VII. WILDLIFE HABITAT MANAGEMENT UNIT 5

Revision/Review History
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Location: Unit 5 is located in the northeast part of the sanctuary (T2S, R1E, section 2 See *Wildlife Conservation Plan for the Phyllis Haehnle Memorial Sanctuary* Figure 1. Map of wildlife management units at the Phyllis Haehnle Memorial Sanctuary). A two-track drive owned by Zone 4 forms the north boundary, a ditch the south and west boundaries, and the east boundary by land owned by Tom M. and Kelly K. Bury.
Size: ~61 acres
Soil Types: See Figure 1. Soil Map for Unit 5.

Soil Name	Acres	Percent
18 Gilford-Colwood Complex, black fine sandy loam	10.1	16.6
35C Arkport-Okee, loamy fine sand	1.1	1.8
37 Palms Muck, deep muck	29.6	48.4
43 A Dixboro very fine sandy loam	0.5	0.7
63 Henrietta Muck, thin muck layer	19.9	32.5
Total	61.2	100.0

Presettlement Vegetation: (see *A Conservation Assessment of the Phyllis Haehnle Memorial Sanctuary*, Presettlement Vegetation Map)
Inland Wet Prairie
Central Hardwood: Black Oak and White Oak
Current Cover Types: (see Vegetation Cover Map and Appendix L)

Cover Type	Acres	Percent
Emergent Marsh	36.5	60.9
Wetland Forest	16.1	26.5
Upland Forest	6.7	11.0
Wetland Shrub	1.6	2.6
Total	60.9	100.0

Management Units: Unit 5 is divided into 8 management units based on cover types. See Figure 2. Unit 5 Management Units.
Human Impacts: Ditches and a network of drain tile lower the water level permitting the area to be farmed after the Portage River Drain construction in 1920-21. Farming continued until late 1950s - 1960s.

Man -made features include a ditch along the east half of the north boundary that turns southwest into the unit and then flows west joining a ditch that forms the south and west boundary. A ditch emanating in 7800 Cutler Rd. LLC property enters the sanctuary midway along the north boundary. Access from the west end of Cutler Rd is over a north/south, two-track drive owned by Zone 4 that then turns to the west and forms the north boundary of the sanctuary. The east/west portion is gated.

Casper Haehnle donation in 1955 included land in this unit. Elwin Pickett farmed most of the area except the portion covered by oak woods until the 1960s.

Unit 5 is part of 100 acres enrolled the Wetland Reserve Program (WRP) in 2002. Restoration was completed in 2005. The inline water control structure placed in a ditch on the northwest side of the unit sets the pool elevation at 908.5 ft. Six shallow ponds were constructed: three cover 1/4 acre and three are 1/2 acre in size. All of Unit 5 is restricted by conditions of WRP.

Land owned by Thomas Bury to the east of Unit 5 is enrolled in WRP. When the Bury property was farmed, a berm was constructed to prevent water flowing from the sanctuary on to his land.

Unit 5 Goals and Objectives

1.00 Conserve the native flora and fauna at the sanctuary, especially Sandhill Cranes.

1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain

1.04 Restore, enhance and maintain native biotic communities i.e. grasslands, savannahs, fens, and wetlands.

Unit 5.01 Wetland Forest

Size: 14 acres

Soil: Palms Muck, deep muck
Dixboro very fine sandy loam

Human Impact Farmed until the 1960s. The Section 2 Northeast corner survey marker is located near the northeast corner of unit (Latitude 42.3352° N, Longitude 84.2699° W).

Vegetation: Willow and boxelder are co-dominant. Ash and elm were formerly common. It appears that this area may be reverting to a wetland shrub community.

Objectives and Actions

1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain
See Unit 5.05 Actions 1.03a and 1.03b.
1.03a Repair ditch berm along north boundary. Needs to be implemented.
1.03b Break and plug drain tile missed during 2005 restoration. Needs to be implemented.

1.04 Restore an emergent wetland biotic community.
1.04a Make general observations to monitor vegetation. Ongoing

Units 5.02 Oak Forest

Size: 7 acres

Soil: Gilford-Colwood Complex, black fine sandy loam
Arkport-Okee, loamy fine sand

Human Impact: A ditch bisects the unit.

Vegetation: White oak and hickory (shagbark and pignut) are co-dominant, black cherry, multiflora rose, prickly ash, and boxelder are common.

Objectives and Actions

1.04 Maintain upland hardwood forest biotic community
1.04a No actions are needed.

Unit 5.03 Emergent Wetland

Size: 4 acres

Soil: Henrietta Muck, thin muck layer

Human Impact: The North 1/2 Section land survey marker is located midway along north border of unit (42.3354°N and 84.2796°W). Two ponds were excavated in 2005.

Vegetation: Reed canary grass dominant. Willow and boxelder present

Objectives, Actions

1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain.
See Unit 5.05 objective Actions 1.03a and 1.03b

1.04 Restore an emergent wetland biotic community by constructing some pockets of deeper water.
1.04a Excavate a 1/4-acre and 1/2-acre ponds. Completed
1.04b. Burn every 3-5 years. Needs to be implemented

Unit 5.04 Wetland Shrub
Size: 2 acres
Soil: Henrietta Muck, thin muck layer
Human Impact: A ditch forms the south and west boundary.
Vegetation: Cottonwood and willow are dominant. Boxelder present
Objectives and Actions
1.04 Maintain wetland shrub biotic community
1.04a Burn along with Unit 5.03 every 3-5 years. Needs to be implemented

Unit 5.05 Wetland Shrub
Size: 2 acres
Soil: Henrietta Muck, thin muck layer
Human Impact: A ditch forms the west boundary. A water control structure is located at the northwest corner of the unit.
Vegetation: Silky dogwood, honeysuckle are dominant. Willow and boxelder present
Objectives and Actions
1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain
1.03a Conduct a feasibility study of restoring degraded wetlands using the Wetland Reserve Program funds, including mapping elevations; impact on neighbors, presence of species of concern, historic site review, cost analysis, etc.
1.03b Construct an inline water control structure in the ditch at 42.33546° N and 84.28065°W to control water levels in Units 5.01, 5.06, 5.08 and 5.10 at an elevation of 908.5 ft. Completed 2005.
1.03c Monitor water levels periodically. Ongoing

Unit 5.06 Emergent Wetland
Size: 20 acres
Soil:
Palms Muck, deep muck
Henrietta Muck, thin muck layer
Human Impact: A ditch separates this unit from 5.04. Another ditch forms the south and part of the west boundary. A1/4-acre pond and 1/2-acre pond were excavated in 2005.
Vegetation: Reed canary grass dominant. Willow and boxelder present
Objectives and Actions
1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain
See Unit 5.05 objective Actions 1.03a and 1.03b
1.04 Restore an emergent wetland biotic community by constructing some pockets of deeper water.
1.04a Excavate a 1/4-acre and 1/2-acre ponds. Completed

Unit 5.07 Emergent Wetland
Size: 12 acres
Soil: Palms Muck, deep muck
Human Impact: A ditch separates this unit from 5.02. Another ditch forms the south boundary. A 1/4-acre pond and 1/2-acre pond were excavated in 2005.
Vegetation: Reed canary grass dominant.
Objectives and Actions
1.03 Restore water levels to elevations that occurred prior to construction of the Portage River Drain
See Unit 5.05 objective Actions 1.03a and 1.03b
1.03a Break and plug a tile that drains this unit. Needs to be implemented
1.04 Restore an emergent wetland biotic community by constructing some pockets of deeper water.
1.04a Excavate 1/4-acre pond and1/2-acre pond. Completed

Unit 5.08 Wetland Forest
Size: <1 acre
Soil: spot of mineral soil in muck
Human Impact: A ditch forms the south boundary.
Vegetation:
Objectives and Actions
1.04 Maintain a wetland forest biotic community.
1.04a No action recommended.

Table 1. Unit 5 five-year schedule for performing management actions.

		Season of Year				
Action	Description	2012	2013	2014	2015	2016
	Unit 5.01 Wetland Forest					
1.03a	Repair ditch berm north side of unit	su				
1.03b	Break and plug drain tile	su				
1.04a	Monitor vegetation	w	w	w	w	w
	Unit 5.03 Emergent Wetland					
1.04b	Burn every 3-5 years		w			w
	Unit 5.04 Wetland Shrub					
1.04a	Burn every 3-5 years		w			w
	Unit 5.05 Wetland Shrub					
1.03c	Monitor water levels	all	all	all	all	all
	Unit 5.07 Emergent Wetland					
1.03a	Break and plug drain tile	su				

all - all seasons, f - fall, sp - spring, su - summer, w - winter

Figure 1. Unit 5 soil map.

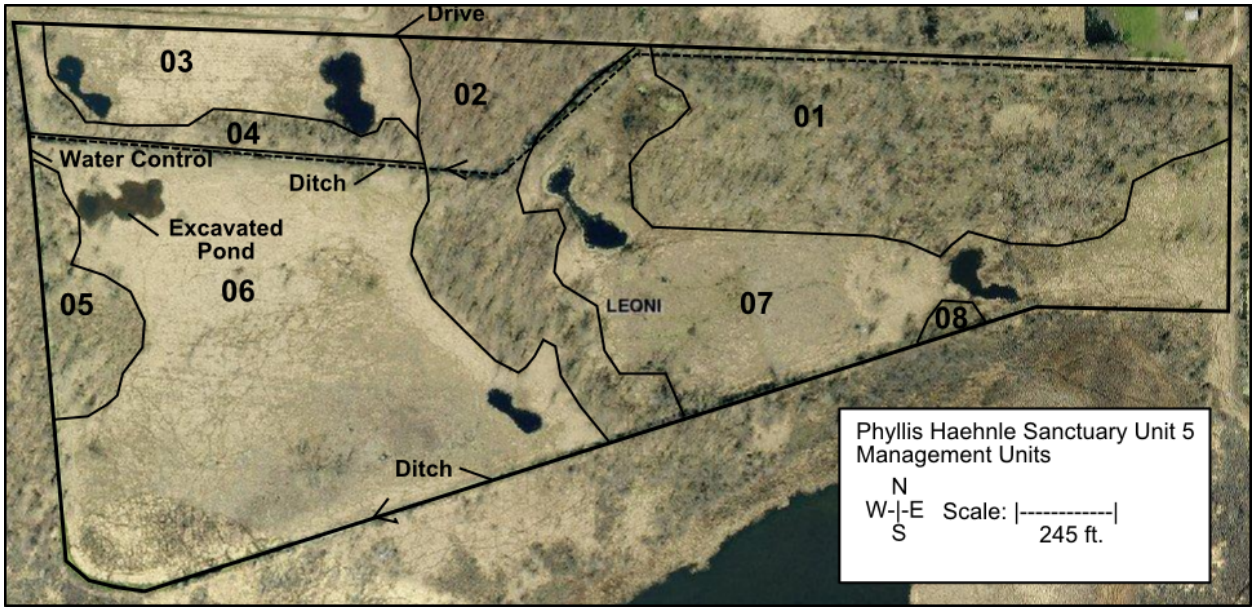

Figure 2. Unit 5 Management units.