

Draft

Lower Rock Creek Property



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Lower Rock Creek: the Property and its Features



The Werner Parcel/Lower Rock Creek Property is located on the north shore of Deer Lake and south of 140th Avenue in the town of St. Croix Falls, Wisconsin. Rock Creek, the largest intermittent stream which flows to Deer Lake, travels through the property entering the lake at one of three lake sensitive areas. Sensitive areas are important habitat areas designated by the Wisconsin Department of Natural Resources.

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

The property's northeast corner is adjacent to a natural area (Rock Creek parcel) owned by the Deer Lake Conservancy. The eastern boundary is adjacent to the Johnson Preserve, a parcel protected by a conservation easement owned by the West Wisconsin Land Trust. The Conservancy anticipates purchasing the Johnson Preserve early in 2017. The Lower Rock Creek Property is an undeveloped, wooded parcel with about 500 feet of shoreline according to the CSM. More than half of the depth of the parcel is within the shoreland zone.



Figure 1. Parcel Location:
S25 T34N R18W (32.10 acres)
Polk County, WI

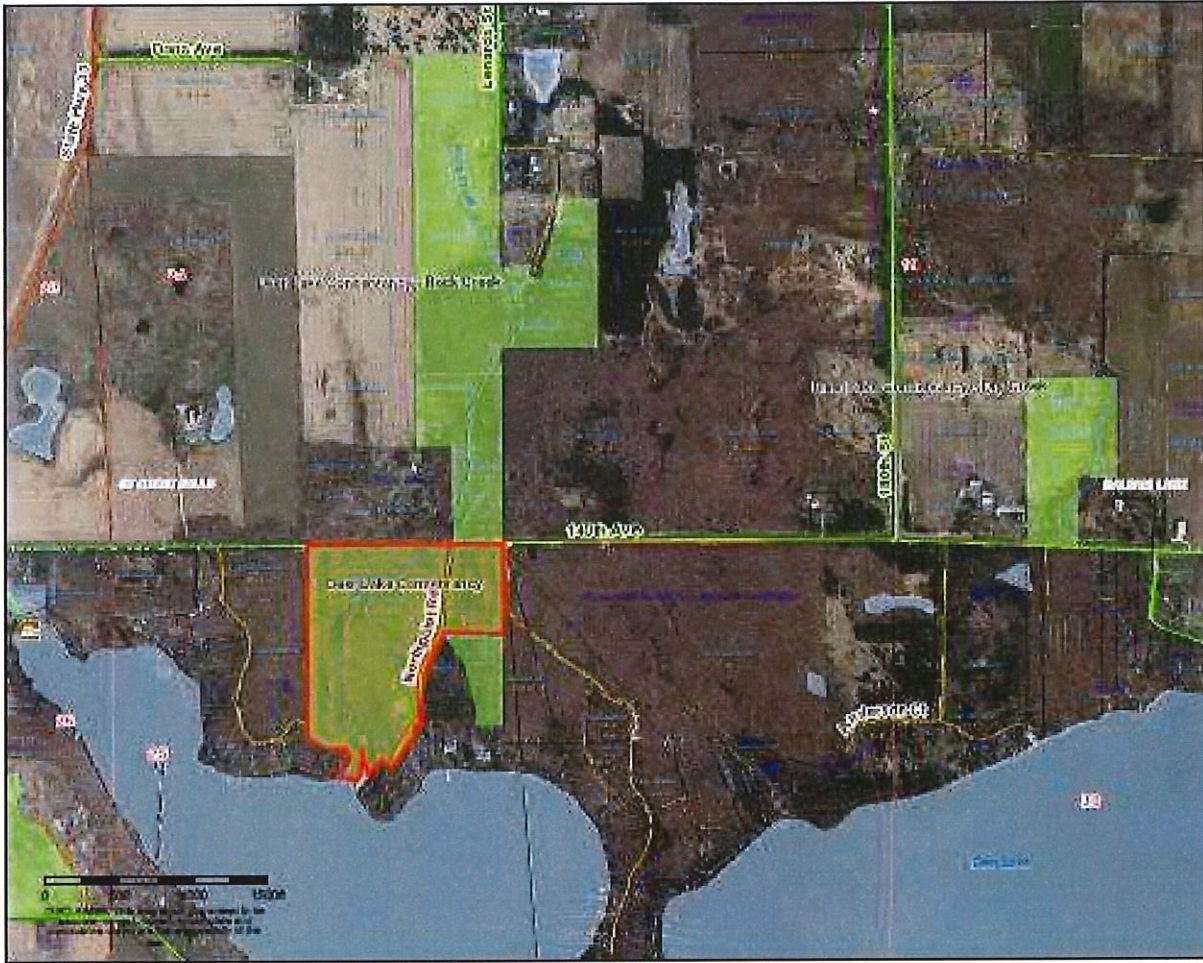


Figure 2. The parcel is bordered by 140th Avenue to the north, with the Conservancy-owned Rock Creek parcel and a wooded residential parcel north of 140th Avenue. There are crop fields to the northwest which drain through a culvert under 140th via a feeder creek to Rock Creek. Wooded parcels border the west lot line, and waterfront parcels border the parcel to the south.

The Preserve itself is wooded with mature hardwoods. Rock Creek is a prominent feature flowing through a steep then gradually sloping wooded ravine.

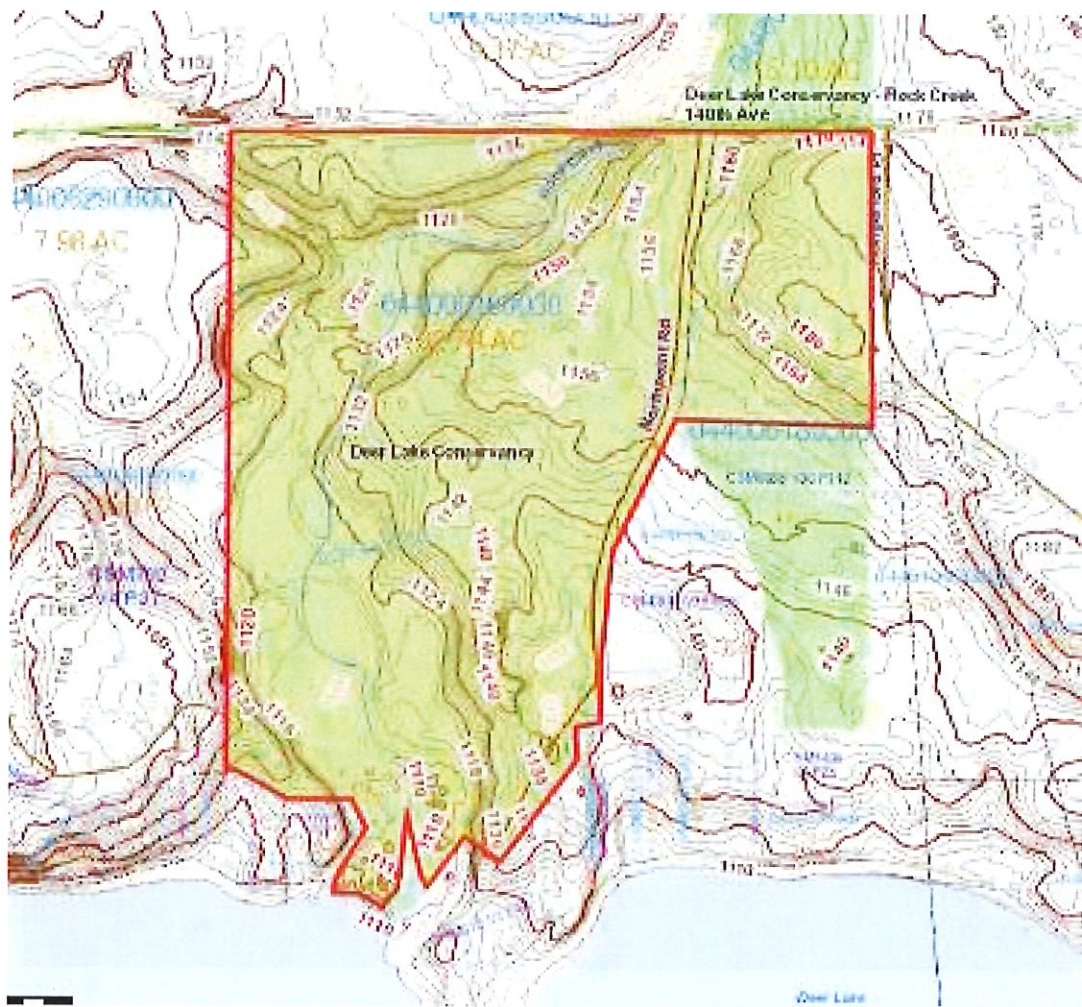


Figure 3. The topographic map above shows 2 foot contours. The land generally slopes steeply to the Rock Creek ravine and gradually to the south toward Deer Lake. A feeder creek enters Rock Creek from the northwest.

Lower Rock Creek Property Management: Meeting Strategic Plan Objectives

The Lower Rock Creek Land Management Plan supports the direction established in the Deer Lake Conservancy Strategic Plan (2010). The property will provide significant strategic benefits and significantly increase the watershed acreage the Conservancy currently owns and protects. The Lower Rock Creek Property is managed by the Deer Lake Conservancy.

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 Acquisition¹

Top Priority:

Reduce phosphorus runoff to Deer Lake

Additional Criteria:

Minimize potential increases in phosphorus runoff with future development (as currently regulated)

Enhance ability to expand trail system

Improve fish and wildlife habitat around Deer Lake

Enhance scenic views from the lake

¹ From Deer Lake Conservancy Land Acquisition Priorities

Proposed Preserve Objectives

1. Preserve and enhance Deer Lake water quality

The Lower Rock Creek property provides the opportunity to meet the Deer Lake Conservancy's goal of 65% reduction of watershed total phosphorus loading since 1996. As of 2016, total phosphorus loading is estimated to be 2351 lbs./year, a 58% reduction from the 1996 value of 5622 lbs./year. According to Polk County Engineer, Scott Geddes, a sediment basin that captures water on the Lower Rock Creek Property provides significant potential for additional total phosphorus reduction. In his analysis, Scott assumes that a sediment basin will remove 60% of the total phosphorus from the inflow of runoff from Watersheds 4 and 5.

Watershed	Current TSS (tons/year)	Current Total Phosphorus (lbs./year)	TP Reduction w/Sediment Basin (lbs./year)
W4	447	603	241
W5	326	588	235
Annual Totals	773 tons	1,191 pounds	476

If a sediment basin captured runoff from Watershed 5 alone, the annual TP reduction is projected to be 235 lbs. or 10% of current phosphorus loading to Deer Lake.

If a sediment basin captured runoff from Watersheds 4 and 5 together, the annual TP reduction is projected to be 476 lbs. or 20% of current phosphorus loading to Deer Lake.

The Conservancy plans to construct a sedimentation basin (or other appropriate best management practice) on the property to reduce the phosphorus carried in runoff from the watershed. Monitoring will be used to help target the most appropriate location and develop the most cost effective design to meet Conservancy phosphorus reduction goals.



Channel from Watershed 4



Channel from Watershed 5

2. Understand natural features

Plant and bird inventories were completed to aid in understanding the natural features of the adjacent 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*) provide information to guide this management plan.

Bird inventory summary

A bird inventory was completed on the adjacent Johnson Preserve. 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. This habitat is similar to that found on the Lower Rock Creek property, except there are fewer wetland depressions on the Lower Rock Creek 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.

Brian Collins confirmed the significance of the Lower Rock Creek Acquisition as follows:

Having confirmed that Red-shouldered Hawks were using the area during the breeding season, the addition of forested acres to the land conservation preserve will certainly work in favor of area-sensitive species, including the Red-shouldered Hawk. As I have studied the air photos, I can conclude that the habitat in the proposed acquisition is favorable for Red-shouldered Hawks, that the proposed acreage outside of the currently surveyed plot is very likely strongly contributing to their presence within the surveyed plot during the breeding season, and the acquisition of more forested acres will contribute to their success and continued presence along Deer Lake. Red-shouldered Hawks are sensitive to forest fragmentation and require large blocks of contiguous, mature forest near water. The acquisition of this land is further protection against fragmentation. (Collins, December 2016)



A natural lagoon at the lakeshore is one of the interesting natural features of the Lower Rock Creek Property. There is an emergent, wet meadow, aquatic bed wetland (1.25 acres) along the lakeshore and a scrub, shrub wetland (1.33 acres) further inland along the creek. It was designated a sensitive area by the Wisconsin Department of Natural Resources. According to the WDNR report (1992):

Sensitive Area C encompasses a small bay at the northwestern corner of Deer Lake. This bay comprises the entrance of Rock Creek. The area provides important habitat for centrarchid (bass and panfish) and esocid (northern pike and muskellunge) spawning and nursery areas. This area also provides important habitat for forage species. Wildlife also are reliant upon this area for habitat. Eagles, loons, herons, waterfowl, songbirds, furbearers, turtles, and amphibians benefit from this valuable habitat.

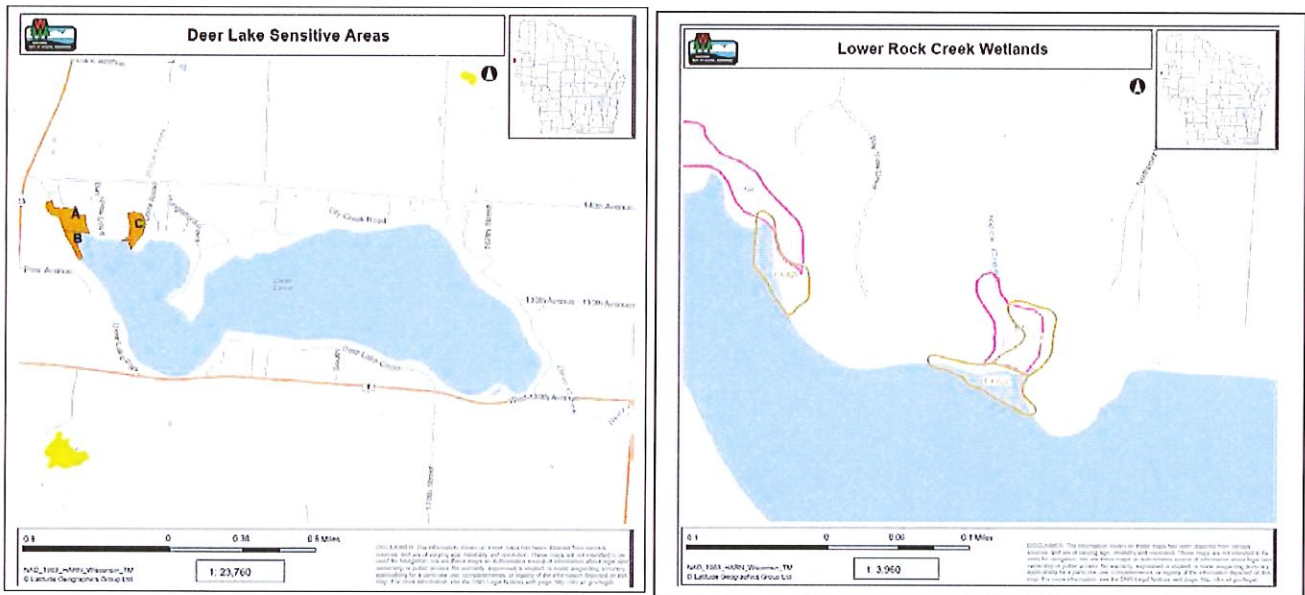


Figure 4. Sensitive Areas and Wetlands

3. Enhance natural features/habitat

The following recommendations are from the Johnson Preserve plant and bird survey results. Those appropriate for the Lower Rock Creek Property are adopted for the Lower Rock Creek Property and listed below.

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).

Allow some conifer trees to mature.

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

Remove invasive species.

Significant buckthorn is present along 140th Avenue, Northpoint Road, and Hungerford Point Road. Buckthorn control will be a priority for the Conservancy's buckthorn control efforts beginning in 2017. The Conservancy generally hires a contractor to treat buckthorn with foliar application for small plants and basal application for larger specimens. Conservancy volunteers follow the application by burning remaining wood during periods of snow cover. Chipped buckthorn has also been used for a path material/mulch.

4. Share natural features with residents and visitors



A trail map is shown in Figure 5. The property and trail will be open to the public. The trail winds through the property to showcase the ravine and, eventually, best management practices to be installed. The trail provides a link to the Rock Creek trails to the north and to the Johnson Preserve trails to the east.

A parking lot may be constructed adjacent to Northpoint Road to provide access to the trails. The parking lot will be unpaved – likely with a surface of mown grass.

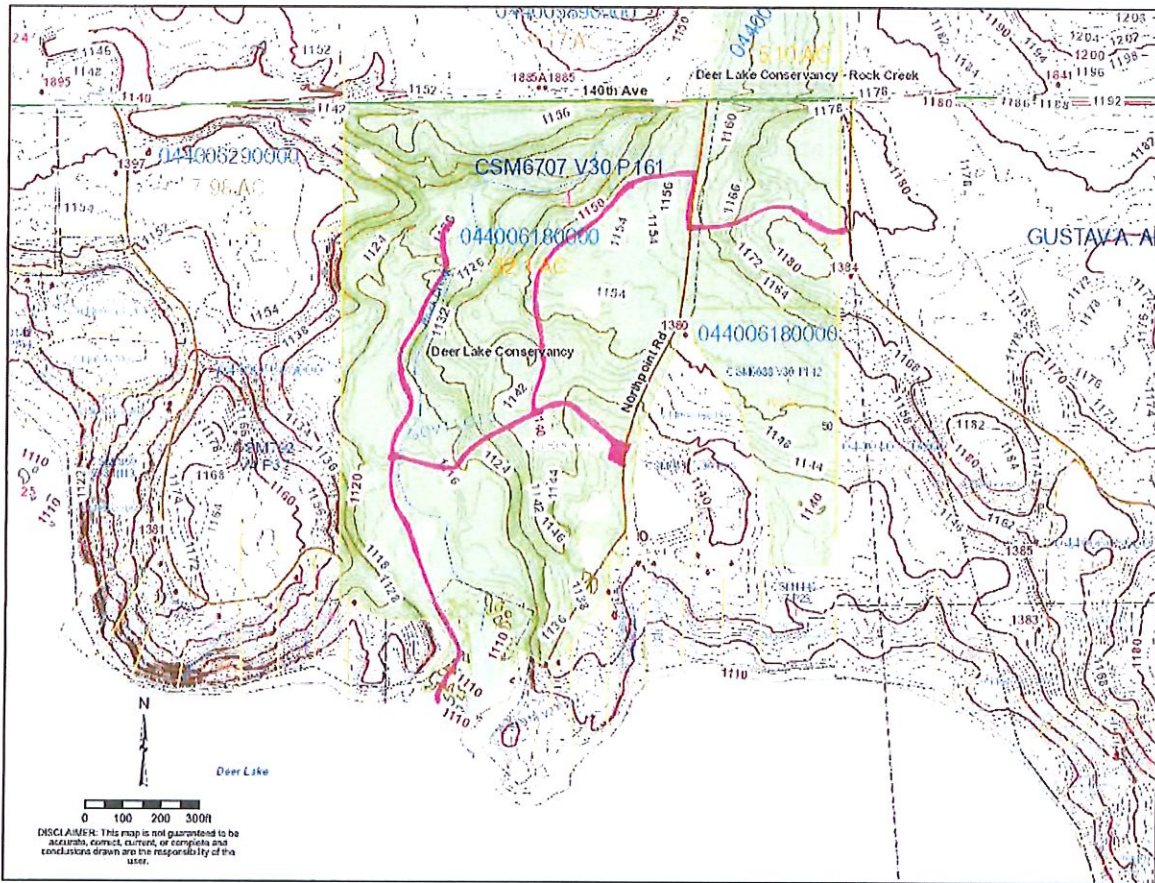


Figure 5. Proposed Trail Location. Trail location was developed by Jim Miller, Deer Lake Conservancy Vice President and project manager. A potential area for parking is shown along Northpoint Road.

Lower Rock Creek/Werner Property Acquisition

The Deer Lake Conservancy purchased the 35-acre Werner parcel on August 22, 2016. Subsequent to this purchase on October 17, 2016 the Conservancy sold a 4-acre portion of the parcel to Mark and Patty Thayer. The remaining 32 acre parcel constitutes the Lower Rock Creek Property.

There are no plans to sell or transfer all or any portion of the Lower Rock Creek Property to other owners.

The property will be maintained in a natural state. No buildings will be constructed.

Trails are present on the property. The trails are cleared paths in the woods with no paving, gravel surface or mulch cover. A parking lot may be cleared as a trailhead for access to the trails. It will likely have a surface of mown grass. If gravel is used and additional runoff is generated from a parking area, it will be captured and infiltrated. Soils in the area are Cromwell Sandy Loam which are described as "somewhat excessively drained with low runoff potential." Depth to sand is approximately 13 inches. These soils will make infiltration of runoff relatively simple.

A sedimentation basin (or other appropriate best management practice) will be constructed to capture and treat runoff water that flows from agricultural lands north the property. The basin will be designed to remove approximately 60% of the total phosphorus carried in runoff water. Sedimentation basin installation is likely to occur in 2018.