**III Wildlife Conservation Plan Unit 7 (Peter & Gwyneth Schroeder Tract)**

Revision/Review History
Written by Ron Hoffman January 26, 2019

Location: Unit 7 is located at the southeast ¼ of the southwest 1/4 of section 3, T2S, R1E. The east boundary is in Eagle Lake, the south boundary is a drainage ditch, the west boundary is Wooster Rd., and Unit 6 and private land form the north boundary (Figure 1). The northwest corner of Unit 7 is located at 42.32494° and -84.30430°.
Size: 25 acres
Soil Types: See Figure 2. Unit 7 soil map.

| Soil Symbol, Name and Phases | Acres | Percent |
|---|---|---|
| 18 Gilford-Colwood complex | 8.3 | 33.2 |
| 20 Houghton muck | 3.8 | 15.2 |
| 35B Arkport-Okee loamy fine sand | 2.5 | 10.0 |
| 43A Dixboro very fine sandy loam, 0 to 3 percent slope | 1.8 | 7.2 |
| 55B Eleva sandy loam | 1.3 | 5.2 |
| w Water | 7.3 | 29.2 |
| Totals | 25.0 | 100.0 |

Water: In addition to Eagle Lake, a dug pond and drainage ditch are found in the unit. The pond was dug by a previous landowner. Water in the drainage ditch flows west from Eagle Lake, across Wooster Rd. and eventual empties into the Portage River Drain. March 3, 2018, water was 12.5 inches above the bottom of the Wooster Rd. culvert.
Presettlement Vegetation: (Comer et al. 1995 also see Presettlement Vegetation Map in *A Conservation Assessment of the Phyllis Haehnle Memorial Sanctuary*).

Emergent Marsh – a shallow water marsh characterized by emergent narrow and broad-leaved herbs and grass-like plants as well as floating-leaved herbs. Dominant plants bull rushes, cattails, sedges, yellow water lily, white water lily, and wild rice.

Oak Forest – Black oak and white oak were dominant in the canopy of this dry-mesic southern forest. Associated trees were red maple, pignut hickory, white ash, black cherry, scarlet oak and sassafras. Baneberry, bedstraw, black snake root, witch-hazel and hop hornbeam were other characteristic plants.
Human Impacts: This unit was purchased by Michigan Audubon from George H. Smith August 15, 2018 for $90,000.00.

A two-track drive is located along the south side of Unit 7.01 extents from Wooster Rd. to land owned by Judith Cory east of Unit 7. She will be granted access to her property using the drive. An electric power line crosses the eastern part of the unit.

An excavated pond is located in Unit 7.02 was once used for irrigating the fields to the north. Water levels have been lowered by the drainage ditch. The remains of a cement structure are located about 100 yards East of Wooster Rd. It was probably used to control water levels.

Present Vegetation:

| 2018 Cover Type | Management Unit | Acres | Percent |
|---|---|---|---|
| Cropland | 7.01 | 7 | 28 |
| Wetland Forest | 7.02 | 7 | 28 |
| Shrub/scrub Wetland | 7.03 | 3 | 12 |
| Emergent Marsh | 7.04 | 1 | 4 |
| Lake | 7.05 | 7 | 28 |
| Total | | 25 | 100 |

Unit 7 Management Goals, Objectives and Actions

Goal - is a general, broad outcome that is not measurable.

Objectives - a subset of the goals that reflects the results needed to achieve a goal. They are measurable.

Actions - activities required to fulfill the objectives.

The relationship of goals, objectives, and actions are indicated by a numbering system. The goal number (1-3) is first, followed by a period, then the objective number i.e. 3.02 is goal #3, objective #2. Actions and policies are indicated with lower case letters. The same goal and objective numbers are used for all the sanctuary management units, but actions are not.

Only the objectives specific to Unit 7 are listed here. Some additional objectives that pertain to the entire sanctuary are not listed here e.g. 1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain or 3.01 Maintain an inventory of plants, insects and vertebrates.

Goal 1: Conserve native flora and fauna at the sanctuary, especially sandhill cranes.

Objective 1.01: Maintain sanctuary boundaries.

Objective 1.02: Restrict public access to environmentally sensitive areas including fens and wetlands used by cranes.

Objective 1.04: Restore, enhance and maintain native biotic communities e.g. grasslands, savannahs, fens, wetlands.

Objective 1.07: Reduce invasive plants and animals.

Goal 2: Increase public understanding of the sanctuary, its wildlife and their environment.

Goal 3: Increase scientific knowledge of wildlife and their environment though research.

Management Units: Unit 7 is divided into 5 management units based on plant cover types in 2018. See Figure 1. Unit 7 management units map.

**Unit 7.01 Hay Field**

Size: 7 acres

Soil: Arkport-Okee loamy find sand, Dixboro very fine sandy loam, Eleva sandy loam

Vegetation: Alfalfa and cool season grasses

Human Impacts: A narrow driveway along the south side of field

Objectives and Actions:

1.01 Maintain sanctuary boundaries.

1.01a Place boundary signs along Wooster Rd.

1.01b Erect a sign stating: "Phyllis Haehnle Sanctuary, Peter and Gwyneth Schroeder Tract, Michigan Audubon".

1.04 Restore, enhance and maintain a warm-season grassland biotic community.

1.04a Prepare the site for planting native warm season grasses and forbs. Spray herbicide glyphosate to kill all vegetation in spring 2019.

1.04b Plant a mixture of native warm season grasses and forbs with a no-till drill in early summer 2019. The mixture should contain two or three species of grass and 15 or more species of wildflowers.

1.04c Burn the grassland every 3 – 5 years, or as needed to control woody plant invasion.

1.04d Spot spray woody plants and non-native, invasive plants with herbicides as needed.

**Unit 7.02 Wetland Forest**

Size: 7 acres

Soil: Gilford-Colwood complex

Vegetation: Cottonwood is dominant. Other prominent species include aspen, red cedar, walnut, black cherry, black oak, swamp white oak, two sycamore, autumn olive, oriental bittersweet, silky dogwood, willow, gray dogwood, and staghorn sumac.

Human Impacts: Dug pond, deer blind, trash, electric power line

Objectives and Actions:

1.04: Restore, enhance and maintain a native wetland forest biotic community.

1.04a Remove hunting blind and trash spring 2019.

1.07: Reduce invasive plants and animals.

1.07a Spot-spray and/or cut and treat stubs of invasive woody plants with herbicides. Ongoing

**Unit 7.03 Wetland Shrub/scrub**

Size: 3 acres

Soil: Houghton muck and Gilford-Colwood complex

Water: A drainage ditch forms the south boundary of the unit west of Eagle Lake.

Vegetation: Willows and silky dogwood are dominant. Red osier dogwood, buttonbush, glossy buckthorn, winterberry, **shrubby cinquefoil** (*Potentilla fruticosa*), swamp rose, meadow sweet, gray dogwood, ? highbush blueberry, poison sumac, elm, purple loosestrife, marsh fern, reed canary grass, cattail, **cordgrass (***Spartina pectinata*), and sedges are present. Shrubby cinquefoil is an indicator of alkaline soil associated with fens.

Human Impacts: Drainage ditch, electric power line. Absence of fire has probably allowed a former emergent marsh to evolve into a shrub dominated wetland.

Objectives and Actions:

1.01a Place boundary signs along the south side of the unit.

1.04: Restore, enhance and maintain an emergent marsh biotic community.

No active habitat management is recommended at this time because of the unit's small size and bordering private land. If the wetland south of the ditch is acquired, then consideration should be given to evaluating the area for fen restoration.

**Unit 7.04 Emergent Marsh**

Size: 1 acre

Soil: Mostly Houghton muck

Water: A drainage ditch that forms the south boundary of the unit west of Eagle Lake is mostly plugged by cattails.

Vegetation: Cattails are dominant, sedges common

Animals: A pair of sandhill cranes probably nested here in 2018.

Human Impacts: Electric power line cross the unit.

Objectives and Actions:

1.02: Restrict public access to environmentally sensitive wetlands used by cranes.

**Unit 7.05 Eagle Lake**
Size: 7 acres
Soil: Submergent
Water: Shallow lake
Vegetation: Submergent and some emergent plants along the shore
Human Impacts: Fishing and potential waterfowl hunting
Objectives and Actions:
1.02: Restrict public access to environmentally sensitive wetlands used by cranes. Little can be done to restrict public access because other landowners own property bordering Eagle Lake.

Literature Cited
Comer, P. J. et al. 1995. Michigan presettlement vegetation as interpreted from the General Land Office Surveys 1816-1865. Michigan Natural Features Inventory, Lansing, MI digital map.

Figure 1. Unit 7 management units map.

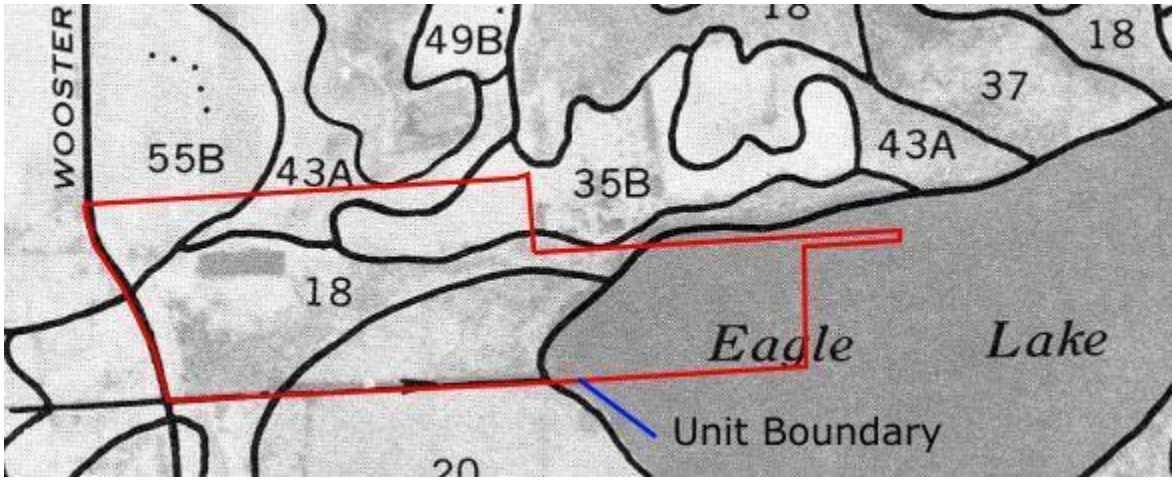

Figure 2. Unit 7 soil map.