

## Gustav and Elizabeth Johnson Land Preserve



*Photos by Tom McBride*

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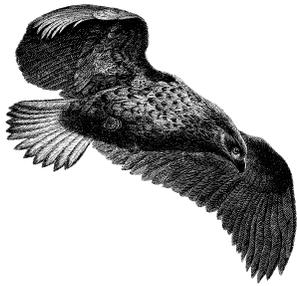
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## Deer Lake Conservancy Strategic Plan (2010)

### STRATEGIC DIRECTION: VISION

#### Lake Health & The Lake Environment

- The DLC has increased its property acquisition and now owns 320 acres surrounding Deer Lake, including many “back lots,” which create a buffer zone.
- Ponds and wetlands are restored and/or protected by DLC’s conservation efforts.

#### Programs & Services

- Recreational trails have been expanded and park-like areas exist, which showcase the work of the DLC and enhance public appreciation.

#### Land Acquisition Objective

- Strategically acquire land, or obtain conservation easements, in watershed areas that are critical for protecting the quality of Deer Lake.

#### Criteria for Land Acquisition<sup>1</sup>

##### Top Priority:

Reduce phosphorus runoff to Deer Lake

##### Additional Criteria:

Minimize potential increases in phosphorus runoff with future development

Enhance ability to expand trail system

Improve fish and wildlife habitat around Deer Lake

Enhance scenic views from the lake

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<sup>1</sup> From Deer Lake Conservancy Land Acquisition Priorities

## Meeting Strategic Plan Objectives

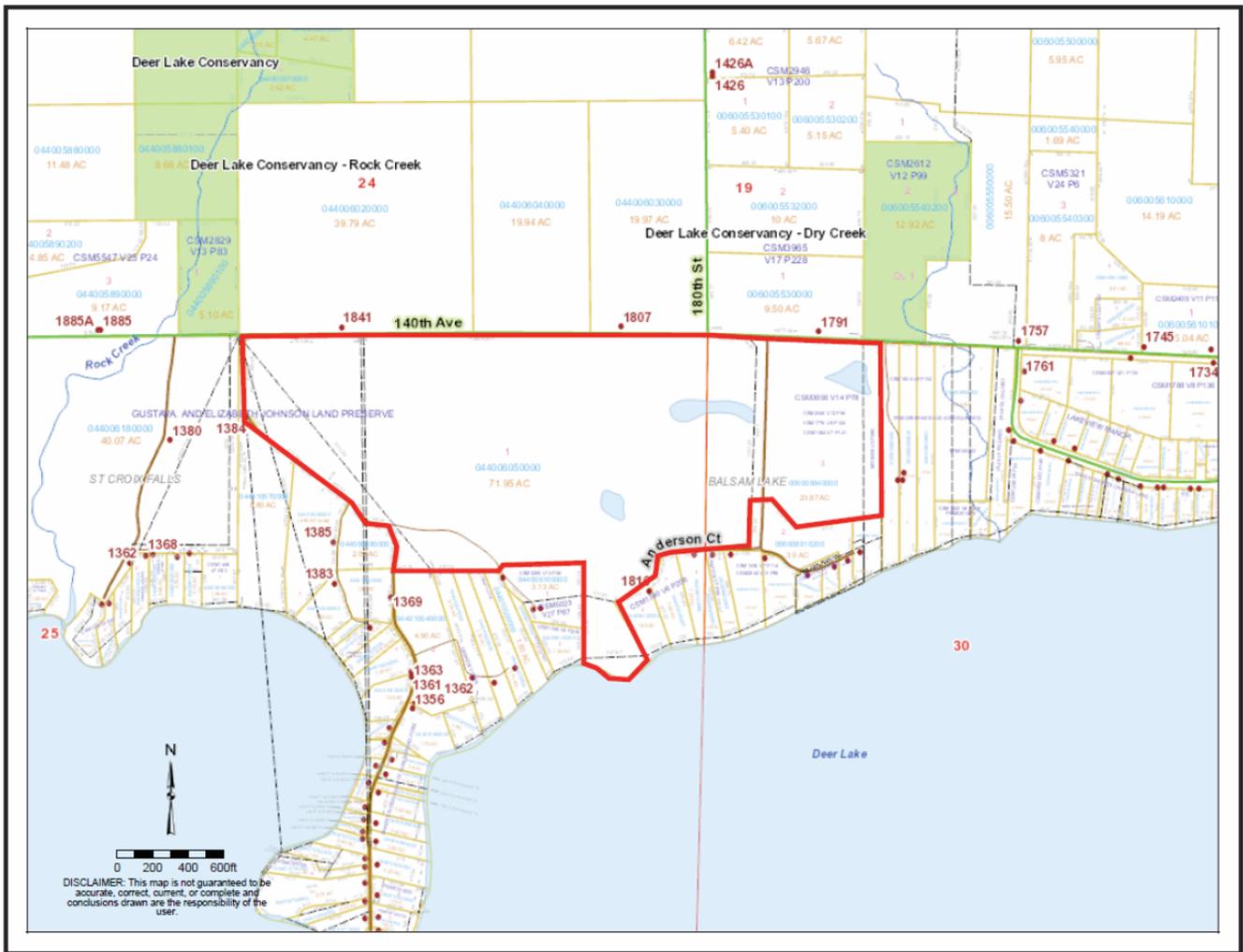
The Johnson Preserve Acquisition supports the direction established in the Deer Lake Conservancy Strategic Plan (2010). Preserve acquisition will provide significant strategic benefits and greatly increase the watershed acreage the Conservancy currently owns and protects.

The Preserve's wetland ponds and shallow wet depressions capture significant watershed runoff, preventing delivery of sediments and nutrients to the lake and allowing infiltration to recharge the springs which feed the lake. The easterly-most pond provides an opportunity to treat agricultural runoff from crop fields north of 140<sup>th</sup> Avenue.

The Preserve will provide a critical link to Conservancy recreational trails. These trails showcase and enhance appreciation of the Conservancy's work. The trails will also showcase the Preserve's varied plant and animal life.



## The Property and its Features



The Gustav and Elizabeth Johnson Land Preserve is located on the north shore of Deer Lake and south of 140<sup>th</sup> Avenue in the towns of St. Croix Falls and Balsam Lake, Wisconsin. Its northeast and northwest corners are adjacent to natural areas owned by the Deer Lake Conservancy. The parcel is 358 feet wide adjacent to Deer Lake, and there is 425 feet of shoreline. About one half of the depth of the parcel is within the shoreland.

Figure 1

THE JOHNSON PRESERVE ACQUISITION

The Preserve is bordered by 140<sup>th</sup> Avenue to the north, with wooded parcels and a farmstead north of 140<sup>th</sup> Avenue.

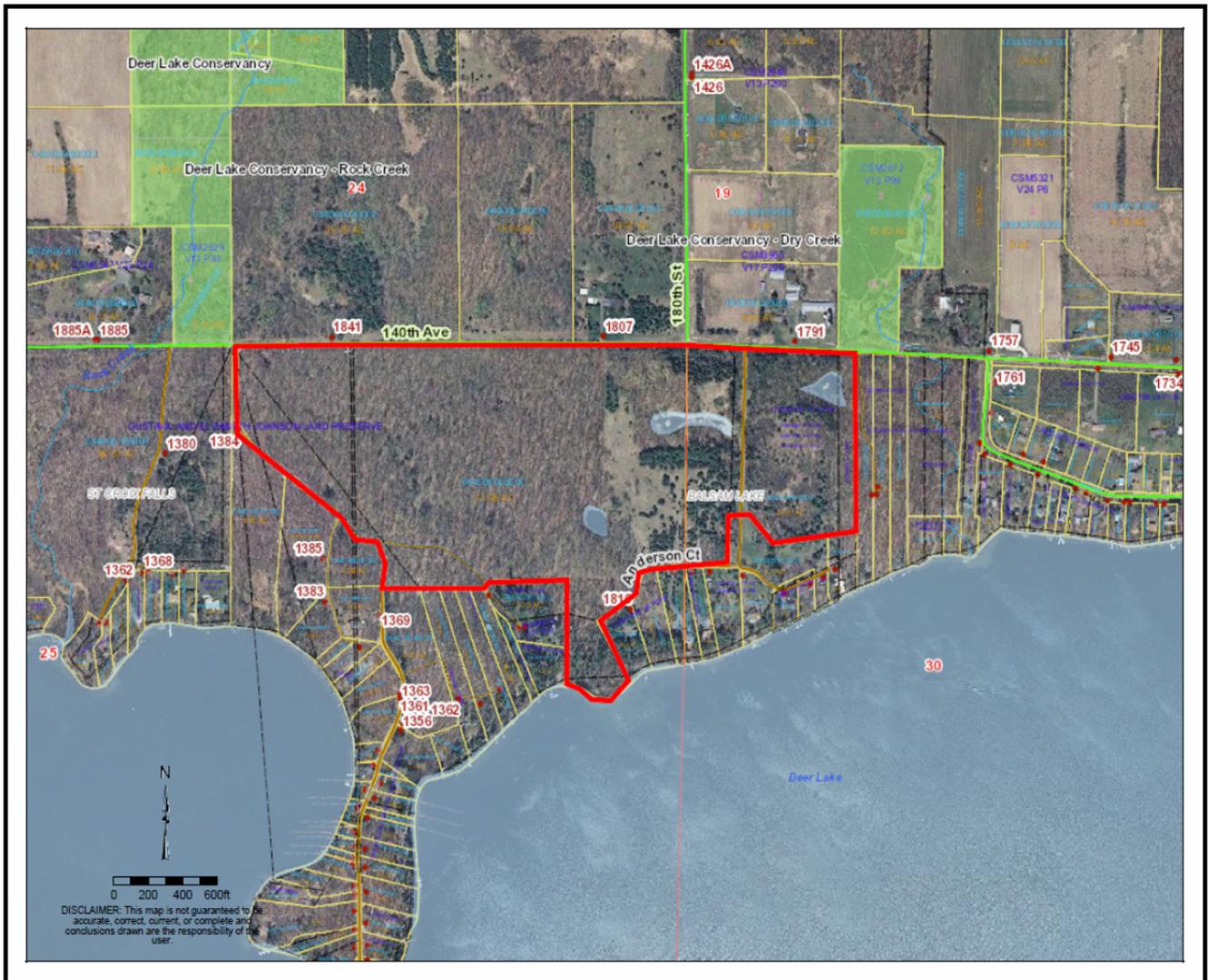


Figure 2

There is a crop field currently planted to corn adjacent to the farmstead. Waterfront parcels border the Preserve on the east, south, and west sides. The Preserve itself is wooded with created and natural wetland ponds and an old field opening near Anderson Court, a road which enters the property near its east end from 140<sup>th</sup> Avenue.

The topographic map below shows 10 foot contours.

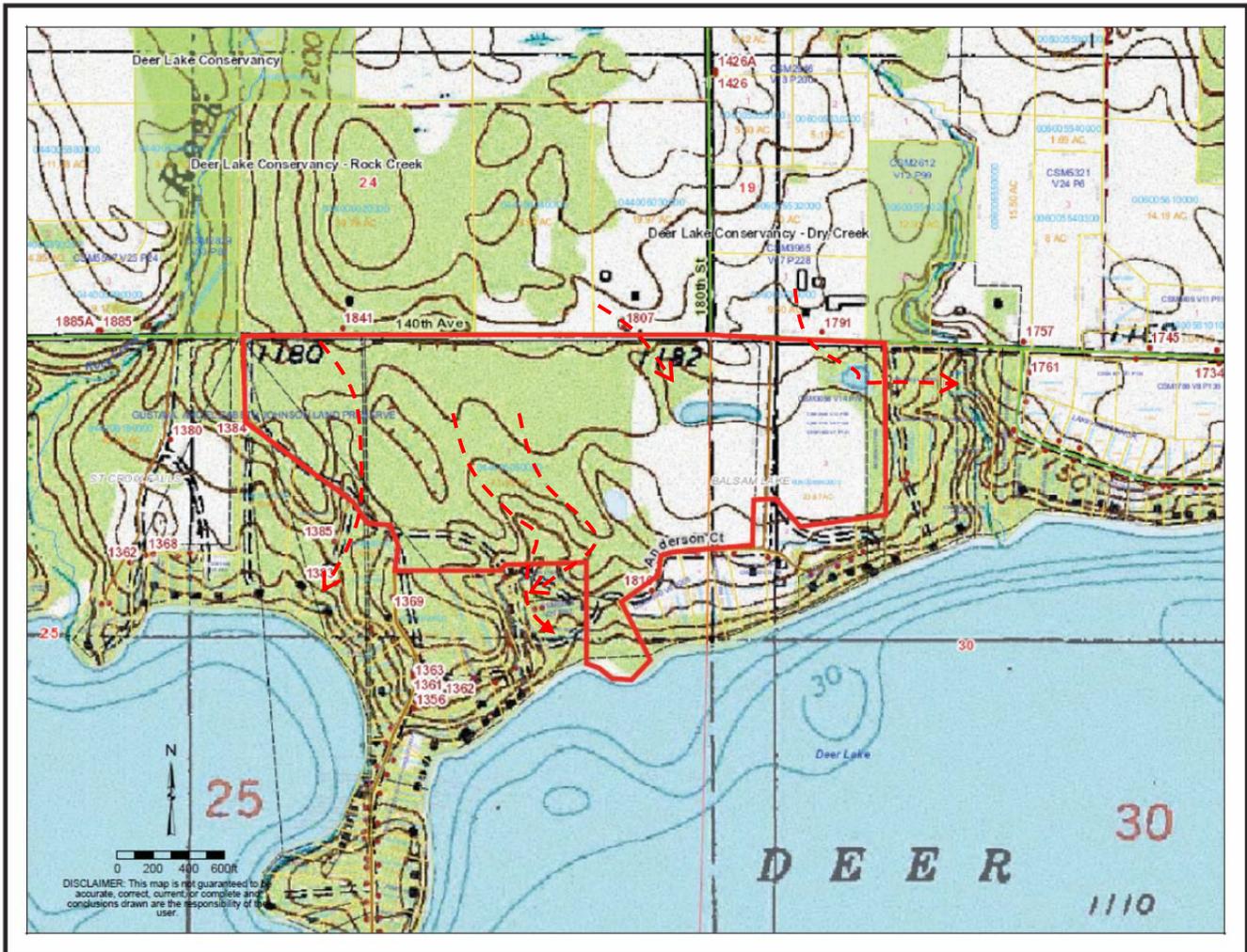


Figure 3

The land generally slopes gradually to the south toward Deer Lake with wetland depressions which hold water. Sloping ravines carry water to Deer Lake. Dashed red lines show patterns of drainage.

## Proposed Preserve Objectives

### Preserve and enhance Deer Lake water quality

Existing ponds and wet depressions enhance Deer Lake water quality by retaining runoff water, thereby preventing sediment and nutrients from entering the lake. These ponds and depressions also allow infiltration which helps feeds the springs that flow to Deer Lake.

The easterly-most pond provides potential for water quality improvement. A large (27") culvert under 140<sup>th</sup> Avenue carries water from a crop field which is currently planted to corn. Water flows through the pond to an intermittent stream channel then to Dry Creek - a direct connection to Deer Lake. While the pond temporarily holds water, it was overtopped in June 2014 storm events, and erosion is evident downstream of the pond.



The Conservancy will investigate increasing pond holding capacity and adding a riser pipe to slow pond outflow. Slowing pond outflow will reduce downstream erosion. The riser pipe would also allow sediments to settle out in the pond to reduce downstream impacts. The Conservancy will investigate methods to stabilize the stream channel on the adjacent property.



## Understand natural features

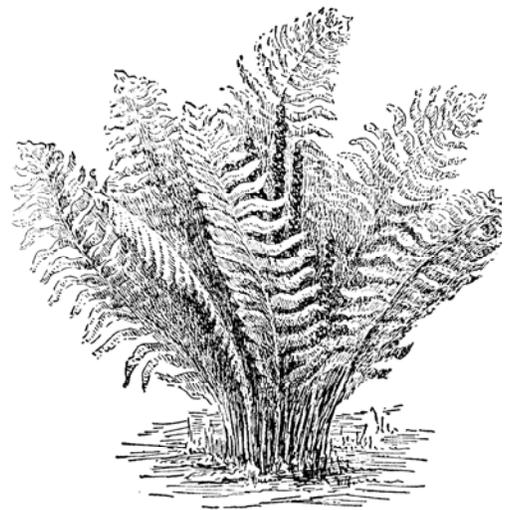
Plant and bird inventories were completed to aid in understanding the natural features of the property. The resulting reports: (*Gustav and Elizabeth Johnson Land Preserve Vegetation and Plant Species Inventory Delaney July 2014* and *A Rapid Assessment of a Bird Community Within 90 Acres of Land Along the Shore of Deer Lake, Polk County, Wisconsin. Collins July 2014*) are attached to this plan as appendices.

### Plant inventory summary

The Preserve consists of a mature hardwood forest with small, temporary wetlands, ponds, undeveloped lakeshore, and former pasture-land with conifer groves, shrub thickets, and grassy openings. The diverse habitats harbor over 200 plant species including an especially good array of forest wildflowers, ferns, grasses, and sedges native to our Northern Mesic Hardwood Forest in Wisconsin.

Within the mature forest there is a natural draw with shallow wetlands perched along its route. A variety of plant species depend on these ephemeral wetlands. The most important native plant communities are the hardwood forest and the small lake beach/lake terrace communities. Both are of good natural quality with high ecological value. One state-listed special concern plant, American ginseng, was found in the hardwood forest.

Disturbance indicators include recent, selective logging, lack of diverse subcanopy trees and shrubs, and lack of large, decaying tree trunks on the ground. Invasive species such as buckthorn have a negative impact on native shrubs and herbs. (Delaney 2014)



### Bird inventory summary

A total of 234 birds of 36 species were detected including a single Threatened Species, the Red-shouldered Hawk. Overall, 32 species of birds were detected in the mature forest portion of the property. The presence of the red-eyed vireo indicates a valuable second growth forest. Birds dependent upon standing deadwood and cavity nesting substrate were abundant and diverse. A total of 9 cavity-nesting species were present with a total representation of 22% of all individuals.

Open pools of water throughout the property enhance bird diversity as well as amphibian diversity. Open pools serve as feeding areas for aerial insectivore birds such as American Redstart, Great Crested Flycatcher, Eastern Phoebe, and Eastern Wood Pewee.

Consistent with similar habitats throughout Wisconsin, the early succession, edge portions of the property had increased bird abundance (28 birds per survey) and bird diversity. As is usual, however, the majority of the species present were edge species common to disturbed areas. These species are native, beneficial, and often Neotropical migrants. However, due to the abundance of younger habitats throughout the Great Lakes states, many of these species are not considered to be conservation priorities. (Collins 2014)

A natural lagoon at the lakeshore is one of the interesting natural features of the Preserve. This lake beach/lake terrace community is home to a variety of native sedges, flowers, shrubs and trees.



## **Enhance natural features/habitat**

The following recommendations are from the plant and bird survey results.

### **Preserve wetland pools.**

Temporary wetland pools provide diversity of plant, bird, and amphibian habitat. They also serve to enhance water quality by slowing water flow and preventing erosion to the lake.

### **Maintain standing dead wood and fallen branches.**

Standing dead wood will enhance habitat for cavity nesting birds (Collins) and leaving fallen branches and trees will rebuild the forest soil (Delaney).

### **Create openings in the dense, sugar maple forest.**

Some areas of the mature forest are approaching a sugar maple monoculture and, as a result, are becoming more sterile in overall biological (including bird) community. Two surveys within the mature forested areas had only six bird species each, whereas other forested surveys had many more species. Planting white pine, yellow birch, white birch, and white oaks along sunny edges is recommended. (Collins 2014) Delaney mentioned it might be desirable to remove red maple and sugar maple trees next to red and white oak trees to allow their continued growth.

### **Allow some conifer trees to mature.**

Tall white pines and plantation conifers will add diversity to habitat for a variety of birds. (Collins)

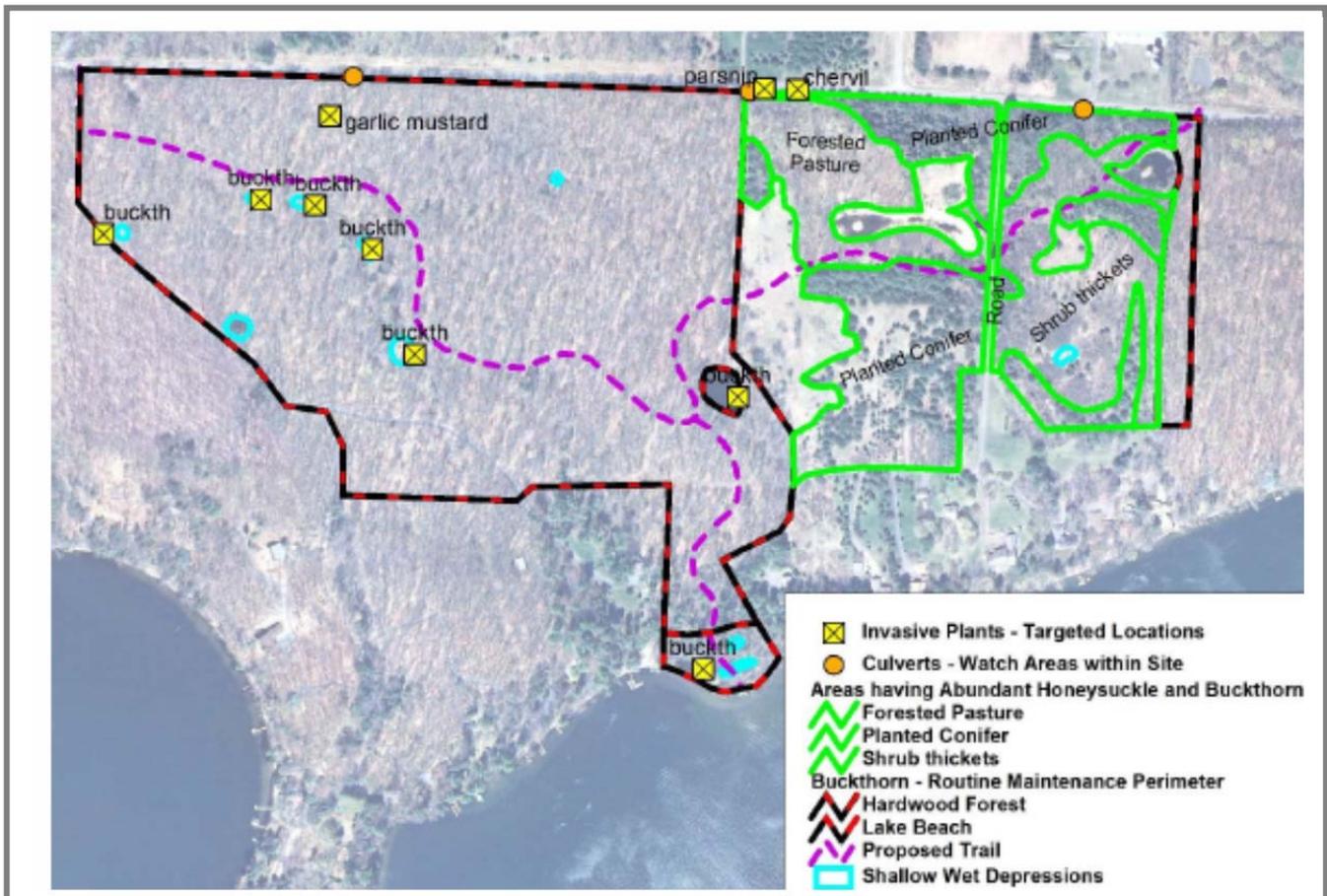
**Remove invasive species.**

Delaney recommended priorities for invasive species removal as follows:

Highest priorities: Wild parsnip and wild chervil (present in the ditch along 140<sup>th</sup> Avenue); garlic mustard (below a culvert that passes below 140<sup>th</sup> Avenue).

High priorities: buckthorn and honeysuckle removal, especially along proposed trail system and in lagoon area.

Medium low priority: day lilies in lagoon area.



Recommended invasive species management priorities. (Delaney 2014 from *Gustav and Elizabeth Johnson Land Preserve: Vegetation and Plant Species Inventory*)

Figure 4

## Share natural features with residents and visitors

A tentative location of a trail is shown in Figure 5. This trail would wind through the property to showcase its ponds and other natural features including plant and bird species present. The trail provides a link to the Rock Creek trails to the west and the Dry Creek trails to the east.



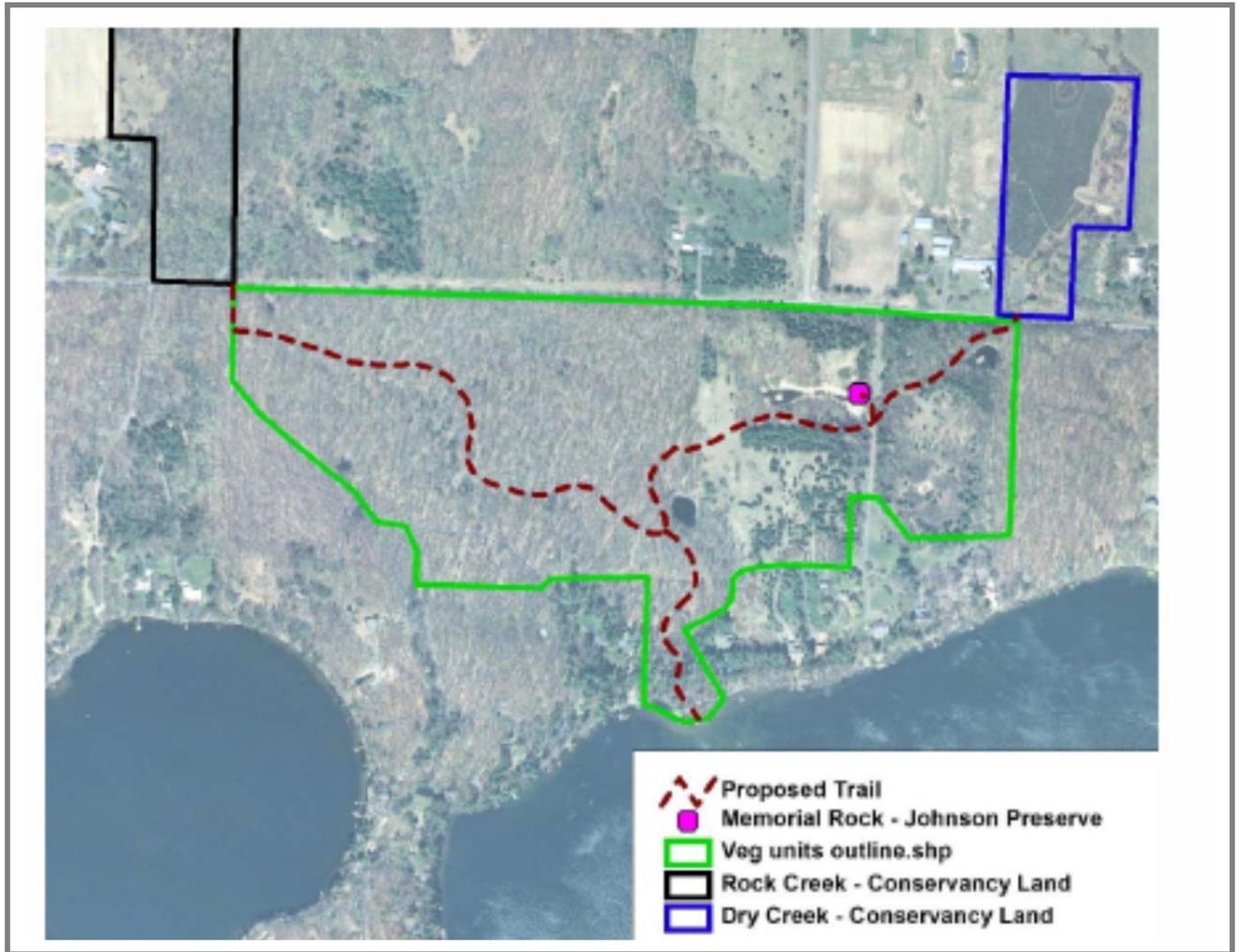
Signage will emphasize the history of the Gustav and Elizabeth Johnson Preserve and highlight the benefits the Preserve provides for the lake. The trail will pass by the existing dedication of the Preserve on this boulder.



The Deer Lake Conservancy will manage the property so that it is aesthetically pleasing to adjacent landowners, other residents, and visitors. This will include regular mowing of the perimeter areas. The split rail fence will be maintained where feasible, and may be removed in some sections.



Proposed Trail Location.



Trail location was developed by Jim Miller and mapped by Barb Delaney (Delaney 2014 from *Gustav and Elizabeth Johnson Land Preserve: Vegetation and Plant Species Inventory*)

Figure 5

## Acquisition Options and Funding

The acquisition will be funded through a combination of grants, Conservancy reserves, donations, and loans or bonds. Because the Conservancy is a 501(c)(3) organization, the transaction can be structured to maximize tax advantages to the seller.

### Grants

Acquisition of the parcel would be eligible as a Wisconsin Department of Natural Resources Lake Protection project. The next application date is February 1, 2015. A current property appraisal would need to be completed prior to the grant application deadline. Maximum grant award is \$200,000. Grant match (75% of total project costs) can be in the form of cash or value of donated property. A bargain sale with a signed offer to purchase would enhance the potential for grant funding. Purchase can occur prior to grant review, but a letter from the WDNR authorizing retroactive costs is needed. This letter could be requested at any time.

Additional property and project features which enhance grant scoring include:

- Ability to make water quality improvements
- Size of parcel
- Lakefront acquisition
- Native/natural landscaping
- Link to other natural areas
- Wildlife habitat (verified through plant and bird surveys)
- A clear project implementation plan



