

## Threats to Ecological Value

The triangular plot of land east of Hamilton Lake is now part of a golf course. Nutrient runoff is commonly a problem associated with golf courses, and the water quality of Hamilton Lake should be monitored to ensure that what is currently a mesotrophic lake does not become a eutrophic lake where algal blooms near the water surface are more common.

The wetland corridor between the golf course and the inflow stream to Hamilton Lake may serve as a nutrient sink for runoff from the golf course. Still, the wetland plant community along the stream could change in composition towards more nutrient-demanding species, which may facilitate the spread of more aggressive species into the northeast portion of this site.

Finally, the proximity of roads to this PCA could help propagate non-native species into the upland forest and the swamp.



## Management Recommendations

PCA 11 is an excellent candidate for conservation priority. The southern swamp is the largest of its kind in the four-township area, and because of its size, could support certain plant and animal species that occur in large swamp habitats with little edge effect. However, residential development would open up the interior portion of the site to vehicle traffic, reducing the ecological quality of the interior of the PCA.

Although development of the golf course may threaten the northeast part of the PCA, the effects on the majority of the site should remain small.

Monitoring the water quality of Hamilton Lake and the nearby plant communities will provide the best means to evaluate the effects of the golf course on the lake ecosystem and its associated wetlands.

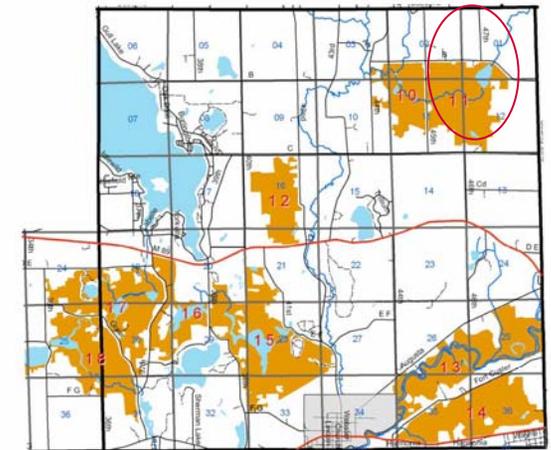


The prairie fen along Hamilton Lake is a unique plant community that should be protected and maintained by reducing human impact throughout this narrow band of wetland vegetation.

## Ross Township Stafford Swamp and Hamilton Lake PCA 11

### Location

Potential Conservation Area (PCA) 11, located in sections 1, 2, 11, and 12 of Ross Township, is a 595-acre property roughly bounded by B Ave., 48th St., C Ave., and 45th St.



High priority potential conservation areas  
Ross Township (and portion of Richland)

#### Legend

- state highways
- county roads
- township boundary
- Village of Augusta
- lakes
- rivers
- sections
- potential conservation areas



MICHIGAN STATE  
UNIVERSITY  
EXTENSION

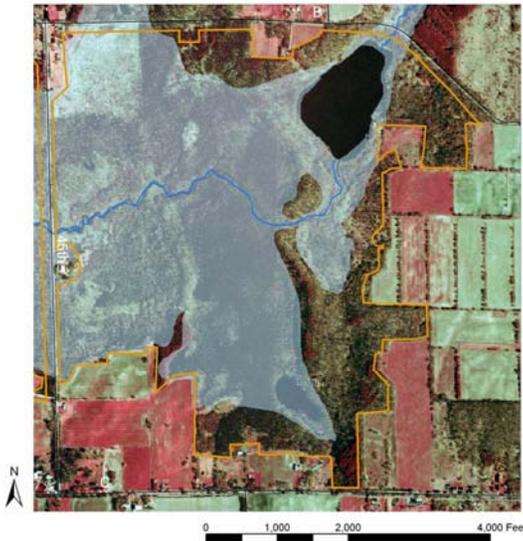


Michigan  
Natural  
Features  
Inventory

# Diverse Ecosystems

## Site Description

This Potential Conservation Area (PCA) is largely wetland habitat that borders Hamilton Lake and its out-flow stream. The border of this property consists of agricultural fields, roads, and old fields.



Potential conservation area 11  
Ross Township  
595 acres

### Legend

-  potential conservation area
-  roads
-  wetlands



## Communities and Ecosystems



The majority of PCA 11 is a southern swamp (named Stafford Swamp), which is the largest intact southern

swamp in the four-township area.

Sections of southern shrub-carr (east of 45th St.), southern wet meadow (northwest corner of site), and emergent marsh (stream proper) occur within the overall wetland complex. Dry-mesic southern forest comprises most of the upland habitat.

The Stafford Swamp basin is a broad, flat depression with little topographic variability; the result is a relatively homogeneous, expansive forested wetland ecosystem. Several groundwater seeps emerge in the swamp, and iron oxide precipitation readily occurs in these waters.



Hamilton Lake represents the upstream end of the hydrologic system in PCA 11. The shallow perimeter of the lake is an emergent marsh community. However, what is floristically noteworthy is the narrow band of prairie fen along the eastern edge of the lake.

## Plants and Animals of Interest

The large southern swamp harbors many plant species and provides habitat for numerous animals. Blanchard's cricket frog, a species of special concern in Michigan, was heard in this area, which is a good indication of a healthy wetland ecosystem. Five additional common frogs and toads were also heard.

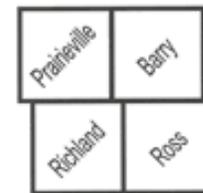


Southern Blue Flag

Bishop's cap, an uncommon plant, was observed in the swamp in the spring. The prairie fen along Hamilton Lake is an excellent example of this rare plant community in both the four-township area and Michigan overall.



The importance of this habitat to breeding birds is made evident by the results of the 2003 Michigan Breeding Bird Census. A total of 72 species were identified in the area of this PCA.



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