

Beulah Bog SNA – Adopt-A-Natural Area Management Plan

Background:

History of Beulah Bog – Beulah Bog is owned by the DNR and was designated a State Natural Area in 1975. This 78-acre property is located in the northwest uplands of Lake Beulah. The entrance is on Stringers Bridge Road, where a small parking area is located on the western edge of the property. A hiking trail connects the parking area to the largest kettle, near the center of the property, which has a short boardwalk to allow visitors a close up view of the otherwise inaccessible bog. Other than an annual mowing of the trail and maintaining the parking lot and boardwalk, the DNR has done little to improve this site. In 2009, the Kettle Moraine Land Trust committed to adopt this property under the Natural Resources Foundation of Wisconsin Adopt-A-Natural Area Program. Eric Tarman-Ramcheck has written a restoration plan (Attachment 1: Beulah Bog State Natural Area Work Days.doc) for the upland wooded area of the site that has been approved by the DNR.

Fit to Kettle Moraine Land Trust Mission – Conservation and restoration of this site, located within the KMLT Lake Beulah project area, provides an opportunity to preserve a unique natural area with good public access for education and enjoyment of nature. Volunteers, guided by KMLT leaders, will greatly enhance the restoration effort.

Site Characteristics:

Beulah Bog lies in a series of four kettle holes and features an undisturbed bog with many unusual plants more typical of northern bogs. Classical stages of ecological succession are exhibited in the bog including: a shallow bog lake dominated by watershield with white and yellow water-lilies and extensive floating mud flats; an advancing, quaking sedge and sphagnum mat between 25 and 50 feet wide; northern wet forest of tamarack and bog shrubs and; a wet open moat surrounding the main bog, dominated by wild calla and cat-tails. Undisturbed bogs in this area are rare and the site supports a number of regionally rare plants with more northern affinities including dense cotton grass, large and small cranberry, and small bladderwort. The site harbors at least six species of insectivorous plants and the state-threatened plant, kitten tails (*Bessya bullii*), is also found here. The bog lake provides habitat for several dragonfly species and other invertebrates.

From the intersection of County Highways N and J in Troy Center (4.5 miles northwest of East Troy), go east on J 2.6 miles, then south on Stringers Bridge Road 0.8 mile to a parking area east of the road. Follow the hiking trail east 0.3 miles to a boardwalk into the bog.

Attachment 2: Beulah Bog GIS.pdf - shows the Beulah Bog on the Walworth County plat (Sections 7, 8 - T 4N - R 18E). Attachment 3: Beulah Bog – DNR Topographical Map.pdf - shows a topographic view of Beulah Bog.

The conservation value of Beulah Bog SNA is the preservation of a unique kettle based bog system with its vegetation, including some rare plants. SNA protect the “best and last remaining vestiges of native plant and animal communities” – Natural Resources Foundation. The Beulah Bog is identified in SEWRPC’s 1997 Planning Report No. 42 *A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin* as a NA-1 site.

<http://maps.sewrpc.org/publications/pr/pr->

[042_nat_areas_critical_species_habitat_protection_management_plan.pdf](http://maps.sewrpc.org/publications/pr/pr-042_nat_areas_critical_species_habitat_protection_management_plan.pdf)

A NA-1 site is defined by SEWRPC as a natural area site of statewide or greater significance.

SEWRPC specifically describes Beulah Bog “Outstanding acid sphagnum bog communities located

in a series of four kettle holes. A small openwater bog lake is surrounded by a quaking mat and tamarack swamp. A wet, open moat separates bog from wooded and pastured uplands.”

A State Natural Areas (SNA) is created under Wisconsin Statutes: Chapters 23.27-29 - <http://www.legis.state.wi.us/statutes/Stat0023.pdf>. Constraints to management of this SNA adopted by KMLT (adoption agreement - Attachment 4: KMLT_MOU_ETR Edits.doc) under the Natural Resources Foundation of Wisconsin Adopt-A-Natural Area Program are delineated by Wisconsin DNR NR45 - <http://www.legis.state.wi.us/rsb/code/nr/nr045.pdf> and a management plan for this SNA prepared by the DNR – Attachment 5: Beulah Bog No. 122 State Natural Area Management Plan. This bog is rare for southern Wisconsin, as most Wisconsin bogs exist north of the tension zone, which defines the boundary between southern and northern plant species. Beulah Bog contains many northern bog species in the southern portion of the tension zone!

The Beulah Bog contains bog, disturbed grasslands (low pasture) and upland oak woodlands.. These areas are outlined in Attachment 6: Beulah Bog – DNR Habitat Map. Attachment 7: DNR Plant List for Beulah Bog - contains a plant list from the DNR. Attachment 8: Lake Beulah Plant Record - contains a plant list prepared by Eric Tarman-Ramcheck.

Wildlife in the preserve includes deer, fox and turkey, as well as smaller mammals and birds.

Management Goals and Objectives:

Stewarding our Natural Areas – WI DNR:

“Stewardship of SNAs is guided by the principles of ecosystem management. For some SNAs, the best management prescription is to "let nature take its course" and allow natural processes, and their subsequent effects, to proceed without constraint. However, some processes, such as the encroachment of woody vegetation and the spread of invasive and exotic plant species, threaten the biological integrity of many SNAs. These sites require hands-on management and, in some cases, the reintroduction of natural functions -- such as prairie fire -- that are essentially absent from the landscape.”

Ecological Goals:

Upland/Wooded – The upland area of this SNA is about 56 acres. The wooded area is overgrown oak savanna with large spreading Bur Oaks, White Oaks and Shagbark Hickories. The goal of the volunteer effort lead by the Kettle Moraine Land Trust is to restore the many oak savannas found on the property through prescribed burning, invasive species removal, and thinning out straight, young trees like Ash, Cherry, Aspen, Box Elder.

Grassland/Meadow – All of the grassland area was formerly pastured intensively with cattle, reducing the vegetation to be a monoculture of brome with clumps of other herbaceous invasive species like Spotted Knapweed, Sweet Clover, Multi-flora Rose and Queen Anne’s Lace. The goal is to get this all into tall grass, mixed grass, and short grass prairie when a seed source and funding is available.

Wetland – The bog is in relatively pristine shape, and is the primary reason the property was declared a state natural area. Many rare species with a coefficient of conservatism value of 10 exist in the bogs protected here. No management is needed to maintain the shape of the bog, but activity on the adjacent home site located on Austin Road needs to be monitored.

Public Access Goals:

Permitted Uses – Hiking, Bird Watching, Plant Identification, Hunting, Trapping and Skiing.

Signage – Our goal is to post signs that illustrate the special features of the oak savanna and how oak savannas are restored as well as the uniqueness of bogs. The UW-Whitewater Biology Department as well as area High Schools take classes out here to learn about a bog.

Visitor Parking – There is a small parking lot available for the public right with access from Stringers Bridge Road, which is the staging area for the KMLT work parties.

Trails and Overlooks – There is a trail that goes to the second bog from the west, which is the largest of the bogs and also has a little boardwalk in it that is not the original boardwalk. The original boardwalk might have been taken down due to visitors walking outside the walk and stealing rare plants like the Pitcher Plant.

Education and Research Goals:

Community Outreach – Some significant partners in the community with similar goals and values include:

- Lake Beulah Management District
- Lake Beulah Protection and Improvement Association
- The Nature Conservancy
- Wisconsin DNR – Endangered Resources Bureau
- UW-Whitewater Biology Department
- Friends of the Mukwonago River
- Camp Edwards YMCA on Lake Beulah
- Camp Timber Lee

Education Partnerships – It is our goal to help area institutions use this site and other KMLT properties in the Beulah Bog area as an educational resource that can continue to inspire students and professionals alike to the many things that the natural ecosystems have to offer for helping us learn. UW-Whitewater is an especially important institution to partner with because their biology department takes field trips to this natural area every fall and spring. It would be terrific to get the students more involved with these workdays to benefit them in their educational development.

Surveillance Goals:

Waste Management – No on-site trash containers, because one that was placed there by the DNR attracted more than visitor waste – hikers pack out all material they bring to site. A big issue for several years has been dumping by the local community of construction, farm and yard waste. Post DNR “No Dumping” signs!

Access Management – DNR allows limited public access to this site. If dumping continues, KMLT should consider moving their game-monitoring camera to overlook on the south side of the parking area that has been treated as a dumping site, and report dumping with photo evidence to local authorities.

Work Plan and Budget:

History:

2009 – Starting in the spring, Eric has organized several workdays for volunteers to clear under-story brush and invasive trees in the area around the parking lot and to remove trash dumped on the site, especially the sloping area located south of the parking lot. Some of this brush has been burned on site; the rest has been chipped in another workday. The chips have been distributed along the entry portion of the trail. Fallen tree limbs on the trail have been removed from the trail, and a bed of Garlic Mustard located on the south side of the mid-trail has been pulled. A boot brush station was installed at the trail start.

Plan:

See Attachment 1, Attachment 9: Beulah Bog Winter Work Days Flyer and Attachment 10: Beulah Bog SNA Biannual Report. Attachment 11 shows the planning for a series of firebreaks to be cut by the DNR and volunteers on work days during the winter to allow for DNR supported burns over much of the old pasture and oak savanna in the early spring.

Budget:

2009 – 2011 - \$5000.00 commitment of volunteer effort - materials and equipment.
(Attachment 12: Beulah Bog Volunteer Contributions – DNR provided chart showing donation value of volunteer tasks.)