

LAKE DISTRICT PRESERVE

“When one tugs at a single thing in nature, he finds it attached to the rest of the world.”

-- John Muir, Sierra Club founder and former Wisconsin resident

7-1 BASIS FOR PRESERVE PLAN

This chapter builds upon the “Lake District Preserve Management Plan” produced by the Lake Ripley Management District in 1998. A new plan was warranted for several reasons. These include evolving landscape conditions and management needs, the successful implementation of property-improvement measures, and the expansion of Preserve boundaries due to recent land acquisitions. The following chapter is intended to describe the history and present status of the Preserve, and to set forth recommendations for future management action.

7-2 STRATEGIC VALUE OF THE PRESERVE

Wetlands and undeveloped natural areas in the watershed are valuable resources that often contribute directly to Lake Ripley’s water quality and ecosystem health. Wetlands act as natural sponges that absorb and then slowly release storm runoff, thereby reducing the severity of downstream flooding, shore erosion, and high-water impacts. A similar function is served by woodlands and other natural areas that help intercept, infiltrate and evapo-transpire rainfall. Properly functioning wetlands not only offer tremendous water-storage capacity, but are able to filter and trap sediment and other pollutants headed toward the lake. The lush vegetation found in wetlands also provides wildlife habitat for many different species, and is used by fish for spawning and nursery areas when connected to surface waters.

In 1903-08, the U.S. Geological Survey mapped approximately 1,500 acres of wetlands within the Lake Ripley watershed, which at the time represented about 29% of the total watershed area. Many of these wetlands had already experienced significant agricultural land clearing and drainage alterations at the time they were originally mapped. In 1986, the Wisconsin DNR was only able to map 540 acres (11.5% of total watershed area) as functioning or partly functioning wetlands, reflecting a 60% wetland reduction. Today, no more than one-third of the watershed’s original wetland acreage still remains in a functioning or partly functioning state.¹

Alert to the value and vulnerability of these important landscapes, the Lake District has long targeted them for protection and restoration as a key component of its overall lake-management strategy. Such efforts have resulted in both fee-simple acquisitions and the negotiation of land-protection agreements (via conservation easements) with willing landowners. In particular, the Lake District was early to recognize the strategic value and high restoration potential of the

¹ Wisconsin Department of Natural Resources, Wisconsin Department of Agriculture, Trade and Consumer Protection, Lake Ripley Management District, and Jefferson County Land Conservation Department. 1998. Nonpoint Source Control Plan for the Lake Ripley Priority Lake Project. Wisconsin Nonpoint Source Water Pollution Abatement Program. Publication WT-512-98.

former Probst Farm. This property, now owned and managed by the Lake District, consisted largely of farmed wetlands located at the inlet to Lake Ripley. It is now undergoing a remarkable transformation back to functioning wetlands and restored prairie areas. Today, this land not only helps protect the quality and quantity of water entering Lake Ripley, but provides unique opportunities for outdoor recreation.

7-3 PROPERTY DESCRIPTION

The 167-acre Lake District Preserve is located less than one-half mile east of Lake Ripley in the Town of Oakland. Area topography is rolling, ranging from flat in valley bottoms to wooded hills with 7% slopes. Much of the soils are characterized as Houghton muck—an organic, level and very poorly drained soil found in depressions of old lake basins and subject to frequent flooding. Land cover in the Preserve consists predominantly of stream-corridor wetlands (covering over half the property) and adjoining uplands, including a 21-acre woodlot. Currently, approximately 26 acres of the adjoining agricultural uplands remain as actively farmed cropland under a two-year, tenant-farming lease. These 26 acres will be planted to native prairie in late 2010 or early 2011.

Lake Ripley's only inlet stream runs east to west through the southeastern and southwestern portions of the Preserve. This unnamed, perennial stream has been degraded from a long history of dredging, channelization, and siltation caused by upstream and adjacent agricultural activities. Degradation is evidenced by macroinvertebrate data collected in 1993 at the lake's inlet. These data, when compared to standard biotic indices, revealed fair to poor water quality in the inlet stream.² During this same period, regular water quality monitoring at the inlet found high nutrient levels and low dissolved oxygen concentrations. Such findings are consistent with impacts associated with manure and fertilizer runoff.

Connecting to the inlet are two drainage ditches which cross through the Preserve. While their channels are still evident, both ditches were plugged by the Lake District in partnership with the U.S. Fish and Wildlife Service. Thick beds of watercress observed growing in and around the east ditch are indicative of significant groundwater seepage. Efforts were made to avoid any groundwater-discharge areas (springs) at the time of ditch plugging. Such areas are important for supplying clean water and maintaining year-round, open-water habitat for fish and wildlife.

7-4 WILDLIFE AND HABITAT VALUES

Whitetail deer, eastern wild turkey, red fox, ring-necked pheasant, muskrat, great blue heron, sandhill crane, white egret, northern pike and a wide variety of frogs, turtles and ducks are among the many common wildlife sightings at the Lake District Preserve. Federally-designated, "priority migratory waterfowl species" observed within or near the Preserve area include wood duck, mallard, northern pintail, American black duck, American wigeon, and the lesser and

² Wisconsin Department of Natural Resources, and Lake Ripley Management District. 1994. Lake Ripley Water Resources Appraisal.

greater scaup. The Preserve directly benefits these particular species by increasing the extent and quality of their desired habitats. In particular, the northern pintail will benefit from the establishment of upland grassland areas adjacent to the wetlands which can be used for nesting. The lesser and greater scaup will benefit from year-round open water areas around the creek, springs and nearby lake that offer excellent migrational habitat. The restoration and protection of adjacent woodland and grassland areas will further benefit many of these species, namely by ensuring adequate nesting, cover and foraging sites.

Non-game, migratory waterfowl species observed in and around the Preserve area include black tern, sandhill crane, blue-winged teal, bobolink, northern harrier, eastern meadowlark, sedge wren and Virginia rail. Since some of these wetland-dependent birds are grassland species that nest in adjacent uplands, they will directly benefit from the outcome of prairie-restoration efforts, including the eventual conversion of adjacent cropland to native tall-grass prairie. Furthermore, the addition of the 21-acre woodlot will serve as prime nesting and foraging habitat for wood ducks.

The Preserve is also likely to directly or indirectly benefit endangered, threatened and special-concern species as identified by the Wisconsin DNR. Prior inventories have documented the following such species within a one-mile radius of the Preserve: Blanding's turtle, black tern, bullfrog, giant carrion beetle, least darter, lake chubsucker, pugnose shiner, and cuckoo flower.



Blanding's Turtle found near the Preserve in 2008 by LRMD staff.

When fully restored, the Preserve will consist of approximately 100 acres of stream-corridor wetlands, 23 acres of woodlands, and 43 acres of native prairie. It represents the only place of its kind within Lake Ripley's seven-square-mile watershed.

7-5 ACQUISITION HISTORY AND JUSTIFICATION

In late 1997, the Lake District acquired its first 99 acres of the former Probst Farm. The property consisted of 55 acres of farmed wetlands drained by ditches, 40 acres of non-farmed but degraded wetlands, and four acres of farmed uplands. While large sections of the non-cropped wetland areas were found to contain dense stands of reed canary grass, much of the wetland was found to support a fairly diverse and healthy plant community. The purchase of this property was made possible through a Wisconsin DNR Lake Protection Grant and donations from various contributors. As a result of a naming contest, these conservation lands were later coined the "Lake District Preserve" by former Board Commissioner Jim Rank.

In 2001, two additional acres that adjoined the Preserve's northeast side were acquired by condemnation for the purpose of plugging an existing agricultural drainage ditch. A map of the Preserve as it existed between 2001 and 2008 is shown in Figure 52. Then, in late 2008, another 66 acres of the original Probst Farm were purchased from the Johnson Family. An aerial photograph depicting the full extent of today's Preserve in relation to the lake, inlet, and a 40-acre wetland parcel owned by the State of Wisconsin is provided as Figure 53.

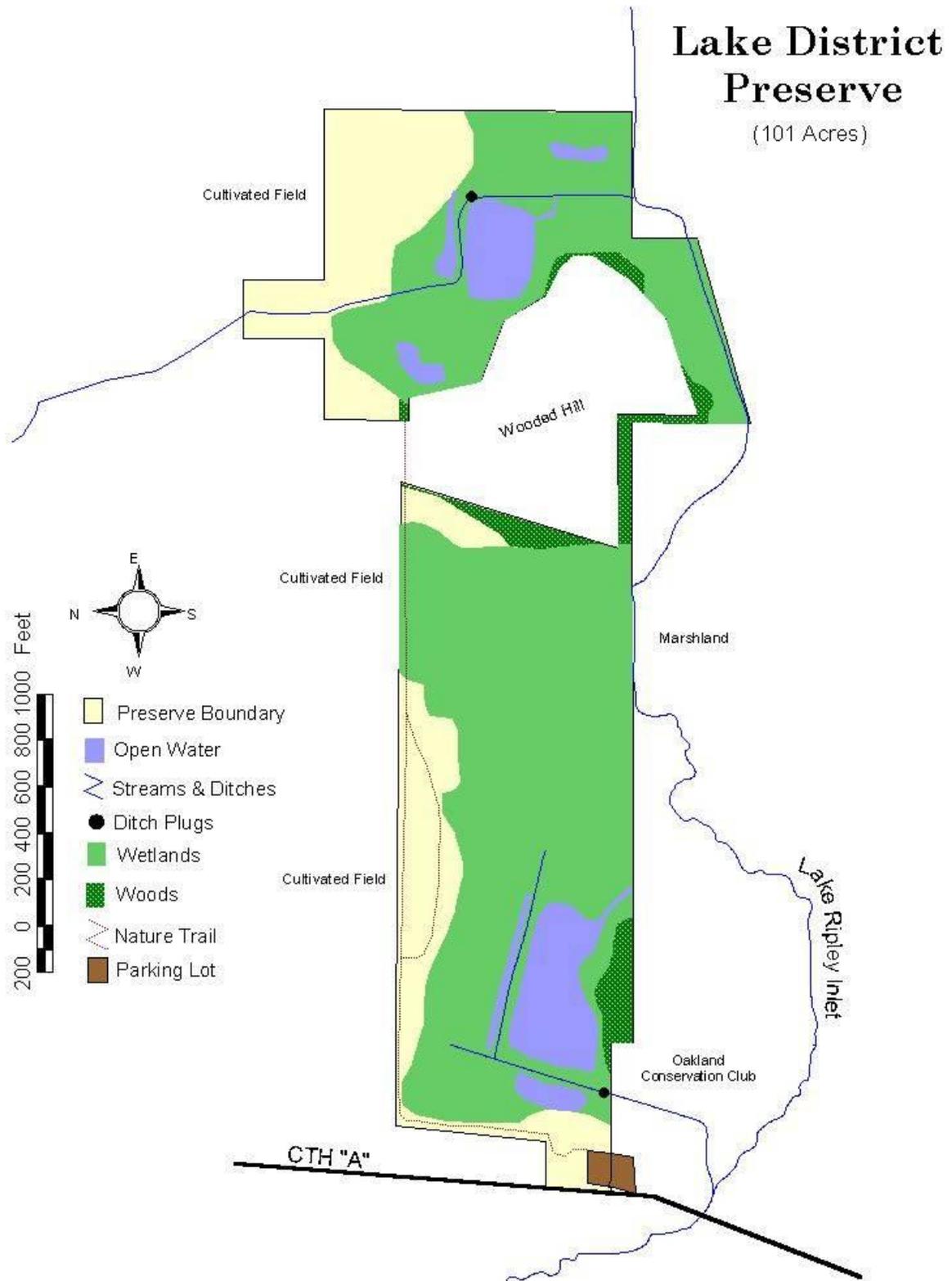


Figure 1: Map of Original, 101-acre Lake District Preserve



Figure 2: Aerial photograph showing acquired Lake District Preserve parcels in relation to Lake Ripley, its inlet tributary, and a wetland parcel owned by Wisconsin DNR

The latest acquisition includes a segment of the inlet tributary, and consists of a mix of farmland, woodlands and riparian wetlands. Protection of these particular lands was specifically identified as a recommendation in the Jefferson County Parks, Recreation and Open Space Plan,³ as well as the draft Feasibility Study, Master Plan, and Environmental Impact Statement for the Proposed Glacial Heritage Area.⁴ It is also generally supported in the Jefferson County Land and Water Resource Management Plan,⁵ Town of Oakland's Comprehensive Growth Plan,⁶ the Lake District's Lake Ripley Management Plan,⁷ and the Nonpoint Source Control Plan for the Lake

³ LanDesign by Margaret Burlingham, LLC. 2005. Jefferson County Parks, Recreation and Open Space Plan (2005-2010). Prepared for Jefferson County Parks Committee.

⁴ Wisconsin Department of Natural Resources. 2009. Feasibility Study, Master Plan, and Environmental Impact Statement for the Proposed Glacial Heritage Area (Draft). DNR Publication No. LF-050.

⁵ Jefferson County Land and Water Conservation Department. 1999. Jefferson County Land and Water Resource Management Plan (2000-2005).

⁶ MSA Professional Services. 2008. Town of Oakland Comprehensive Growth Plan.

⁷ Lake Ripley Management District. 2001. Lake Ripley Management Plan.

Ripley Priority Lake Project.⁸ In addition, a Lake District Board-appointed citizen advisory committee recently issued a report identifying the acquisition as a top priority for improving the existing Preserve.

Aside from increasing the acreage of the Preserve by 65%, the latest acquisition will be instrumental in allowing the Lake District to better control soil erosion while establishing permanent protective buffers around stream-corridor wetlands. It also will allow for greatly improved access to critical headwater lands for the purpose of ongoing habitat restoration and water quality management work. Finally, it will provide for a larger refuge for migratory waterfowl and other wildlife, while linking the property to a 40-acre wetland parcel owned by the State of Wisconsin. In addition to its conservation and inlet-protection benefits, the combined 167-acre property offers the community an abundance of educational and outdoor recreational opportunities. Allowable activities include hiking, hunting, trapping, birding, cross-country skiing, and nature exploration.

The expanded Preserve is part of a larger environmental corridor that will likely attract more diverse numbers of wildlife species, and gives the Lake District greater access and control over tributary waters flowing into Lake Ripley. According to Jefferson County's Land and Water Conservation Plan, environmental corridors are known for their unique natural features and environmentally-sensitive areas. These include floodplains, wetlands, public parks and recreation lands, conservancy lands, at least 10 acres of contiguous woodlands, and land with a greater than 20% slope. A map showing the 167-acre Preserve in relation to the Lake Ripley Management District and watershed boundaries is included as Figure 54.

⁸ Wisconsin Department of Natural Resources, Wisconsin Department of Agriculture, Trade and Consumer Protection, Lake Ripley Management District, and Jefferson County Land Conservation Department. 1998. Nonpoint Source Control Plan for the Lake Ripley Priority Lake Project. Wisconsin Nonpoint Source Water Pollution Abatement Program. Publication WT-512-98.

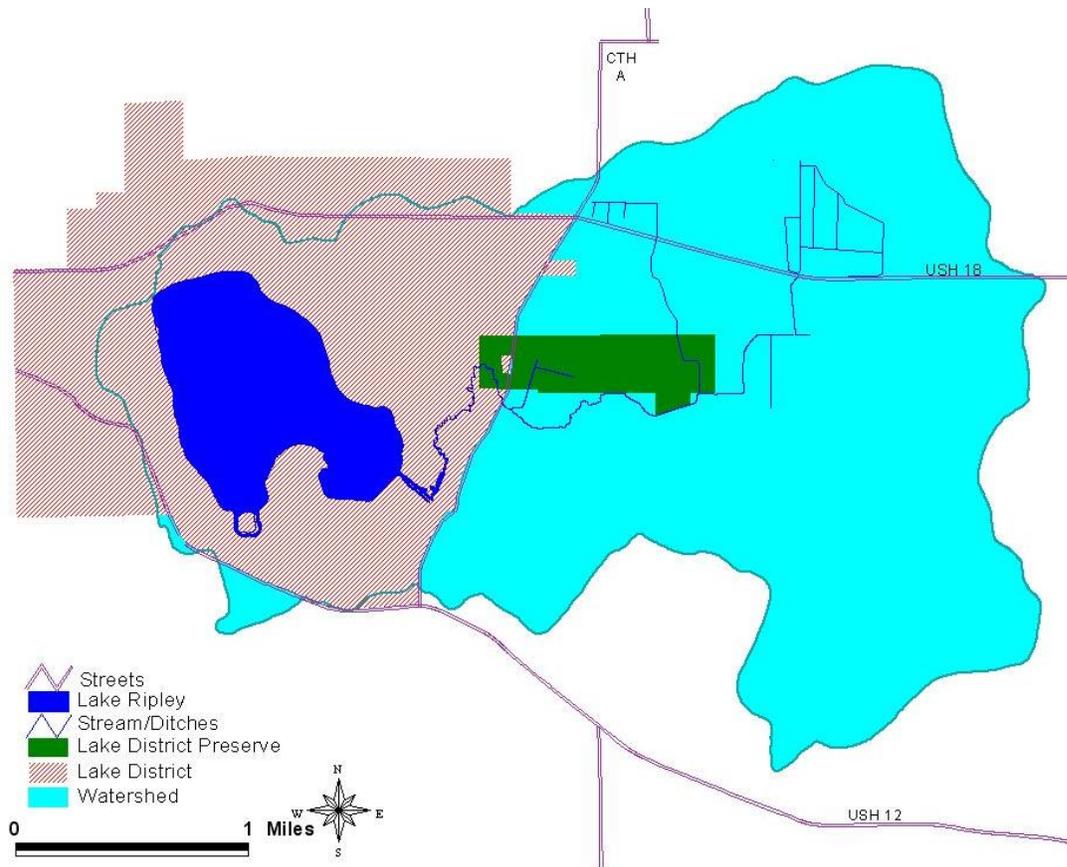


Figure 3: 167-acre Lake District Preserve in relation to Lake Ripley Management District and watershed boundaries

7-6 MANAGEMENT GOALS

A. *Primary Goals:*

1. Improve and protect the quality of water flowing into Lake Ripley through its only inlet.
2. Create and restore quality fish and wildlife habitat.

B. *Secondary Goals:*

1. Reduce downstream flooding and high-water impacts by restoring wetland function.
2. Provide low-impact opportunities for public outdoor recreation.
3. Develop site facilities that increase the public's understanding and appreciation of the Preserve and its resource values.
4. Promote watershed conservation practices and the permanent protection of wetlands and high-value natural areas.

7-7 MANAGEMENT HISTORY (1998-2009)

PRAIRIE RESTORATION

About 45 acres of native prairie was first planted in June of 1998 to take advantage of the existing soybean cover, absence of aggressive weeds, and friable soil condition. Roundup was sprayed to kill weeds that germinated prior to planting. Approximately 35 acres of mesic prairie was planted using a seed drill, while another 10 acres of wet prairie was planted by hand-broadcasting native seed.

Due to limited project funding and the high demand for prairie seed, most of the mesic prairie seed was purchased from Osenbaugh Grass Seeds, a large seed distributor headquartered in Iowa. Ideally, grass seed should be purchased from local distributors to ensure that strains are suited to local conditions. Future plantings should incorporate seeds from local sources whenever possible. The prairie seed mix contained the following species: big bluestem, Indian grass, switch grass, black-eyed Susan, purple coneflower, and purple prairie clover. In addition, the Wisconsin DNR provided about 90 pounds of pure live seed to supplement the mix, containing about 22 different species. Forbs were planted at an average rate of one to three ounces per acre. Grasses were planted at the following rates: big bluestem at three pounds per acre, Indian grass at two pounds per acre, and switch grass at one pound per acre.

The following species were planted in wet prairie areas with little existing natural vegetation: bluejoint, cord grass, stiff goldenrod, big bluestem, switchgrass, New England aster, culver's root, prairie blazingstar, rosinweed, and bergamot. Due to the wetness of the ground, this seed was planted entirely by hand broadcasting. Planting was focused on areas with exposed soil and very little existing weed competition. Specifically, seed was planted along the margins of the existing wetland and the wet areas between the wooded hill and the existing wetland (approximately 10 acres total).

The planted areas were mowed in August of 1998 during the initial growing season. Mower blades were set at 8 inches to cut the taller weeds and allow sunlight to reach the sprouting prairie vegetation. Planted areas were mowed again during the spring of 1999. At that time, mower blades were set at 6 inches. The prairie has since been maintained by periodic burning and the hand-pulling of invasive species. These early-maintenance procedures were repeated in subsequent land-acquisition and restoration areas.

WETLAND SCRAPES

Wetland-restoration activities began in late summer of 1998, starting with the excavation of two, half-acre wetland scrapes on the east side of the property. Although scrapes are not considered "true" wetland restorations, these features provide excellent spring wildlife habitat and can help trap sediment from upland runoff. The two scrapes were excavated to a depth of 12 to 24 inches in the middle, with spoils placed on the adjacent uplands. All necessary permits were obtained prior to restoration, and construction plans were developed to meet NRCS specifications for

wetland restorations. Wetland vegetation was not planted since it was assumed that there was still a viable seed bank present in the soil. A third wetland scrape was created on the west side of the property during the plugging of a drainage ditch in 1999. Excavated soil from the scrape area was used to plug the ditch.

DITCH PLUGS

Wetland restoration work included the plugging of both drainage ditches located on the property. A ditch plug involves collapsing or filling in a section of the ditch so that water is then forced to back up and pool in low-lying areas, creating conditions suitable for wetland habitat. Project designs allow water to reconnect via a spillway to the inlet channel during large storm events, thereby preventing flooding of adjacent properties. Ditch plugs are commonly used to restore wetland hydrology and trap sediment previously carried by the ditches. All ditches on the Preserve were privately owned and able to be manipulated as long as adjacent properties would not be adversely impacted.



Flooded wetland area at the Preserve located next to a ditch plug. Picture was taken during a 2008 flood event.

The Preserve's west ditch was plugged in 1999, resulting in about a 17-acre pool of up to one foot deep. The east ditch (which also drained lands extending north of USH 18) was plugged in late 2001. Prior to plugging, some sections of the existing ditch banks were re-shaped to a more stable 3:1 slope and seeded to prairie grass. Both ditches, totaling 1.7 miles (9,000 linear feet), were plugged in partnership with the U.S. Fish and Wildlife Service. Channelized drainage and agricultural runoff is now able to be diverted back into wetland areas where it can be absorbed and cleansed, thereby reducing flooding and improving downstream water quality.

A three-foot-high spoil bank runs east-west along the west ditch. Although an unnatural feature, it was allowed to remain on the site to help maintain a wetland pool, thereby enhancing shallow-water wildlife viewing opportunities and site aesthetics. Most of the trees on this bank were cut in August, 1998. However, due to ground wetness and time constraints, a few trees were left remaining at that time. A subsequent effort was made to remove trees growing along the old ditch banks in late 2004. Most of the trees were densely-clustered willow colonies that were encroaching into the wetlands. While the bank may provide for excellent wildlife viewing, public access is restricted along most of it to limit human disturbance to the wetland. Restricted bank access also prevents trampling of bank vegetation, minimizing its appeal to large numbers of Canada geese, which are attracted to open areas near water. Trees were also growing along the banks of the east ditch, but were mostly removed or left as habitat in the channel when the ditch was plugged in 2001.

INVASIVE SPECIES CONTROL

The control of invasive species at the Preserve has primarily consisted of employing prescribed burns. Burns are conducted every 2-4 years, and are typically performed in early spring or late

fall when weather conditions permit. Adequate fire breaks (or mowed clearings) are maintained along property lines and around no-burn areas prior to a burn to maintain fire control. The Lake District commissions a team of experienced burn managers to oversee the operation. Other strategies for controlling invasive species have included mechanical brush clearing, mowing, and the hand pulling of isolated weed colonies.



A prescribed burn at the Preserve is used to control weeds and encourage native seed germination.

During initial restoration efforts, care was taken to prevent the establishment of several biennial and perennial problem species in the prairie. These included white and yellow sweet clover, wild parsnip, and leafy spurge. Attempts were made to pull these plants as soon as they appeared. In the wetlands, reed canary grass has been managed with prescribed burning, but with limited success in some areas. The U.S. Fish and Wildlife Service can assist with future control efforts.⁹ Monitoring continues for purple loosestrife infestations, but this weed has not yet been discovered. If observed, this weed will be immediately pulled or controlled using an approved herbicide. Encroaching shrubs and trees will be cut as needed, and the stumps will be treated with an herbicide to control their spread on ditch banks and other areas of concern.

The Preserve will continue to undergo periodic burning to control the spread of reed canary grass, shattercane, ragweed, sweet clover, smooth brome, Queen Anne's lace, quack grass, woody vegetation and other invasive weeds. Spring burns will help weaken early season weeds and warm the soil to stimulate seedling growth. Restored prairie areas will be burned starting the second spring after planting or as soon as sufficient fuel is present on the ground surface. These areas will then be burned on a three- to five-year recurrence interval, depending on need and the availability of resources. To preserve nesting cover and wildlife habitat, no more than one-third of the Preserve should be subjected to a burn in any given year.

The Preserve will be delineated for burning purposes into discrete management zones. Existing landscape features and plant-community types will help define these zones, and fire breaks will be maintained as needed to ensure proper fire containment. Local burning ordinances will be followed, and neighbors and local police will be notified prior to burning.

WILDLIFE HABITAT ENHANCEMENTS

Habitat enhancements at the Preserve are predominantly associated with the restoration of prairie and wetland plant communities. Previously farmed wetlands and cropped monocultures have been replaced with restored wetland and tall-grass prairie communities. By establishing a diverse and permanent cover of native plant species, an increasing abundance and variety of wildlife can be expected and have been observed frequenting the area. Permanently-protected habitat improvements should also benefit several endangered, threatened and special-concern species that have been documented in the vicinity of the Preserve. To a limited degree, natural

⁹ 2009 personal communication with Art Kitchen, U.S. Fish and Wildlife Service

habitat has been supplemented with artificial, including the installation of a number of wood duck and bluebird nesting boxes.

PUBLIC ACCESS IMPROVEMENTS

A small, gravel parking lot was installed east and adjacent to County Highway A in 1998. The parking area provides safe access to and from the Preserve, and allows enough room for school bus parking. A split rail fence demarcates the parking area and precludes vehicle access to the Oakland Conservation Club property and the Preserve's natural areas. The Oakland Conservation Club holds a lease to park vehicles on the site during two or three annual fundraising events. Club members are allowed to park along a 70-foot strip extending east from County Highway A towards the west ditch. In accordance with Wisconsin DNR guidelines, parking is not permitted within 50 feet of any ditches or standing water.

Also in 1998, a welcome sign and information kiosk were first erected near the parking area at the main entrance. The welcome sign identified the site and acknowledged major project donors at the time. This sign was since replaced with a new sign in 2009, following a successful expansion of the Preserve. The trailhead kiosk is positioned at the east end of the parking lot and currently includes a site map, user rules, and some basic background information about the Preserve. The information kiosk is currently being replaced with a newer and somewhat larger kiosk. Several interpretive signs were installed along the nature trail in 2005, mainly to enhance the educational value of the site. The 18x24-inch, pedestal-style signs feature pictures and information about prairie and wetland ecology, and call attention to the different types of plants and animals that inhabit the Preserve.



Informational signage at the Preserve includes a new welcome sign at the main entrance (**left**), an identifying sign for the west side of County Rd. A (**middle**), and several interpretive trail signs (**right**).

Other access amenities include an elevated boardwalk that spans a wetland scrape and connects to a gravel loop trail located at the west ditch plug. The wooden boardwalk and gravel trail were constructed in 2003, and link to a five-foot wide, 3/4-mile-long, grass walking trail. The grass trail was established in 1999, and currently extends to the large woodlot. Before reaching the woodlot, the trail leads visitors to a hillside nature-viewing platform overlooking the marsh that was built in 2007. The trail was sited primarily on drier soils, but some portions had to be routed through seasonally wet areas. Re-routing of the trail to higher ground is recommended now that the adjoining uplands have been acquired. The trail was originally planted with a mix of side oats grama, hairy grama and Pennsylvania sedge. It is mowed several times per year as necessary. A number of interpretive signs, as well as both bluebird and wood duck nesting boxes, provide additional interest for trail users.

Future trails will be located on 0-5% slopes whenever possible and constructed according to Wisconsin DNR trail-construction guidelines. In addition, short stretches of boardwalk may be constructed into saturated or seasonally saturated areas to provide some additional access to wetland areas. Any such construction would be limited so as not to unnecessarily disturb fragile plants or sensitive wildlife. Construction would also likely require special permit approval since the activity would take place near or within wetlands. If completed, efforts should be made to select construction methods and materials that reduce impacts to wetland plants and hydrologic conditions.

66-ACRE JOHNSON ACQUISITION

Acquisition lands west of County Road A were rezoned from “A-1 Exclusive Agriculture” to “Natural Resources” as a requirement of the sale. Due to the rezoning, continued farming of the approximately 4.5 acres of cropland is no longer permitted. Grant monies are allowing this area, which was previously planted in soybeans, to be seeded to native prairie. This work was started in spring of 2009. An abandoned automobile was removed from the site prior to the start of seeding. Seeding was performed using a seed drill, and was followed by a mowing during the fall of the same year. A second mowing will occur next summer to help suppress weed growth.

Long-term plans include converting all previously cropped areas to tall-grass prairie. These areas will then serve as conservation buffers that will help stabilize eroding soils, expand grassland habitat, capture and absorb runoff, and help protect adjacent wetlands. For the next two years prior to restoration (2009 and 2010), the Lake District will participate in a tenant-farming arrangement on the 26 acres of cropland east of County Road A. Temporary farming is permitted under the Lake Protection Grant contract used for the land purchase, and will allow the District to generate rental income that can help offset future restoration costs. Farming will also help maintain effective weed control before restoration is implemented.

The use of conservation tillage practices, such as no-till plowing, will be required while the property is being farmed. The planned crop rotation will be corn followed by soybeans. In addition, significant gully erosion is evident and will be targeted for repair prior to site restoration. The main gully forms 650 feet east of County Highway A, and has been measured up to 500 feet in length. Much of the erosion originates and is located on the adjacent property to the north. If cooperation can be secured with the adjoining landowner, the gully will be reshaped and seeded to a grass-swale waterway. Installation will be based on a design and seed mix approved by the Jefferson County Land and Water Conservation Department. Plans are to seed the entire 26-acre field to prairie beginning in the fall of 2010 or spring of 2011, and following the removal of any crops. The U.S. Fish & Wildlife Service has agreed to donate and help plant the requisite seed mix.¹⁰

The recently acquired, 21-acre woodlot will remain as such, but will be managed to enhance its wildlife value. This will be accomplished through selective tree thinning, native tree planting, and the removal of invasive species. A pile of discarded tires on the north edge of the woodlot

¹⁰ Ibid.

was removed by the seller during the spring of 2009. Abandoned hunting stands were also removed at that time. According to a 2009 walk-through survey,¹¹ the woodlot was found to be comprised of a mixture of red maple, black cherry, shagbark hickory, elm, basswood, black and white oak, bur oak, box elder and white mulberry. Red maple and elm were found to be the dominant species. Oaks and other high-value timber appeared to have been logged from the property some time ago. A considerable amount of young desirable central hardwoods in the sapling and poletimber size classes were observed. However, there was also a significant amount of invasive exotic species, including buckthorn, white mulberry, garlic mustard, multi-flora rose, dames rocket and barberry.

The above-described species will be the target of future control efforts. Any cut trees can be removed, burned, or left in place as brush piles for wildlife as long as quantities are not excessive and not allowed to smother native groundcovers. It is recommended that any tree thinning be conducted in consultation with a qualified arborist or Wisconsin DNR forester. As much of this work as possible should be performed prior to restoring adjoining croplands which will serve as equipment access to the woodlot.

Wetland and riparian areas will be the subject of water quality and habitat-enhancement efforts. These efforts will include the stabilization of eroding stream banks, and the establishment of native wetland plant communities wherever feasible. They will also involve the identification and control of any invasive species before they can spread and cause further problems.

Extending and/or re-routing existing walking trails and adding more interpretive signs may be warranted for improved public-access and education purposes, and to better protect sensitive areas. In particular, the existing trail should be re-routed around seasonally wet areas so they can be more easily used and maintained. No public access trails west of County Highway A are planned at this time in deference to maintaining the privacy of the neighboring residents. If trails are considered in the future, it is advised that they direct foot traffic away from this property. All Preserve lands must and shall remain open (with limitations) to public hunting, trapping, bird-watching, fishing, nature exploration and other low-impact recreational uses.

Simple, low-profile markers, such as wood posts or sections of split railing, will be installed to help demarcate the new Preserve boundaries. A property surveyor will be commissioned to assist with the accurate marking of these boundaries. Care will be taken to install markers that will not unnecessarily complicate adjoining farming operations, or result in a visual intrusion that interrupts the Preserve's natural aesthetics.

LONG-TERM MANAGEMENT CAPACITY

The Lake District Board and its employees will direct all management activities at the Preserve with assistance from volunteers and qualified contractors. The District will also continue to solicit donations and project grants to help facilitate ongoing restoration activities. Management responsibilities will entail publicizing the property's availability to the public, engaging in habitat-restoration work, coordinating volunteer stewardship activities, conducting educational

¹¹ November 18, 2009 report by Randy Stampfl, Wisconsin DNR Forester

tours, gathering visitor feedback via surveys, and performing long-term monitoring of restored habitats and resident wildlife populations. Technical expertise, labor, funding and other assistance will be sought from the Wisconsin DNR, U.S. Fish and Wildlife Service, Cambridge Public Schools, and volunteer groups like the Friends of the Preserve on an as-needed basis.

7-8 MAJOR PARTNERS AND CONTRIBUTORS

The Lake District is proud of the many partnerships that were instrumental in the purchase and restoration of Lake District Preserve lands. Past and current partners include: Wisconsin Department of Natural Resources (\$320,000 in Lake Protection Grants), North American Wetland Conservation Act grant program (\$75,000), Cambridge Foundation (\$50,000), Ducks Unlimited (\$20,000), Foundation of Faith (\$10,000), Oakland Conservation Club (\$5,500), Jefferson County Chapter of Pheasants Forever (\$5,500), Fort Atkinson Wisconservation Club (\$5,000), U.S. Fish and Wildlife Service (\$4,000), Cambridge State Bank (\$3,500), Superior Services of Fort Atkinson (\$2,000), Badger Bank (\$1,000), Natural Resources Foundation -- C.D. Besadny Grant program (\$1,000), John Probst & Sons (4-acre land donation), and all our individual donors whose contributions totaled many thousands of dollars. The Lake District also acknowledges citizen volunteer groups—including the Friends of the Preserve, local scout troops and school environmental clubs—that have assisted with various restoration and stewardship projects over the years.

7-9 RECOMMENDATIONS

MONITORING

- Public access facilities and designated walking paths will be routinely monitored for unintended environmental impacts and to evaluate their condition. Impacts might include erosion or overgrowth of the trails, littering and improper waste dumping, wildlife feeding or harassment, disturbance of protected plant communities, and the illegal harvesting of plants, seeds or animals. Potential management responses could consist of improving the content and positioning of signage, creating added barriers to protect sensitive areas, and re-designing or temporarily closing trails and access facilities found to be in disrepair. The Friends of the Preserve and similar volunteer groups will be approached to assist with regular monitoring.
- The property will be divided into discrete management zones. These zones may be delineated using such factors as landscape/cover type, plant community composition, ecological sensitivity, invasive species types and locations, and degree or type of management intervention required. Once the property is inventoried to assess these factors, management zones will be mapped and linked with recommended action strategies that address restoration and public access objectives.
- Plant-community and invasive-species inventories will be performed at least every two years. Inventory methods may involve a combination of qualitative visual inspections or more

quantitative line-transect or quadrat surveys. Photo-monitoring stations may also be used to track seasonal and inter-annual changes in vegetative communities. The purpose of these inventories is to track the status of restoration objectives, and to make sure that invasive species (i.e., reed canary grass, buckthorn, gypsy moths, etc.) are quickly identified and controlled to the maximum extent feasible. Volunteers who have at least a basic level of plant-identification expertise will be solicited to assist with this work. Volunteers will also be used to help document the types and numbers of different wildlife species that frequent the Preserve.

- Bluebird, wood duck and other nesting boxes will be monitored, cleaned, repaired, repositioned and replaced as needed.
- Lake District Preserve user-opinion surveys will be regularly conducted to ascertain public attitudes regarding their Preserve experiences. The purpose of these surveys is twofold. First, they will help identify and address concerns before they have a chance to develop into larger problems. Second, they will assist in the development of educational, public-access and resource-protection improvements. If feasible, it is recommended that on-site surveys be made available to more effectively gather user opinions and suggestions.

MANAGEMENT INTERVENTION AND FINANCING

Item or Activity	Proposed Timing or Recurrence	Estimated Cost (Professional Rates)	Grant or Donor Potential
Trail grooming	Several times/summer	\$500-750/year	Very Low
Management zone mapping/planning	2010	\$1,000-3,000	Medium
Development of woodland-management plan	2010	Implement via state forester	NA
Prescribed burning rotation	Every 3-5 years	\$2,000-4,000/burn	Low
Snow plowing (parking lot)	Several times/winter	\$150-250	Very Low
Maintenance of nesting boxes	Annual	<\$100	Very Low
Repayment of bank loan used for purchase	2009 - Completed	\$41,000 (+interest)	Completed; covered by grant award
Surveying and boundary markers	2010	\$750-2,500	Very Low
4.5-acre prairie restoration (cropland west of CTH A)	2009	\$3,500-4,500	Completed; covered by grant awards
34-acre restoration (east of CTH A and woods)	2010 or later	\$13,000-17,500	Medium-High
21-ac woody invasives mgmt. (east of CTH A)	2010 or later	\$11,000-14,500	Low-Medium
Gypsy moth surveys	Annually	NA	County match for eradication

Invasive brush clearing in wetland areas	2010 or later	\$1,500-3,000	Low
26-acre prairie restoration (cropland east of CTH A)	Fall 2010 or Spring 2011	\$14,000-15,000	High
New welcome sign	2009 - Completed	\$2,700	Completed
New visitor information kiosk	2009 - Completed	\$1,700	Completed
Re-routing/extension of grass walking trail	Fall 2010 or later	\$0.20/sq. ft.	Medium
Additional trail kiosks (3-5) and display materials	Fall 2010 or later	\$750-1, 500	Medium
Purchase of used ATV to facilitate management access	2010 or later	\$5,000-8,000	Low
Selective logging of woodlands	TBD	TBD	TBD

Potential revenue sources other than local tax dollars and outside grants include the following:

1. Farm rental income (\$150/acre or \$3,915/year applied to 26.1 acres; 2-year lease)
2. Sale of logged timber as a result of woodland-management activities
3. Sale of harvested prairie seed (up to \$2,500/acre)

PUBLIC ACCESS AND OUTREACH

- The Preserve provides a rare opportunity to help people cross the line from passive observers to active participants in conservation. A personal connection with nature combined with knowledge leads to the conservation commitment necessary to preserve wildlife and wild places. Our goals are to offer:



Grade-school kids collecting aquatic insects in a small pond at the Lake District Preserve

1. Positive nature- and wildlife-viewing experiences that limit disturbances to wildlife and their habitats;
2. Controlled access through carefully-planned and aesthetically-inviting walking trails, boardwalks and viewing platforms/blinds so visitors can enjoy different parts of the Preserve in a safe and sustainable manner;
3. Site development facilities that blend into the landscape and enhance the overall function of the Preserve, and that are located, scaled, screened and maintained so as to avoid harming resident plant and animal communities;
4. Recreation such as hunting and fishing when conducted in accordance with state and local rules;
5. Interpretive signs that encourage self-discovery and ongoing learning on topics ranging from wetland and wildlife ecology to water quality management;
6. Occasional guided tours and educational events to showcase restoration challenges and conservation improvements;
7. A recreation access schedule that defines where visitors can go and what activities are appropriate in each month of the year, depending on wildlife activity and site conditions; and

8. Youth exploration, stewardship and learning through partnerships or collaborations with local schools.

- Rules are needed to limit the potential for user conflict and to avoid unnecessary damage to the resource. The following rules shall be prominently posted at all public entry points:

Hours: The Preserve is open for public use from sunrise to sunset. Vehicular parking is allowed in the gravel parking area during these hours.

Dogs: Dogs are allowed if leashed and restricted to established trails. Pet owners shall immediately collect any pet waste and properly dispose of such waste off-site.

Bicycles/vehicles: To prevent damage to the trails and restored plant communities, the use of motorized vehicles and bicycles is not allowed beyond the parking area.

Trail use: Visitors are asked to confine their activities to established trails to minimize wildlife disturbance and trampling of restored vegetation.

Littering/vandalism: It is illegal to litter or deface, destroy or vandalize any structure, sign or natural growth.

Hunting: Hunting is permitted with a valid license and during legal hunting seasons, and hunting dogs may accompany their owners. Preserve users are asked to wear bright clothing during hunting seasons. Only portable blinds and deer stands are permitted, and must be removed at the end of each day.

Trapping: Restricted trapping privileges are granted through an annual lottery system, and the payment of an application fee. Preserve trapping rules, the required application materials, and harvest-reporting forms are available from the Lake District (see Addendum 1 in Appendix E).

Feeding of wildlife: The feeding of any wildlife is not allowed within the Preserve.

- Well-designed trails and boardwalks encourage visitors to leave their vehicles and engage in low-impact nature exploration. Design recommendations include:

1. Use grass walking trails whenever feasible that compliment the natural landscape and involve limited maintenance;
2. Use trails and access features to concentrate traffic where it is most appropriate;
3. Incorporate loops and twists that take advantage of natural landscape features and that keep visitors wondering what surprises lie beyond the next turn;
4. Position benches, viewing platforms and interpretive signs at overlooks or quiet alcoves to invite visitors to pause and let nature come to them;
5. Take advantage of natural vegetative screening and route trails so they lead visitors well clear of sensitive plants and wildlife;
6. Keep wildlife corridors intact as much as possible by limiting stream and wetland crossings, and by avoiding bisecting undisturbed areas;
7. Avoid locating paths on steep slopes that can contribute to safety and erosion concerns;
8. If necessary, use boardwalks in wet areas to keep visitors from trampling fragile wetlands and to allow wildlife to adjust to predictable use;



A view from an observation deck located along the Preserve trail.

9. Use ramps, handrails and other methods to improve safety and to comply with applicable ADA regulations;
10. Provide interpretive signs that inform visitors about the history of the Preserve, its unique watershed functions, the diversity of flora and fauna that can be found there, and tips on how to get the most out of your visit;
11. Monitor levels and types of recreational use that can affect Preserve function and user enjoyment; and
12. Modify trail design and use restrictions to protect wildlife and people as changes dictate.

SUPPLEMENTAL RECOMMENDATIONS

In 2007, the Lake District Board appointed a citizen advisory task force to help set short- and long-term management goals for the Lake District Preserve. This process occurred immediately prior to the recent 66-acre land acquisition, and culminated in an advisory report which is incorporated into this plan (see Addendum 2 in Appendix E). One recommendation was to explore the feasibility of plugging or diverting the flow of the main ditch channel to further utilize the water-cleansing functionality of on-site wetlands. Feasibility would depend on being able to resolve a number of legal and technical hurdles (i.e., drainage district law preventing ditch closures, potential flooding impacts to adjoining properties, Chapter 30 permits relating to modification of navigable waterways, flooding capacity of available wetland areas, etc.).

7-10 EXPECTED OUTCOMES OF MANAGEMENT ACTION

Anticipated outcomes of ongoing restoration and site-improvement work include the following:

1. Greater numbers of people from throughout the region using and enjoying the property for recreational and educational purposes;
2. Increased quality of wetland function;
3. Increased diversity and numbers of wildlife from improved habitat conditions;
4. Stabilization of eroding soils on previously cropped areas; and
5. Improved water quality conditions in the inlet that feeds surface drainage to Lake Ripley.

These expected outcomes will be monitored through user surveys, plant community and wildlife inventories, sediment-delivery modeling, and continued water quality monitoring.