatible with the property designation, property capabilities, the Master Plan's vision and goals, and the area's Regional Analysis. The alternatives summarized below are the most recent set of alternatives that were considered as part of the planning effort for the Pike Lake Unit.

Recreation Management Alternatives

Alternative One: Status Quo
There would be no new recreational facilities or development within the Pike Lake Unit

Alternative Two: Preferred Alternative – High-Level of Recreational Development
This alternative was chosen as the preferred option. The Pike Lake Unit already has a high level of development within the current boundary. The added developments proposed in Chapter Two would provide a variety of camping and day-use activities such as picnicking, fishing, hiking, wildlife observation, nature study, and other forest associated activities. The Pike Lake Unit would also allow regulated deer hunting within the some the intensive-use portions of the Unit when necessary to control overabundant deer, and in other, less intensively used portions of the property would provide for big and small game hunting, trapping, and wildlife observation. In terms of the range of management approaches, the level of recreational facility development of recreational facilities would be typical for other State Parks and Southern Forests This alternative would also provide expanded access to all waters of Pike Lake.

Vegetation Management Alternatives

Alternative One: Status Quo
Management of the Pike Lake Unit would remain passive with no changes. This alternative is feasible but not desirable because it would not meet the vegetative management needs for the Pike Lake Unit.

Alternative Two: Preferred Alternative – Active Forest and Habitat Management
This is described in detail in Chapter 2. A set of diverse habitats are provided, including high quality interior forest habitat of various age classes, and ecologically functional open grassland/wetland habitat for waterfowl and grassland birds. The production of forest products would be an additional benefit of this alternative.

Real Estate and Boundary Alternatives

Alternative One: No Additional Land Acquisition
This alternative would allow no land acquisition beyond what is within the existing Unit boundary. Lands recommended in the Master Plan for acquisition would not be acquired. This would cause the Pike Lake Unit to not meet their vision and goals of providing additional lands for a variety of recreational pursuits and providing additional protection for river headwaters unique, rare, and endangered habitat and species.

Alternative Two: Preferred Alternative – Expand the Pike Lake Unit
Under this alternative, the Pike Lake Unit boundary would be enlarged to include approximately 2,810 acres of land. Acquisition would provide an opportunity to protect the headwaters of the Ashippun River while providing land for public recreation and hunting.

Chapter Six – Summary of Public Involvement

The planning process for the Pike Lake Unit of the Kettle Moraine State Forest began in 2004 with the gathering of background and resource information. During this planning process the DNR hosted public information meetings/listening sessions with individuals, organizations, and municipal and government officials. Staff personally contacted and/or attended meetings with local and state officials, and with landowners within the proposed expanded boundary.

Generally, the public indicated support for the proposed expanded boundary to the south and west of the existing property. The public expressed strong favorable feelings toward improving the existing recreational facilities at the forest and toward developing an additional campground loop, a group campground, a group picnic area, an ADA accessible cabin, and recreational facilities along the shoreline. Some individuals questioned the need to develop a motorized boat launch at the property.

Chronology of Public Involvement Activities

February, 2005 – Contacted state and local officials by letter to announce the master planning project and request a meeting with them.

March, 2005 – Presented the master planning process and proposed expanded boundary to the Mid-Kettle Moraine Partners Group. Members requested that the lowland hardwood swamp and Ashippun River headwaters area be included in the proposed boundary.

April, 2005 – A public meeting held in Hartford, Wisconsin, attended by about 50 people, covered the review of the draft property vision statement, goals, and objectives, and a proposed boundary expansion of about 1,000 acres. The Department issued a news release to regional and statewide news media, and sent post cards announcing the public meeting to more than 1,500 people. A number of people at the meeting requested horse trails, and others expressed an interest in having a boat launch, a dog swimming area, and additional camping sites at the property. We also received requests to expand the boundary to include additional natural resource features in the area.

June, 2008 – Presented the draft vision statement, goals, and proposed expanded boundary to the Mid-Kettle Moraine Partners Group.

October, 2008 – Presented the vision statement, goals, and proposed expanded boundary to the Pike Lake Unit Friends Group.

October, 2008 to April, 2009 – Met with state and local elected and governmental officials. Presented the draft master plan property vision statement, goals, facility development concept plans, and the proposed expanded boundary maps.

June, 2009 – A public meeting held in the Town of Hartford, Wisconsin, at which the draft property vision statement, goals, facility development concept plans, and the proposed expanded boundary maps were shared. More than 175 people attended the meeting. The Department

issued a news release to regional and statewide news media, and sent post cards announcing the public meeting to 2,856 people.

Public Comments and Responses

Expanded Boundary Comments
A majority of comments were received that called for the Department to expand the project boundary. Reasons cited included watershed protection, Ice Age Trail extensions, habitat improvements, and expanded recreational opportunities.

Response:
The plan has been modified to reflect these changes.

Recreational Use
Hunting:
The Department received a number of comments regarding hunting. Most people requested that hunting not be allowed within the existing Pike Lake Unit boundary because of the extent of year around recreational activities on those lands. Most respondents support hunting opportunities on lands the Department would acquire in the proposed expanded boundary, shown as the Headwaters Management Area in the master plan.

Response:
The Department recommends that hunting opportunities be offered in the Headwaters Management Area. And that the Pike Lake Management Area be closed to hunting except to control wildlife populations, when compatible with other recreational activities.

Day Use/Beach Facilities:
There is considerable support for re-designing the day use/beach areas, adding a group picnic area, adding an ADA accessible fishing pier, replacing the existing restroom/changing house with a year around education/interpretive center, adding a pet swimming area, and adding a formal carry-in boat access site.

Response:
The Department is recommending creating all of the improvements above to the day use and beach areas at the Pike Lake Unit. These recommended facilities would provide greater access to recreational opportunities along the shoreline. And the recommendations for the day-use area redevelopment would provide the opportunity to incorporate sustainable design principles, such as the use of permeable asphalt and rain gardens.

Additionally, the Department recommends redesigning the sand beach as a deeper and shorter beach, providing greater access to the water and a larger sand area to play in. This would provide the opportunity to restore the shoreline with native plants.

Campground:
The Department receives requests throughout the year for a larger family campground and a group campground at Pike Lake. There was one question about how close to Hwy. CC the campground would be located.

Response:
The Department recommends the development of a 30-unit modern campground loop to the east of the existing 32-unit campground loop. We also recommend the development of a group campground serving up to 30 people and the development of an ADA-accessible cabin. The concept plan for the campground loop shows it about ¼-mile from Hwy. CC. There is a large deciduous woods and undulating terrain that would buffer campground noise from residential areas along Hwy. CC.

Motorized Boat Launch:
Lakeshore residents, local landowners, and citizens interested in boating have commented on both the need for a boat launch at the Pike Lake Unit, as well as concern about encouraging more boat use on the lake.

Response:
The Department is recommending the development of a motorized boat launch with two boat ramps and parking, within the guidelines set forth in NR 1.91 Wis. Administrative Code, along the southeast shoreline of the Pike Lake Unit. The lake is currently served by two public and two private boat access sites. Parking is not provided at the two town road end public landings. Private landings provide beneficial access to the lake, but their future availability is uncertain. The Pike Lake Unit boat access site would provide access in perpetuity. The site would be lighted, have a two-stall restroom with pressurized water, and a boat washing station. The development of the boat launch facility would depend on available funding and an assessment of reasonable motorized boat access to Pike Lake.

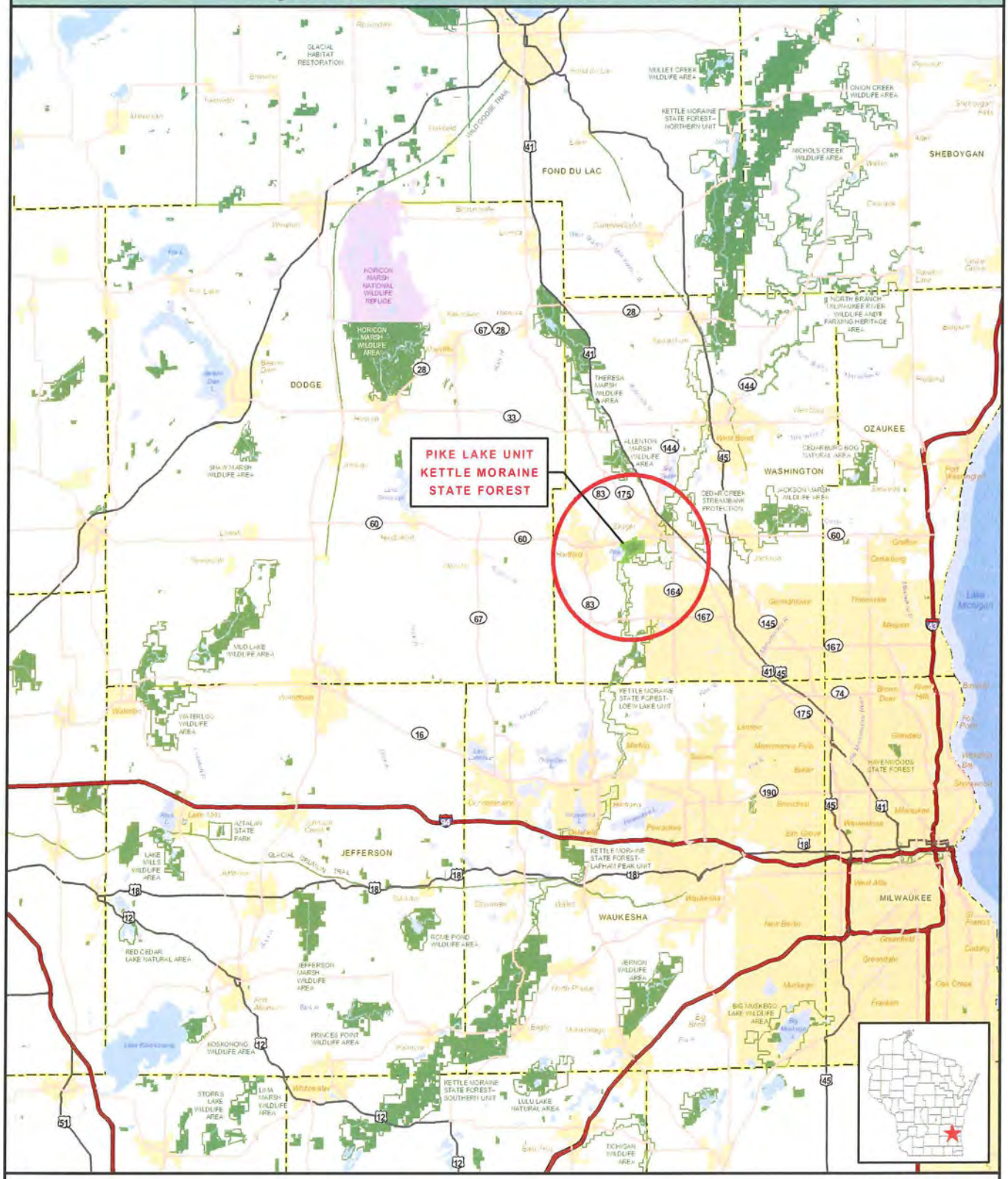
Expanded Boundary Comments:
A majority of comments were received that called for Department to expand the project boundary. Reasons cited included watershed protection, Ice Age Trail extensions and habitat improvements.

Response:
The plan has been modified to reflect these changes.

Kettle Moraine State Forest - Pike Lake Unit

Regional Locator and Public Lands Map

Map A



Pike Lake Unit Project Boundary

Existing Project Boundary

DNR Managed Land

Federal Land

Ice Age Trail Corridor

Municipal Boundary

County Boundary

N W E S

0 Miles 10

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Facilities and Lands

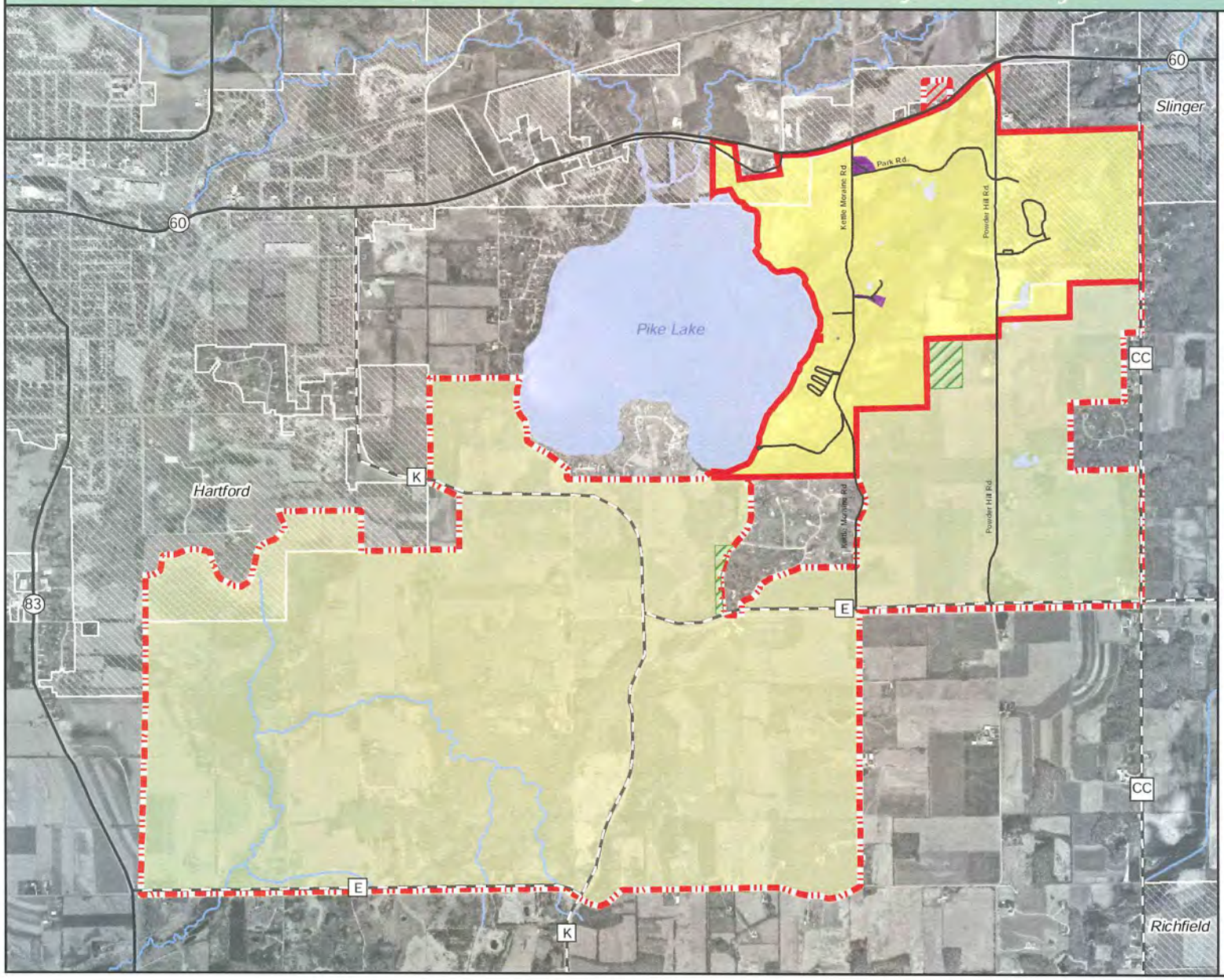
FR-KMSFPLU-MP-A acr

Map Updated 05/22/09

Kettle Moraine State Forest - Pike Lake Unit

Proposed Land Management Areas and Project Boundary

Map B



Pike Lake Unit-- KMSF

- Pike Lake Project Boundary
- Proposed Boundary
- Proposed Deletion
- DNR Property Outside Existing Boundary
- Municipal Boundary

Land Management Areas Classification

- Special Management Area
- Headwaters--Recreation Management Area-- Type III
- Recreation Management Area--Type IV

N

0 Feet 2000

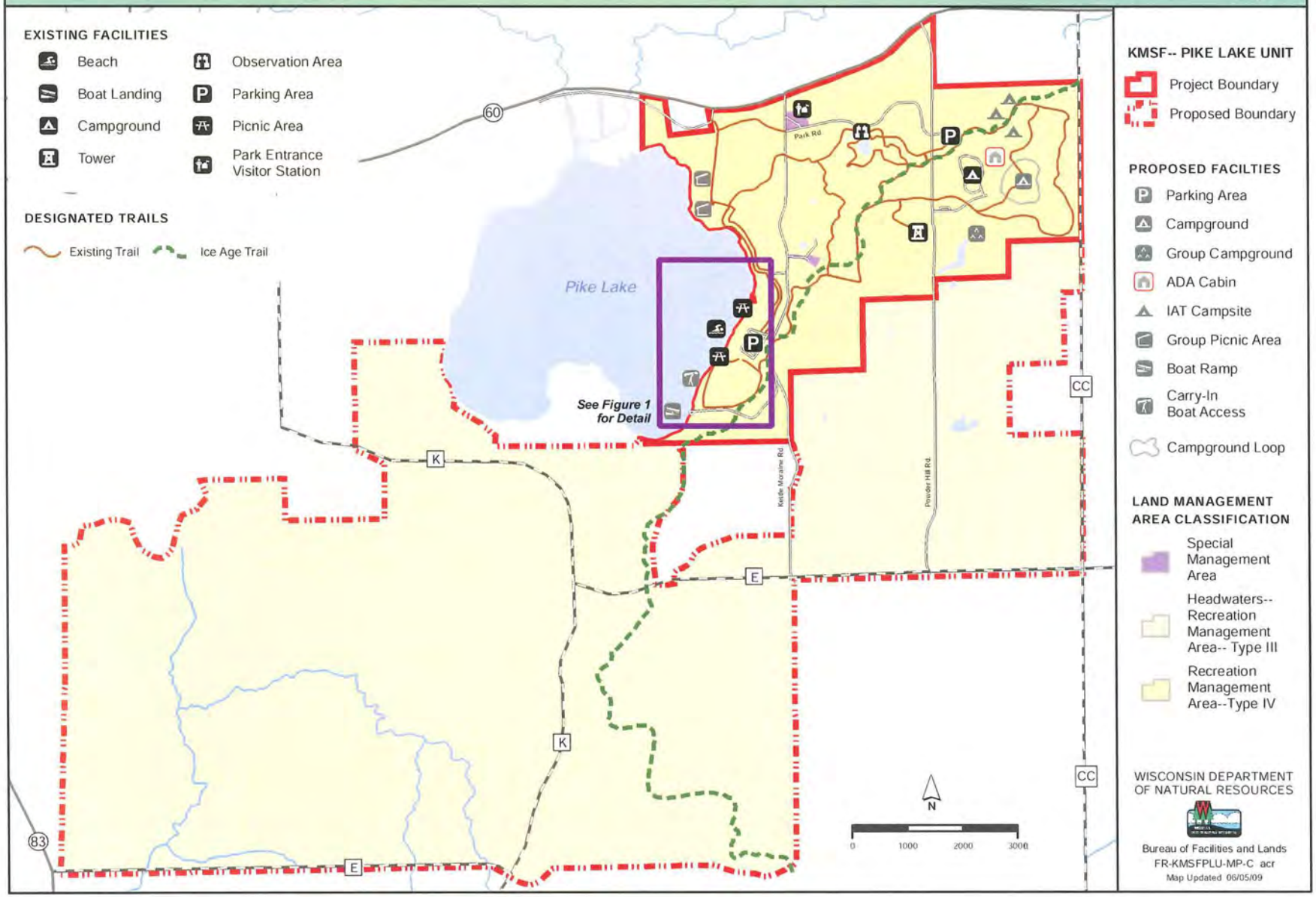
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Facilities and Lands
FR-KMSFPLU-MP-B acr
Map Updated 06/30/2009

Kettle Moraine State Forest - Pike Lake Unit

Future Development Overview

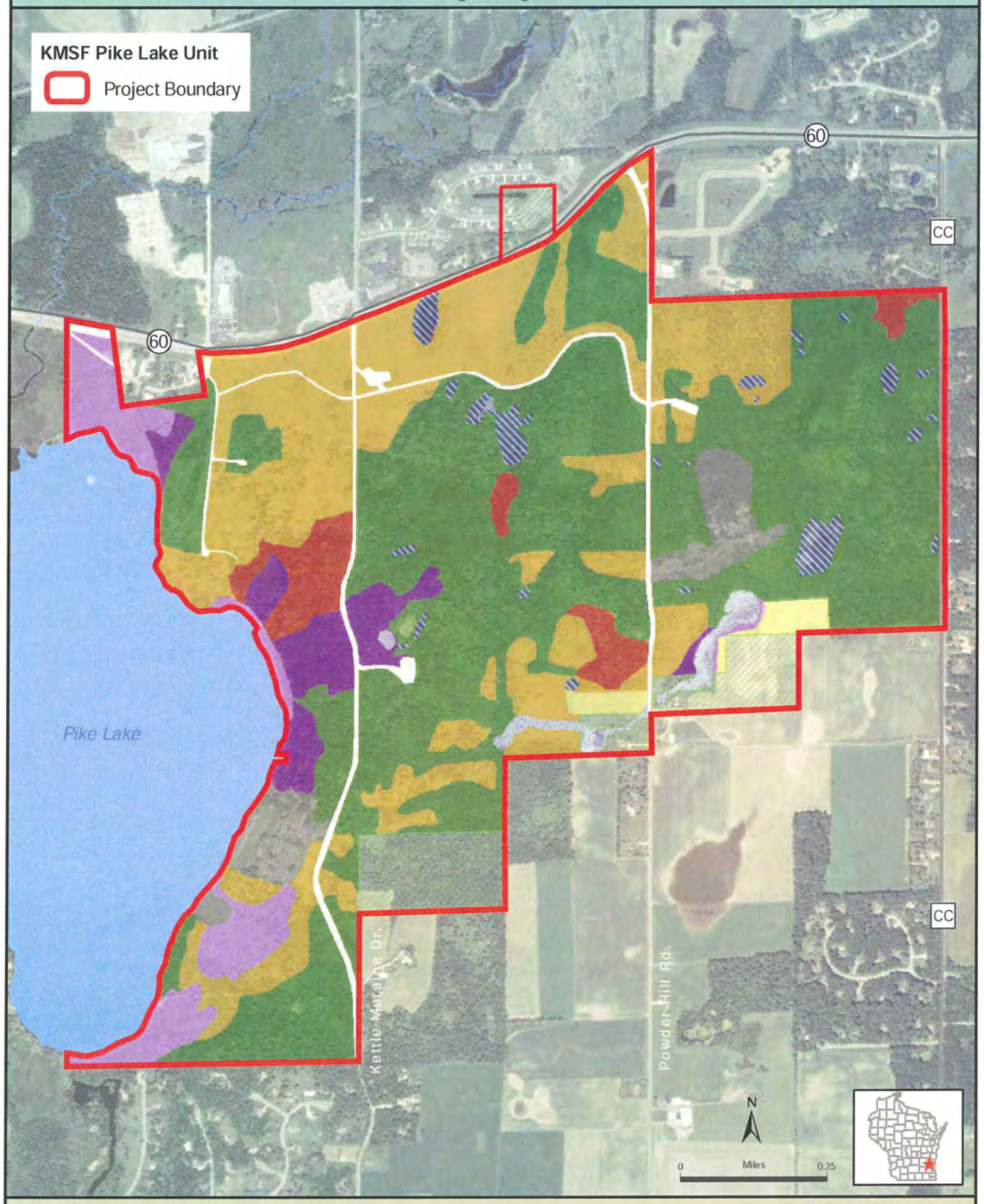
Map C



Kettle Moraine State Forest - Pike Lake Unit

Existing Vegetation

Map D



Land Cover Type

- Aspen
- Grassland/Shrub
- Oak
- Open Canopy Wetland
- Lowland Hardwood
- Pond/Ephemeral Pond
- Northern/Central Hardwood
- Maintained Active Use
- OpenWater/ Deep Marsh
- Roads and Parking Lots
- Private Lands-- Not Surveyed

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Facilities and Lands

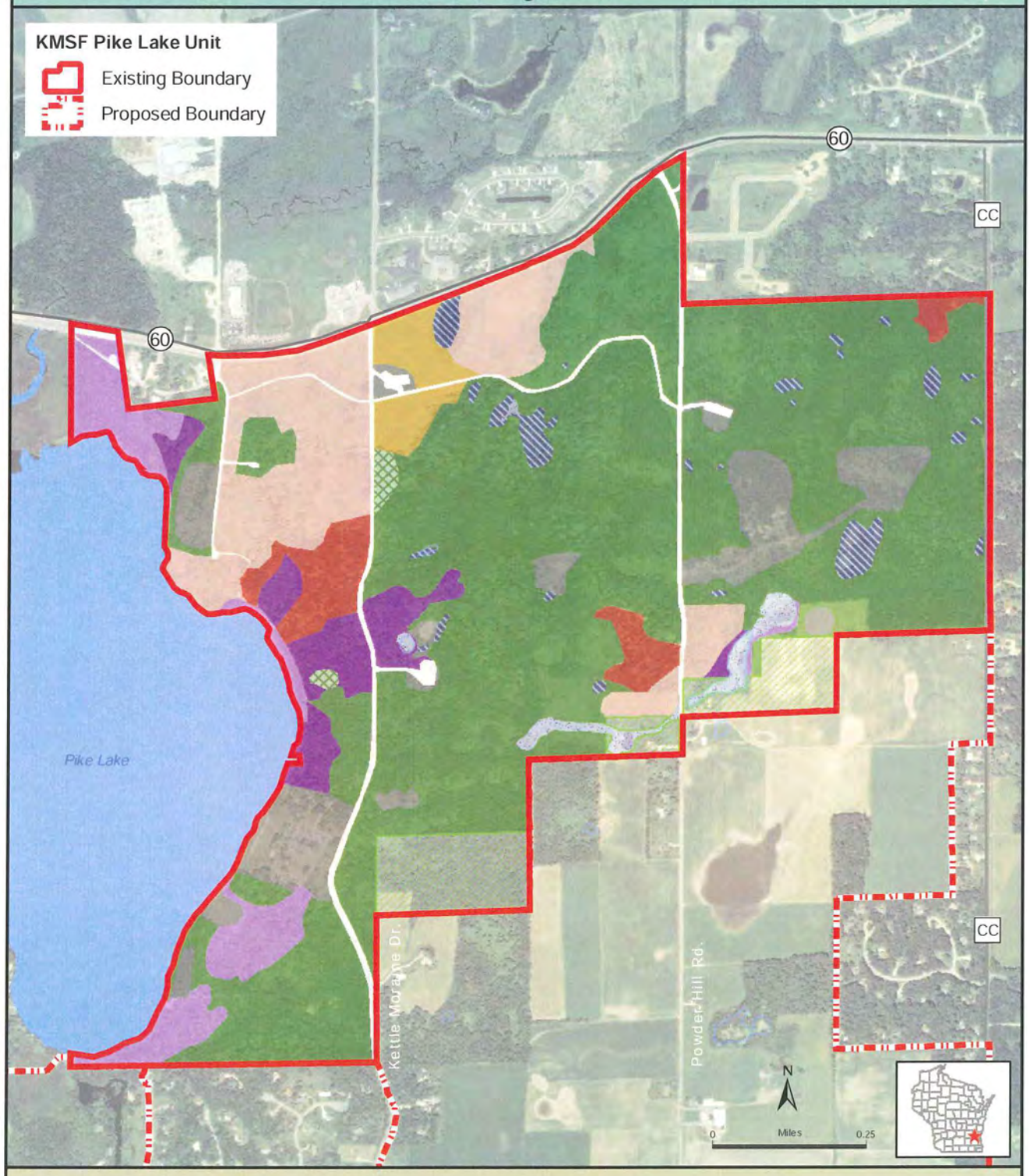
FR-KMSFPLU-MP-D acr

Map Updated 06/02/09

Kettle Moraine State Forest - Pike Lake Unit

Future Vegetation

Map E



Land Cover Type

- Grassland/ Shrub
- Oak Savanna
- Oak
- Open Canopy Wetland
- Lowland Hardwood
- Pond/ Ephemeral Pond
- Aspen
- Northern/ Central Hardwood
- Maintained Active Use
- Open Water/ Deep Marsh
- Roads and Parking Lots
- Private Lands-- Not Surveyed

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Facilities and Lands

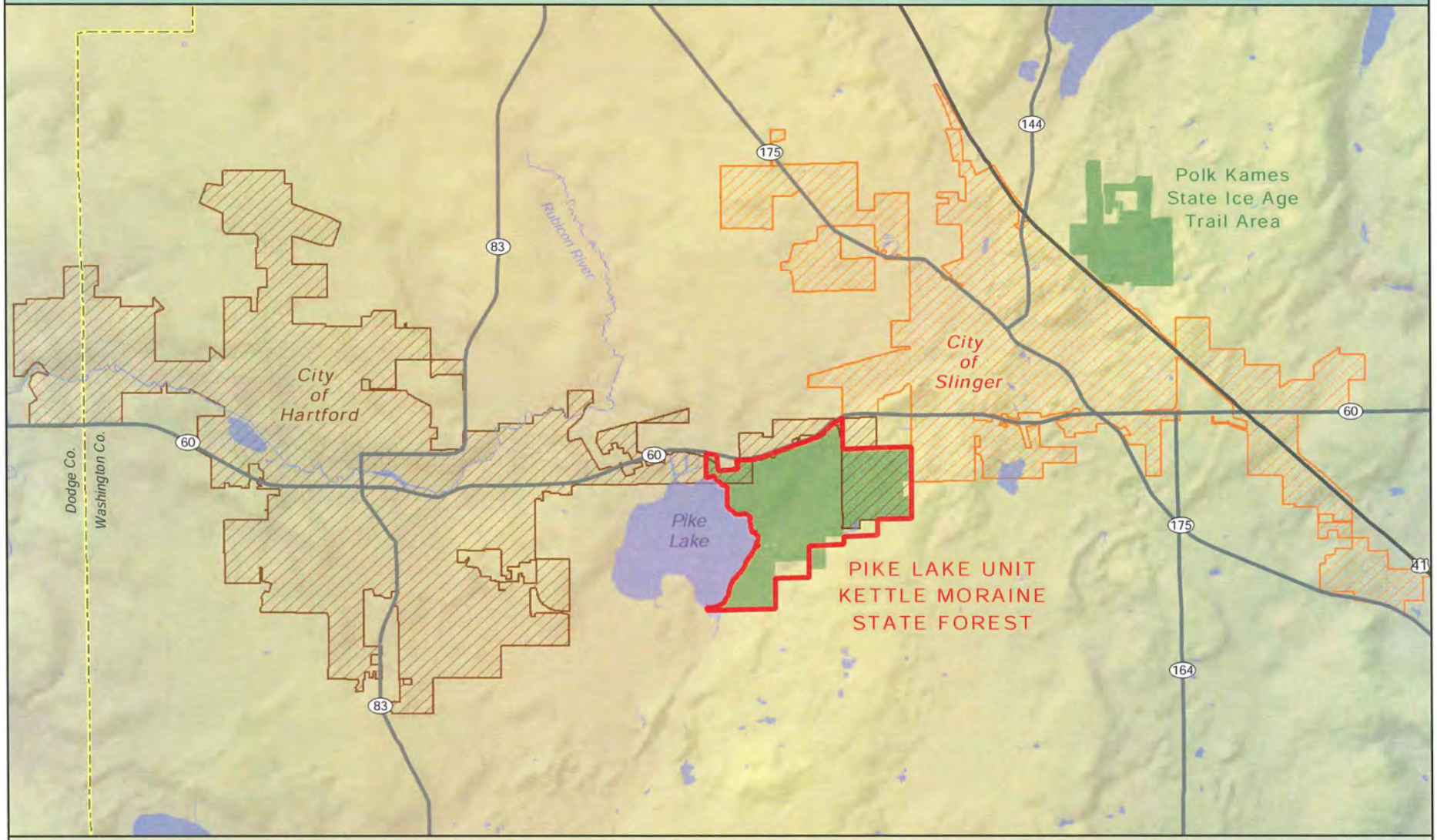
FR-KMSFPLU-MP-E acr

Map Updated: June 03, 2009

Kettle Moraine State Forest - Pike Lake Unit

Adjacent Municipalities

Map F



DNR Managed Lands

Pike Lake Unit

County Boundary

US Highway

State Highway

0 Miles 1

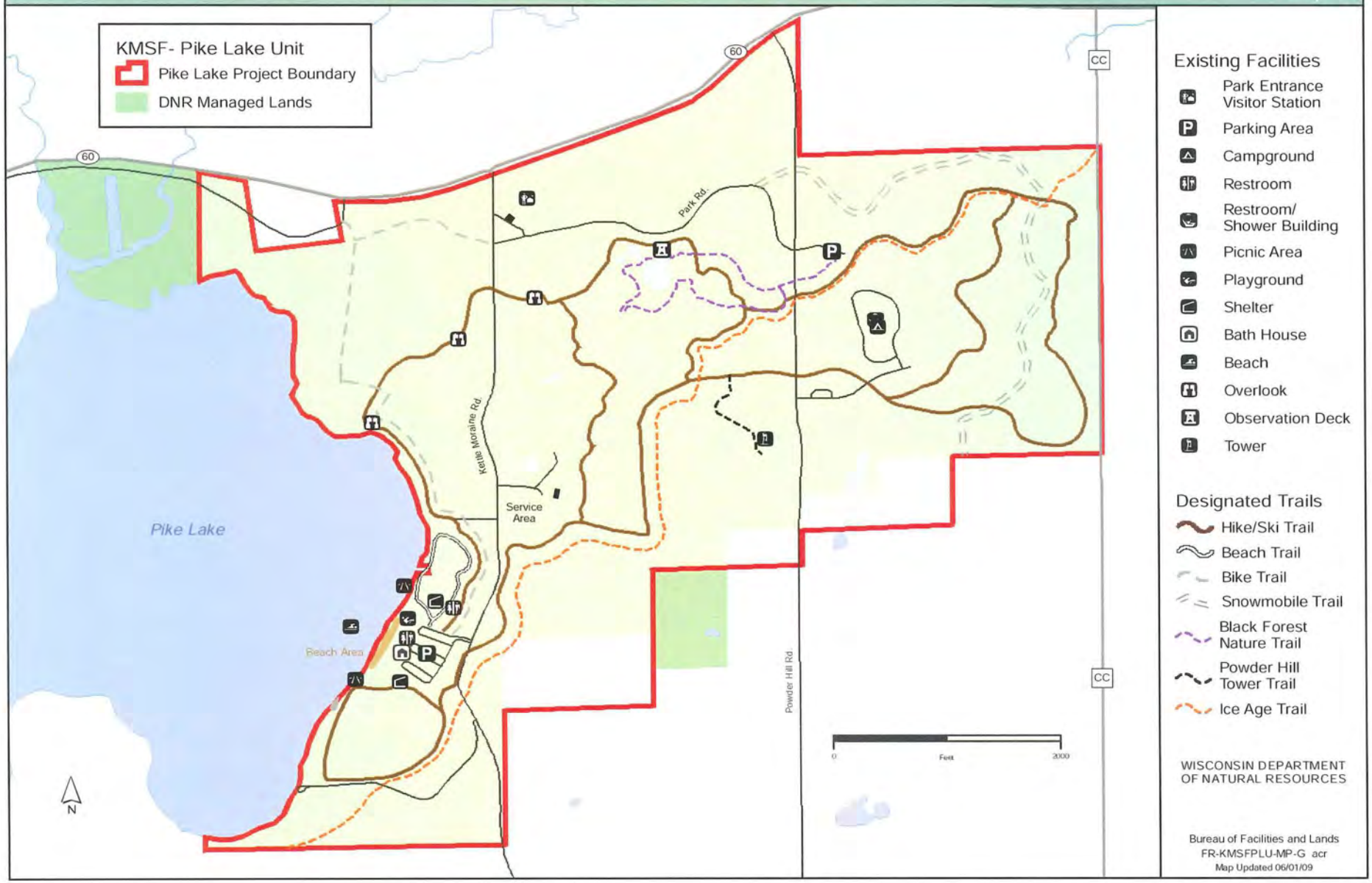
WISCONSIN DEPARTMENT
OF NATURAL RESOURCES
Bureau of Facilities and Lands
FR-KMSFPLU-MP-F acr

Map Updated 06/01/09

Kettle Moraine State Forest - Pike Lake Unit

Existing Facilities and Trails

Map G



KMSF-Pike Lake Unit
Conceptual Site Plan
Day Use/Beach Area
Existing Paved Accessible Trail
Existing Picnic Shelter
Pet Swimming Area
Pet Area
Amphitheater
Carry-in Boat Access
Restroom
Beach
Existing Contact Station
300-325 Car Parking Spaces
Picnic Area and Playground
Kettle Moraine Road
ADA-accessible Trail
ADA-accessible Fishing Pier
Education/Interpretation Building
Existing Play Field
ADA-accessible Trail
Road to Motorized Boat Access Site
Carry-in Boat Access
8+1 ADA Car Parking Spaces
Restroom
33+2 ADA Car-Trailer Parking Spaces
N
250'
500'
Motorized Boat Access
The location or layout of facilities may change during the final site design process.