

Habitat Management Plan for Black Pond Wildlife Management Area 2019 - 2028



An entrance of Black Pond WMA.

Photo: Irene Mazzocchi, DEC

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317 Washington Street, Watertown, New York 13601

December 11, 2018



Department of
Environmental
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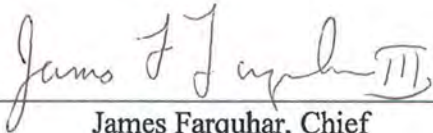
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12/14/2018

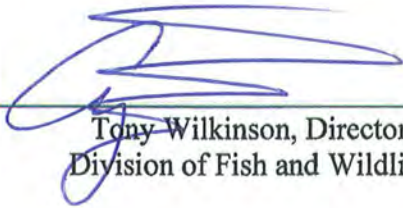
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Financial support for development of this Habitat Management Plan was provided by the Federal Aid in Wildlife and Sport Fish Restoration Program and non-federal funds administered by the New York State Department of Environmental Conservation including Habitat & Access Stamp funds.

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SUMMARY

Black Pond Wildlife Management Area (WMA) is located on the eastern shores of Lake Ontario and is part of a 17-mile stretch of barrier beach embayment consisting of beach, dunes, and emergent wetland. The WMA was acquired to protect its natural wetlands and rare ecological community, the Great Lakes dunes. This area is an important feeding and resting area for hundreds of migrant bird species. In 2007, as part of the Eastern Lake Ontario Barrier Beach and Wetland Complex, it was designated as a Natural Heritage Area. In addition, the WMA has been designated as a significant coastal fish and wildlife habitat by the New York Department of State, a Bird Conservation Area (BCA) by the state as part of the Eastern Lake Ontario Marshes BCA, and an Important Bird Area by Audubon New York. Black Pond WMA is managed for open water, shoreline, and wetland habitats and preservation of unique ecological resources within the WMA, as well as the wildlife that occurs there.

Habitat management goals for Black Pond WMA include:

- Maintaining 28% of the WMA as wetland habitat to provide prime waterfowl breeding and migratory bird stopover habitat and foraging and nesting habitat for Northern Harrier, American Woodcock, Least Bittern, and other marsh dependent birds;
- Managing approximately 5% of the WMA (10% of the forested acreage) as young forest (0-10 years) to promote American Woodcock, Ruffed Grouse, and wintering white-tailed deer habitat;
- Maintaining approximately 50% as intermediate and mature forest;
- Managing approximately 7% as agricultural lands and grasslands to provide forage for many wildlife species; and
- Protecting approximately 9% as Lake Ontario beaches and dunes.

I. BACKGROUND AND INTRODUCTION

PURPOSE OF HABITAT MANAGEMENT PLANS

BACKGROUND

Active management of habitats to benefit wildlife populations is a fundamental concept of wildlife biology, and has been an important component of wildlife management in New York for decades. Beginning in 2015, NYS Department of Environmental Conservation (DEC) Division of Fish and Wildlife (DFW) initiated a holistic planning process for wildlife habitat management projects. Habitat Management Plans (HMP) are being developed for WMAs and other properties administered by DFW Bureau of Wildlife, including select Multiple Use and Unique Areas. The goal of HMPs is to guide habitat management decision-making on those areas to benefit wildlife and facilitate wildlife-dependent recreation. HMPs guide management for a ten-year time period, after which the plans and progress on implementation will be assessed and HMPs will be modified as needed.

HMPs serve as the overarching guidance for habitat management on WMAs. These plans incorporate management recommendations from Unit Management Plans (UMPs), existing WMA habitat management guidelines, NY Natural Heritage Program's WMA Biodiversity Inventory Reports, Bird Conservation Area guidelines, and other documents available for individual WMAs.

SCOPE AND INTENT

Primary purposes of this document:

- Provide the overall context of the habitat on the WMA and identify the target species for management;
- Identify habitat goals for WMA-specific target species, contemplating juxtaposition of all habitat types to guide the conservation and management of sensitive or unique species or ecological communities;
- Identify acreage-specific habitat goals for the WMA to guide management actions;
- Provide specific habitat management prescriptions that incorporate accepted best management practices;
- Establish a forest management plan to meet and maintain acreage goals for various forest successional stages;
- Address management limitations such as access challenges (e.g., topography); and
- Provide the foundation for evaluating the effectiveness of habitat management.

Within the next five years, this HMP will be integrated into a comprehensive WMA Management Plan that will include management provisions for facilitating compatible wildlife-dependent recreation, access, and facility development and maintenance.

Definitions are provided in Appendix A.

The effects of climate change and the need to facilitate wildlife adaptation under expected future conditions will be incorporated into the habitat management planning process and will be included in any actions that are recommended in the HMPs. For example, these may include concerns about invasive species, anticipated changes in stream hydrology, and the desirability for maintaining connectedness on and permeability of the landscape for species range adjustments.

This plan and the habitat management it recommends will be in compliance with the State Environmental Quality Review Act (SEQRA), 6NYCRR Part 617. See Appendix B. The recommended habitat management also requires review and authorization under the Endangered Species Act (ESA), National Environmental Policy Act (NEPA), and State Historic Preservation Act (SHPA), prior to implementation.

WMA OVERVIEW

LOCATION

Black Pond WMA is located in DEC Region 6, Town of Ellisburg, Jefferson County (Figure 1).

TOTAL AREA

551 acres

HABITAT INVENTORY

A habitat inventory of the WMA was completed in 2015. This process documents the species composition and ecological characteristic of the area, which establishes the first step in determining management objectives. Habitat inventory should be conducted every 10 to 15 years to document the existing acreage of each habitat type and to help determine the location and extent of future management actions. Table 1 summarizes the current acreage by habitat type and the desired acreage after management. Desired conditions were determined with consideration of habitat requirements of targeted wildlife, current conditions on the WMA, and conditions in the surrounding landscape (see Landscape Context section below).

Table 1. Summary of current and desired habitat acreage on Black Pond WMA.

Habitat Type	Current Conditions (as of 2015)			Desired Conditions	
	Acres	Percent of WMA	Miles	Acres	Percent of WMA
Forest ^a	304	55%		274	Decrease to 50%
Young forest	0	0%		30	Increase to 5%
Shrubland	0	0%		0	No change
Grassland	14	3%		14	No change
Agricultural land	23	4%		23	No change
Wetland (natural) ^b	155	28%		155	No change
Wetland (impounded) ^b	0	0%		0	No change
Open water	0	0%		0	No change
Other (beach/dunes)	48	9%		48	No change
Roads	7	1%	2.1	7	No change
Rivers and streams			2.0		No change
Total Acres:	551	100%		551	

^a Forest acreage includes all mature and intermediate age classes of natural forest, plantations, and forested wetlands. Young forest is reported separately. Definitions are provided in the Forest section of this plan.

^b Wetland acreage does not include forested wetlands, since they are included in the Forest category.

ECOLOGICAL RESOURCES

Wildlife Overview:

Wildlife present on Black Pond WMA includes many species commonly found throughout northern New York and the lake plains of eastern Lake Ontario, such as:

- Beaver, muskrat, white-tailed deer, mink
- Brown Thrasher, Red-winged Blackbird, Marsh Wren
- American Woodcock, Wild Turkey, Ruffed Grouse, migratory waterfowl, shorebirds
- Painted turtle, snapping turtle
- Bullfrog, northern leopard frog, green frog, eastern American toad, spring peeper
- Northern water snake, garter snake
- Spotted salamander, Jefferson's blue spotted salamander

Wildlife and Plant Species of Conservation Concern:

The following federal or state listed Endangered (E), Threatened (T), or Special Concern (SC) species and/or Species of Greatest Conservation Need (SGCN) may occur on the WMA (Table 2).¹ SGCN listed below include species that have been documented on or within the vicinity of the WMA and are likely to occur in suitable habitat on the WMA. Other SGCN may also be present on the WMA. Data sources include: the NY Natural Heritage Program, NY Breeding Bird Atlases,² NY Reptile and Amphibian Atlas,³ DEC wildlife surveys and monitoring, and eBird.⁴

Table 2. Species of conservation concern that may be present on Black Pond WMA, including state and federal Endangered (E) and Threatened (T) species, state Species of Special Concern (SC), High Priority SGCN (HP), and SGCN (x).

Species Group	Species	Federal Status	NY Status	NY SGCN Status
Birds				
	American Black Duck			HP
	American Bittern			x
	American Kestrel			x
	American Woodcock			x
	Black-billed Cuckoo			x
	Black Tern		E	HP
	Blue-winged Teal			x
	Blue-winged Warbler			x
	Brown Thrasher			HP
	Great Egret			x
	Greater Yellowlegs			x
	Least Bittern		T	x

¹ The 2015 New York State Wildlife Action Plan identifies 366 Species of Greatest Conservation Need (SGCN) including 167 High Priority SGCN. Available online at <http://www.dec.ny.gov/animals/7179.html>.

² Available online at <http://www.dec.ny.gov/animals/7312.html>.

³ Available online at <http://www.dec.ny.gov/animals/7140.html>.

⁴ Available online at <http://ebird.org/content/ebird/about/>. © Audubon and Cornell Lab of Ornithology.

Table 2. Continued

Species Group	Species	Federal Status	NY Status	NY SGCN
	Northern Harrier		T	x
	Prairie Warbler			x
	Ruffed Grouse			x
	Rusty Blackbird			HP
	Semi-palmated Sandpiper			HP
	Wood Thrush			x
Mammals	Indiana myotis	E	E	HP
	Little brown myotis (little brown bat)			HP
	Northern myotis (long-eared bat)	T	T	HP
Amphibians and reptiles	Blue-spotted salamander			HP
	Common ribbon snake			x
	Smooth green snake			x
	Snapping turtle			x
	Western chorus frog			x
Fish	Blackchin shiner			x
	Iowa darter			x
	Bridle shiner			x
Invertebrates	Well-marked cutworm			HP
	Hairy-necked tiger beetle			x
Plants	Champlain beachgrass		E	
	Houghton's sedge		T	
	Great Lakes sand cherry		E	
	Sand dune willow		T	

Significant Ecological Communities:

There are several rare and significant natural communities located on Black Pond WMA as identified by the NY Natural Heritage Program. The state rank reflects the rarity within NY, ranging from S1, considered the rarest, to S5, considered stable; definitions are provided in Appendix A. The following significant ecological communities occur on the WMA (Figure 2):

- **Silver maple-ash swamp (S3)** - a hardwood basin swamp that typically occurs in poorly-drained depressions or along the borders of large lakes, and less frequently in poorly drained soils along rivers. These sites are characterized by uniformly wet conditions with minimal seasonal fluctuations in water levels.
- **Great lakes dunes (S1S2)** - a community dominated by grasses and shrubs that occurs on active and stabilized sand dunes along the shores of the Great Lakes. The composition and structure of the community is variable depending on stability of the dunes, the amount of sand deposition and erosion, and distance from the lake. Unstable dunes are sparsely vegetated, whereas the vegetation of stable dunes is denser, and can eventually become forested. Great Lake dunes can be divided into six physiographic zones: 1) beach

(see sand beach), 2) foredune front, 3) foredune back and swale, 4) secondary dunes, 5) last lee face of high dune, and 6) last lee face of low dune. Each of these zones may develop any one to several vegetation associations or “community types” (Bonanno 1992).

- **Sand beach (S3)** - a sparsely vegetated community that occurs on unstable sandy shores of large freshwater lakes, where the shore is formed and continually modified by wave action and wind erosion.
- **Shallow emergent marsh (S5)** - a marsh meadow community that occurs on mineral soil or deep muck soils (rather than true peat), that are permanently saturated and seasonally flooded. This marsh is better drained than a deep emergent marsh; water depths may range from 15 cm. to 1 m. (6 in. to 3.3 ft.) during flood stages, but the water level usually drops by mid to late summer and the substrate is exposed during an average year. This is a very broadly defined type that includes several distinct variants and many intermediates. Shallow emergent marshes are very common and quite variable. They may be co-dominated by a mixture of species or have a single dominant species.

Additional information about significant ecological communities is available in *Ecological Communities of New York State, Second Edition*⁵ and in the Black Pond WMA Biodiversity Inventory Final Report (1997) prepared by the NY Natural Heritage Program.

Special Management Zones:

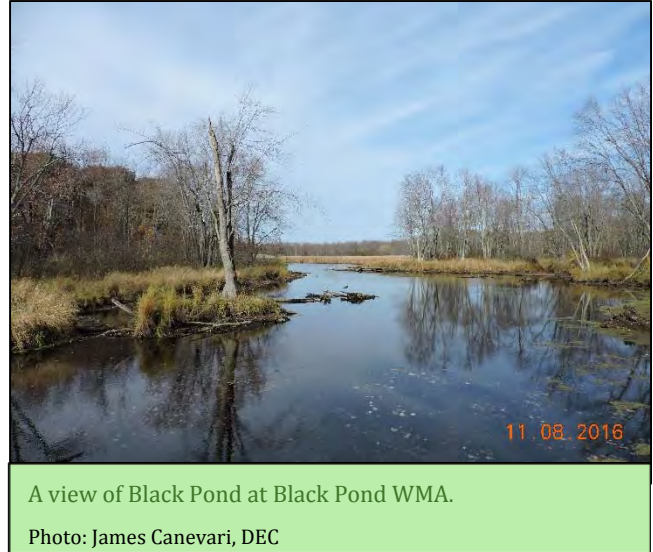
Special Management Zones (SMZs) are areas adjacent to wetlands, perennial and intermittent streams, vernal pool depressions, spring seeps, ponds and lakes, recreational trails, and other land features requiring special consideration. SMZs on Black Pond WMA include:

- One NYS freshwater wetland regulated by Article 24 of the Environmental Conservation Law and several additional wetlands shown on the National Wetlands Inventory (NWI; Figure 3). Each state-regulated wetland is protected by a buffer zone of 100 feet from the delineated wetland boundary, known as the adjacent area. There may be forestry prescriptions associated with forested wetlands and adjacent areas, and each management prescription will be reviewed individually for determination of impacts.
- Four streams (a watercourse entirely within the WMA) or segments of streams (a stream that meanders in and out of the WMA). The highest stream classification is Class C, therefore no streams are regulated by Article 15 of the Environmental Conservation Law, but water quality standards will be adhered to.⁶

⁵ Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero. 2014. *Ecological Communities of New York State, Second Edition*. New York Natural Heritage Program, NYS Department of Environmental Conservation, Albany, NY. Available online at <http://www.dec.ny.gov/animals/29384.html>.

⁶ Information about stream classification is available online at <http://www.dec.ny.gov/permits/6042.html>.

- A portion of an open water body known as Black Pond is on the WMA (approximately 1 acre). The majority of the pond is located on The Nature Conservancy property.
- A dune ecosystem is found along the shoreline of Lake Ontario and within Black Pond WMA.
- An accessible trail including an accessible boardwalk is located off the main parking lot at the end of Bolton Road. The trail traverses through wooded wetlands, over the dunes, and down to the beach. There is also a fishing platform where anglers can catch sunfish, yellow perch, bullhead, and bass. This area receives extensive use by hikers, bird watchers, and fisherman.
- A Motorized Access Program for People with Disabilities (MAPPWD) trail is located in the southern section of the WMA and can be accessed from the parking area off El Dorado Rd. MAPPWD trails allow for motorized access for people with disabilities. A permit is required for such use⁷.



Guidelines for habitat management projects within these areas are outlined in the Division of Lands and Forests Rules for Establishment of Special Management Zones on State Forests and Wildlife Management Areas.⁸ Some habitat management activities may either be prohibited or restricted to protect these features. Some activities performed within the SMZs are permitted through the authorization of DEC General Permit GP-0-16-003. Any deviations from these guidelines will be addressed in the individual stand prescriptions or habitat summary.

Soils:

The soil across much of Black Pond WMA is shallow and/or poorly drained, which limits the establishment and growth of many tree species. Soil groups include Galoo-Rock outcrops, Groton variant gravelly loam, Benson-Galoo complex, and Elmridge fine sandy loam. The wetland area primarily consists of Sapristis and Aquents.⁹ Stands 8 and 9 contain areas of exposed rock with shallow fissures. Flat areas of exposed rock can also be found in Stand 10. Due to the shallow or poorly drained soils, many of the trees in this area lack root support and have a slow growth rate.

⁷ Available online at <http://www.dec.ny.gov/outdoor/2574.html>.

⁸ Available online at <http://www.dec.ny.gov/outdoor/104218.html>.

⁹ Soil classification information available from: US Department of Agriculture, Natural Resources Conservation Service. Available online at <http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=NY>.

LANDSCAPE CONTEXT

The goals of this HMP have been developed with consideration of surrounding landscape features and the availability of habitats and other conservation lands adjacent to Black Pond WMA (Figures 4 and 5). The surrounding landscape within a three-mile radius of the WMA is composed of the following land cover types:

- Open water (38%)
- Cultivated crops (18%)
- Pasture/hay and grassland (14%)
- Scrub/shrub (9%)
- Wetlands (7% combining emergent and woody wetlands)
- Deciduous forest (7%)
- Development (3%)
- Mixed forest (1%)
- Evergreen forest (1%)

The National Land Cover Data (NLCD) does not depict the beach/dune system surrounding Black Pond WMA. There are approximately 17 miles of Lake Ontario shoreline dunes within and adjacent to the WMA. The total area of the dunes within three miles of the WMA is approximately 360 acres. This area is important because of the value of the unique habitat on the Lake Ontario shoreline.

Currently, the forested landscape on Black Pond WMA includes no young forest habitat, well under DFW's Young Forest Initiative (YFI) goal of managing at least 10% of the forested landscape on most WMAs as young forest.¹⁰ While forests only account for 9% of the surrounding landscape, Black Pond WMA is comprised of 55% mature forest, making the goal of creating young forest habitat within the WMA beneficial.

Nearby conservation lands include:

- El Dorado Beach Preserve, along the northern boundary of the WMA, managed by The Nature Conservancy;
- Southwick Beach State Park and
- Lakeview WMA, located a couple miles to the south.

II. MANAGEMENT STRATEGIES BY HABITAT TYPE

DEC will continue active management of wildlife habitats on Black Pond WMA to provide the following benefits:

- Maintain habitat characteristics that will benefit wildlife abundance and diversity within the New York landscape.

¹⁰ Additional information about DEC's Young Forest Initiative and the YFI Strategic Plan is available online at <http://www.dec.ny.gov/outdoor/104218.html>.

- Promote Best Management Practices for targeted wildlife and habitats.
- Provide opportunities for wildlife-dependent recreation such as trapping, hunting, fishing, and bird watching compatible with the ongoing habitat management practices and species management considerations.
- Improve habitat quality by reducing invasive species, if present and identified for treatment.

FOREST

Forested acreage includes the following forest types:

Natural forest: naturally forested acres, including hardwoods and softwoods. Includes any upland forested acreage that is not young forest, i.e., pole stands, other intermediate forest age classes, mature forest, and old growth forest.

Plantation: planted forested acres, generally planted in rows dominated by one or two species.

Forested wetland: wetland acres where hydrophytic forest or shrub vegetation accounts for greater than 50% of vegetative cover and the soil or substrate is periodically saturated or covered with water.

Young forest: young or regenerating forested acres, which are typically 0-10 years since a disturbance or regeneration cut, depending upon the site conditions. May include both natural forest and plantations.

Young forest (forested wetland): young, regenerating forested wetland acres.

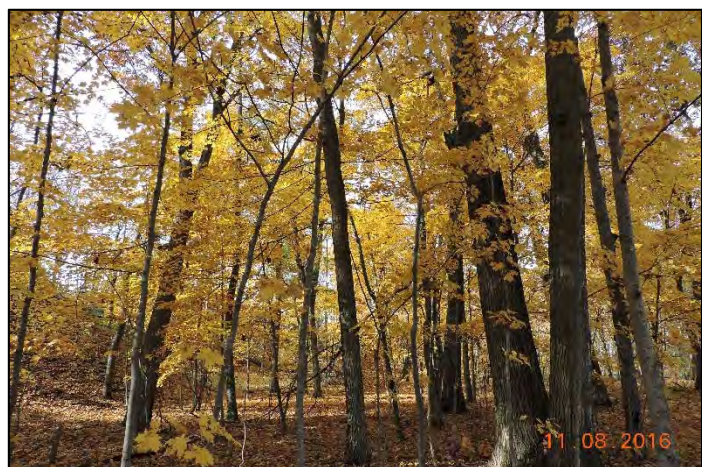
Forest management on Black Pond WMA incorporates an approach to create and/or maintain the diversity of forest age classes that are required to support a diversity of wildlife. In 2015, DEC launched the YFI to increase the amount of young forest on WMAs to benefit wildlife that require this transitional, disturbance-dependent habitat.

MANAGEMENT OBJECTIVES

- Retain 274 acres of existing intermediate and mature forest.
- Increase young forest from zero to 30 acres (10% of the total forested area) to improve habitat for young forest-dependent wildlife, targeting American Woodcock, Ruffed Grouse, and white-tailed deer.

DESCRIPTION OF EXISTING FOREST HABITAT AND TARGET SPECIES

There are 304 forested acres on Black Pond WMA. The forested habitat is split into natural forest (233 acres), plantation (2 acres), and forested wetland (69 acres). Table 3 provides a summary of the forested areas, including the most common species found in each.



Northern hardwood forest at Black Pond WMA.

Photo: James Canevari, DEC

Table 3. Summary of the acreage and dominant overstory species for each forest type present on Black Pond WMA.

Forest Type	Acres (as of 2015)	Desired Acres	Overstory species
Natural forest (mature/intermediate)	233	203	Cedar, maple, ash, hemlock, oak
Plantation	2	2	White spruce
Forested wetland	69	69	Maple, ash, black willow
Young forest	0	30	-
Young forest (forested wetland)	0	0	-
Total Forested Acres:	304	304	

The forested acres on Black Pond WMA are a unique blend of silver maple-ash swamps, hardwood forests, and thick cedar stands. Stands 9, 10, 16, and 19 are dominated by eastern red cedar and northern white cedar, with patches of thick buckthorn or honeysuckle in the understory. Stand 11 is unique in that it is mostly sugar maple with a very open understory. Several of the forested stands, particularly Stands 9 and 19, are being over-run by pale swallowwort (PSW), an invasive species.

Target species for young forest habitat management on Black Pond WMA include: American Woodcock, Ruffed Grouse, and white-tailed deer. These species rely on forest and young forest areas for nesting, foraging, and cover, and will benefit from management that creates the following habitat requirements:

- American Woodcock:
 - Singing/Peenting Ground – Open areas from 1 acre to >100 acres usually in an abandoned field.
 - Foraging – Moist, rich soils with dense overhead cover of young alders, aspen, or birch.
 - Nesting – Young open, second growth woodlands.
 - Brood rearing – Similar to nesting except also including bare ground and dense ground cover.
 - Roosting – Open fields (minimum of 5 acres) or blueberry fields and reverting farm fields.¹¹
- Ruffed Grouse:
 - Drumming areas – Downed trees surrounded by small diameter woody cover.
 - Foraging – Open areas with dense overhead cover of young forest with good mast production.
 - Nesting – Young open forest stands or second growth woodlands.
 - Brood rearing – Herbaceous ground cover with a high midstory stem density.¹²
- White-tailed Deer (in Northern Hardwood Forests):
 - Fawning areas – Vary from open forest to hay fields to brushy cover.

¹¹ Sepik, G. F. et al. 1981. A Landowner's Guide to Woodcock Management in the Northeast, Moosehorn National Wildlife Refuge, USFWS. 25 pp.

¹² Jones, B. C. et al. Habitat Management for Pennsylvania Ruffed Grouse, Pennsylvania Game Commission. 10 pp.

- Spring/Summer diet – Primarily herbaceous vegetation (clover, *Rubus* sp., forbs, etc.), hardwood foliage, soft mast, and agricultural crops where available.
- Fall diet – Hard mast, preferably acorns, hardwood foliage, and agricultural crops where available.
- Winter diet – Hardwood buds, fallen leaves, hard mast and conifers, preferably white cedar.
- Bedding cover – Varies from open hardwoods with laydowns to dense thickets of early succession shrublands or hard and softwood regeneration.¹³

MANAGEMENT HISTORY

There are no records of timber sales on the WMA. However, stumps found in Stands 14, 15, and 16 indicate that small harvests occurred in the past for firewood and cedar posts, before the state acquired the land.

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

The following management is proposed for the next 10 years with a young forest acreage goal of reaching approximately 30 acres:

- **Management planned for 2019-2023** (Table 4, Figure 6):
 - Conduct a 9 acre shelterwood cut in Stand 8
 - Conduct a 15 acre seed tree cut in Stand 15
 - Create 6 acres of patch clearcuts in Stand 16
- **Management planned for 2024-2028:**
 - Monitor previous cuts. No additional management planned.

Table 4. Forest management schedule for the first five-year period of this HMP (2019-2023).

Stand	Acres	Size Class	Forest Type		Management Direction	Treatment Type
			Current	Future		
8	9	Small Saw Timber 12"-17" DBH	Northern Hardwoods	Seedling-Sapling-Natural	Wildlife	Shelterwood
15	15	Pole Timber 6"-11" DBH	Northern Hardwoods	Seedling-Sapling-Natural	Wildlife	Seed Tree
16	6	Pole Timber 6"-11" DBH	Cedar	Seedling-Sapling-Natural	Wildlife	Patch Clearcuts

Stand locations and planned management actions are also summarized in Figure 6. Specific forest stand descriptions and detailed management prescriptions will be prepared for each proposed forest management area prior to implementation (see template, Appendix C). Briefly, habitat management will include the following:

- **Management planned for 2019-2023** (Table 4, Figure 6):
 - **Stand 8** is a 43-acre stand with a mix of northern hardwoods on shallow, rocky soils in the northern part of the stand, and ash-maple swamp in the remainder of

¹³ Halls, L. K., ed. 1984. White-tailed Deer: Ecology and Management. The Wildlife Management Institute. Stackpole Books, PA. 864 pp.

the stand. Portions of the stand are overstocked and there is a significant ash tree component that is at risk from the emerald ash borer. A 9-acre shelterwood harvest, where the residual trees will be left standing indefinitely, is planned for the northern section of the stand. Larger openings may be cleared around several clumps of aspens within the harvest area to encourage dense aspen regeneration. The goals of this harvest are to improve forest health and encourage hardwood regeneration, which will provide habitat for young forest dependent species. Oak, hickory, and hemlock will be favored as residual trees. No management is planned in the ash-maple swamp at this time, due to the poorly drained soils.

- **Stand 15** is a 31-acre northern hardwood stand with a mix of ash, cedar, and maple in the overstory. The soil is poorly drained in places and the cedars appear to be declining. The stand is bordered by mature hardwoods to the west, a forested wetland to the north, and thick cedar to the south and east. A 15-acre seed tree harvest is planned for the drier portions of the stand, leaving a buffer along the wetland and avoiding vernal pools and poorly-drained areas. Black cherry, maple, hemlock, and hickory will be favored as seed trees.
- **Stand 16** is also a 31-acre stand and is dominated by red and white cedars with scattered groups of aspen trees. Approximately a total of 6 acres will be cut in several patch clearcuts centered around the clumps of aspen, to promote dense aspen regeneration.

BEST MANAGEMENT PRACTICES

Forest management on all WMAs follows Best Management Practices to protect soil and water resources, promote quality wildlife habitat, and establish healthy forests (Table 5).

Table 5. Best Management Practices for forest management on WMAs.

Resource	Guidance Document ¹⁴
Soils	<i>Rutting Guidelines for Timber Harvesting on Wildlife Management Areas</i>
Water quality	<i>NYS Forestry Best Management Practices for Water Quality</i>
Wildlife	<i>Retention Guidance on Wildlife Management Areas</i>
Plantations	<i>Plantation Management Guidance on Wildlife Management Areas</i>

Wildlife Considerations:

Black Pond supports a wide variety of protected and unprotected wildlife. Since Indiana bats and northern long-eared bats are known to occur within the county, tree selection for cuts and the timing of cuts will be evaluated and BMP's will be implemented to protect these species. The timing of early successional habitat management will not interfere with any species of concern found within the WMA.

Forest Health Considerations:

The forests on Black Pond WMA are in moderate health. Shallow poorly-drained soils, thick brush, and ferns limit growth and regeneration in some parts of the WMA. Other forest health concerns are invasive insect and plant species.

¹⁴ All guidance documents referenced here are available online at <http://www.dec.ny.gov/outdoor/104218.html>.

Two significant invasive insects to watch for are emerald ash borer (EAB) and hemlock wooly adelgid (HWA). While neither has been recorded on the WMA, both insects are gradually spreading throughout the state. EAB is an invasive beetle that feeds on and kills all species of ash trees and significant ash mortality is expected if the beetle reaches the WMA. At that time, dead or dying ash may be removed from the WMA if deemed a hazard to infrastructure or adjacent private property. The nearest recorded EAB occurrence is in northern Oswego County, within 5 miles of the WMA. HWA, which attacks Eastern hemlock trees, is not spreading as quickly as the EAB nor will it impact the WMA as significantly since there is a much smaller hemlock component on the WMA. The nearest recorded HWA occurrence is in western Oswego County.

Several species of invasive plants are well established on Black Pond WMA. Buckthorn and honeysuckle dominate the understory in many of the forest stands, but PSW is currently the greatest concern due to its ability to spread rapidly and choke out other vegetation. PSW is found throughout the WMA, particularly in Stands 9, 19, and 20. Preventing the spread of PSW and working collaboratively with the St. Lawrence Eastern Lake Ontario Partner for Regional Invasive Species Management (SLELO PRISM) and other partners is important for maintaining wildlife diversity on the WMA. Stringent inspections and cleaning of any operational equipment in or near known swallowwort areas will be implemented. Future control of PSW may include a biological control such as the release of the moth *Hypena opulenta*.

Pre- and Post-treatment Considerations:

Herbicide application prior to and/or after some forest management activities will be needed to control PSW, honeysuckle, buckthorn, and other invasive plant species. Pre- and post-treatment actions to promote the desired forest regeneration will be addressed in detail in the silvicultural prescriptions.

Other management notes:

- No management is currently planned in Stand 11. However, it is recommended that the stand be re-evaluated in 10-15 years to consider a thinning to maintain forest health.
- To protect the dune and wetland ecosystem on the WMA, no management is proposed for Stands 4, 5, and 6 (Figure 6).
- Continue to work with SLELO PRISM and other partners to use herbicide applications to reduce PSW across the WMA.

MANAGEMENT EVALUATION

In order to determine whether the desired forest regeneration and wildlife response(s) have been achieved by the management outlined above, pre- and post-management assessments will be conducted in accord with the guidelines established in the *Young Forest Initiative Monitoring Plan: 2016-2025*.¹⁵ The Monitoring Plan establishes statewide standards for evaluating vegetation and target wildlife responses to forest management to determine if the outcome is as prescribed. Regeneration assessments will be conducted within one year of harvest completion, three, and five years after the harvest or until the forester determines adequate natural or artificial

¹⁵ Available online at <http://www.dec.ny.gov/outdoor/104218.html>.

(i.e., planting) regeneration has been securely established. YFI target species selected for Black Pond WMA, which may be assessed to determine response to management, include:

- American Woodcock
- Ruffed Grouse
- White-tailed deer

SHRUBLAND

Shrublands are early successional habitats dominated by woody plants typically less than 10 feet tall with scattered open patches of grasses and forbs that provide floristic diversity. Shrublands are typically characterized by >50% cover of shrubs and <25% canopy cover of trees.

MANAGEMENT OBJECTIVES

There is no shrubland habitat on the WMA or any plan to develop such habitat.

GRASSLAND AND OTHER OPEN SPACE

Grasslands are open, grassy areas with a minimal amount of shrub and tree cover (<35%) that are maintained, or could be maintained, without significant brush cutting. Grasslands may include areas where hay is harvested by late season mowing once per year.

MANAGEMENT OBJECTIVES

- Maintain and/or enhance the existing 14 acres of open, grassy fields to provide grassland habitat for white-tailed deer foraging habitat.
- Remove dense PSW and sparse cedar trees in Stand 20 (8 acres) to improve open habitat for a diversity of wildlife.
- Monitor fields for invasive species and eradicate where feasible.

DESCRIPTION OF EXISTING GRASSLAND HABITAT AND TARGET SPECIES

Black Pond WMA currently contains 14 acres (3% of the WMA) of open habitat (Figure 6). The areas provide habitat for nesting, foraging, roosting, and cover for multiple species.

Species that benefit from open habitat include:

- Northern Harrier,
- White-tailed deer,
- Wild Turkey,
- Multiple pollinators

MANAGEMENT HISTORY

None

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

- **Management planned for 2019-2028** (Figure 6):
 - Periodically mow fields (Stands 17 and 20) on an annual, biennial, or triennial basis, depending on vegetation growth, to prevent woody growth while also allowing for thatch.
 - Reclaim open field in Stand 20 by clearing trees and removing invasive species, to provide open habitat areas for Wild Turkey and white-tailed deer. Creating access to Stand 20 off Benton Road would allow better access and therefore improved grassland habitat management of the stand which will reduce the amount of PSW on the WMA.

AGRICULTURAL LAND

Agricultural lands on WMAs include any acreage on which crops or hay are grown, primarily areas that are under cooperative agreements or farming contracts, but also including wildlife food plots.

MANAGEMENT OBJECTIVES

- Maintain agricultural cooperative agreements to provide forage opportunities and cover for white-tailed deer and Wild Turkey.

DESCRIPTION OF EXISTING AGRICULTURAL LANDS AND TARGET SPECIES

Black Pond WMA currently supports 23 acres (4% of the WMA) of agricultural lands (Stand 2, Figure 6). Maintaining the agricultural aspect provides forage for white-tailed deer and foraging habitat for Northern Harriers.

MANAGEMENT HISTORY

Stand 2 (23 acres) has been planted on a rotation between row crops and close-sown crops of small grains and/or hay. The cooperative agreements have required the hay to be cut after the nesting birds have fledged their young which is typically August 1st or later.

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

- **Management planned for 2019-2028** (Figure 6):
 - Continue with current agreements.

WETLANDS (NATURAL AND IMPOUNDED)

Natural wetlands are areas where the soil or substrate is periodically saturated or covered with water, including emergent (perennial herbaceous vegetation accounts for >50% of hydrophytic vegetative cover) and scrub-shrub wetlands (woody vegetation under 20 feet tall accounts for >50% of hydrophytic vegetative cover). Impounded wetlands are areas similar to natural wetlands, but where water is held back by a berm, road, or other structure. Forested wetlands are addressed in the Forest section above.

MANAGEMENT OBJECTIVES

- Maintain 155 acres of natural wetlands as they currently exist.
- Maintain habitat for wetland-dependent wildlife such as waterfowl, muskrat, and beaver.
- Provide opportunity for muskrat and beaver trapping, waterfowl hunting, small and big game hunting, and bird watching.

DESCRIPTION OF EXISTING WETLAND HABITAT AND TARGET SPECIES

There are 155 acres of natural wetlands on Black Pond WMA (28% of the WMA, Figure 3). The wetlands consist of scrub/shrub, emergent, and open water wetlands. The wetlands are diverse and provide habitat for species such as:

- American Woodcock, Red-winged Blackbird, Marsh Wren
- Beaver, muskrat
- Midland painted turtle
- Bullfrog, northern leopard frog, green frog, eastern American toad, spring peeper
- Migratory waterfowl

MANAGEMENT HISTORY

None

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

- **Management planned for 2019-2028:**
 - Monitor habitat for invasive species and eradicate if feasible.

MANAGEMENT EVALUATION

Monitor wetlands and open water areas for invasive species such as water chestnut and conduct BMPs as needed.



Forested wetland at Black Pond WMA.

Photo: Jeremiah Maxon, DEC

OPEN WATER (WATERBODIES AND WATERCOURSES)



Sandpiper at Black Pond WMA.

Photo: Christina Kolbmann SCA

Open water is defined as any area of open water, generally with less than 25% cover of vegetation or soil and typically named (e.g., Perch Lake, Black Pond).

DESCRIPTION OF EXISTING OPEN WATER HABITAT AND TARGET SPECIES

There is a small portion of Black Pond (open water) that is located within the WMA, but the area is too small to be tracked as its own stand so it was included within the wetlands (Stand 6, see Figure 6). There is no other open water habitat on the WMA or any plan to develop such habitat.

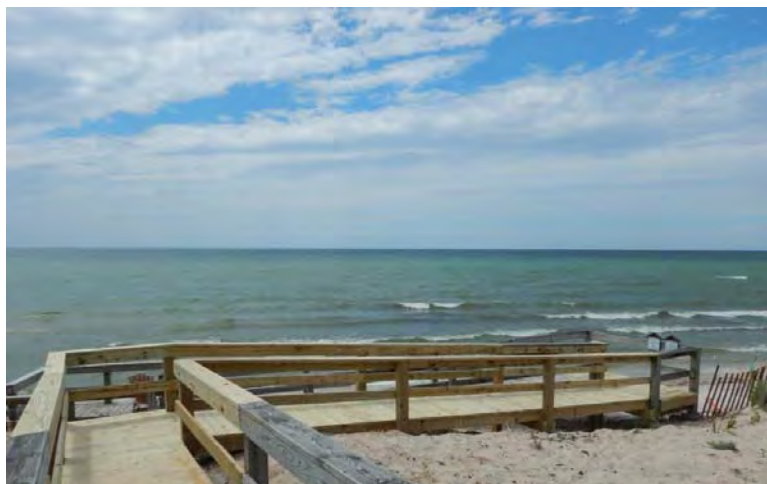
LAKE ONTARIO DUNE SYSTEM

An ecosystem comprised of a beach, foredune, swale, interior dune, and back dune. Sand and wind play a major role in the formation and existence of a dune system. The coastal barrier ecosystem (dunes, wetlands and waters) is currently under NYS regulation through Article 34-0108 of the Environmental Conservation Law, Part 505, Coastal Erosion Management.

MANAGEMENT OBJECTIVES

The stretch of dune system on Black Pond WMA is approximately 1.6 miles long and comprises 48 acres. This unique system supports several rare bird and plant species and functions as a migratory stopover for many species of shorebirds. Species of interest include:

- Wormwood
- Sand dune willow
- Champlain beach grass
- Migrating shorebirds



Dune walkover at Black Pond WMA.

Photo: Irene Mazzocchi, DEC

DESCRIPTION OF EXISTING DUNE HABITAT AND TARGET SPECIES

Black Pond WMA is located within a 17-mile stretch of the Eastern Lake Ontario Dune and Wetland System (ELOWDS). This ELOWDS is a natural blend of sand dunes, freshwater wetlands, ponds, and creeks. This ecosystem serves as vital habitat for a diversity of plant and wildlife species and is an important coastal barrier between Lake Ontario and the marshes, rivers, waterways, and homes that are located on the other side of the dunes. The dominant overstory

trees on the dunes (Stand 5) include cottonwood, white ash, maple, and oak, with poison ivy throughout. Protection of this dune system and the rare plants and wildlife that are associated with this ecosystem is a high priority on this WMA.

MANAGEMENT HISTORY

In 1985, a dune steward program was launched in an effort to educate the public about the importance of the dune system. The Ontario Dune Coalition was successful in putting its first intern on the beach in 1986 to interact with recreational visitors. The effort grew in time until a coordinated seasonal Dune Steward Program was put in place in 2000. It has always been a collaborative effort, depending on the resources and support of several partners, working together through what is now called the Eastern Lake Ontario Dune Coalition (ELODC).

In 2001, a 2,700-foot trail including 1,800 feet of elevated boardwalk was built to provide access through the WMA to the shoreline of the area, while protecting the dune system. This trail is considered accessible to people with disabilities, expanding the opportunity for fishing and wildlife viewing on the WMA.



Shoreline at Black Pond WMA.

Photo: Irene Mazzocchi, DEC

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

Continue to participate in the ELODC outreach activities and meetings and support the dune steward program. As part of the dune steward program, dune stewards are hired annually to provide protection of the dune system by educating the public, reinforcing the WMA regulations, assisting in erecting physical barriers (i.e. snow fence) to keep people off the dunes, and participate in invasive species control. In addition to the dune steward program, monitoring and protecting the beach habitat for the Piping Plover is a priority on this WMA. Sections of the beach may be secured and off limits to the public as required for nesting habitat. This will vary from year to year depending on the lake levels and bird behavior.

BEST MANAGEMENT PRACTICES

Continue to protect the sand dunes by installing snow fence, educational signs, planting beach grass, maintaining the dune walkovers, and patrolling the area, especially during heavy public use. Combat invasive species as is practical.

MANAGEMENT EVALUATION

As part of the Dune steward program, dune stewards record the daily number of visitors, violations, and any meaningful experience they encounter in the field. This helps to determine the management needs or areas that need to be addressed.

HABITAT MANAGEMENT SUMMARY

In summary, Table 6 lists the habitat management actions planned for Black Pond WMA over the next ten years. Any substantive changes will be appended to this HMP annually or as needed (Appendix D).

Table 6. Summary of habitat management actions recommended for Black Pond WMA, 2019-2028. (Also see Figures 3 and 6.)

Habitat	Management Action	Acres	Timeframe
Forest	Shelterwood cut in Stand 8	9	2019-2023
Forest	Seed tree cut in Stand 15	15	2019-2023
Forest	Patch clearcuts in Stand 16	6	2019-2023
Grassland	Remove sparse cedar trees in Stand 20 and mow to control invasive species (pale swallowwort).	8	2024-2028
Grassland	Mow grassland fields (Stands 17 and 20) on an annual, biennial, or triennial basis depending on vegetation growth to allow for thatch and prevent woody growth.	± 14	Annual, biennial, or triennial
Agricultural Land	Continue with the cooperative agreement on Stand 2.	22.7	2019-2028

III. FIGURES

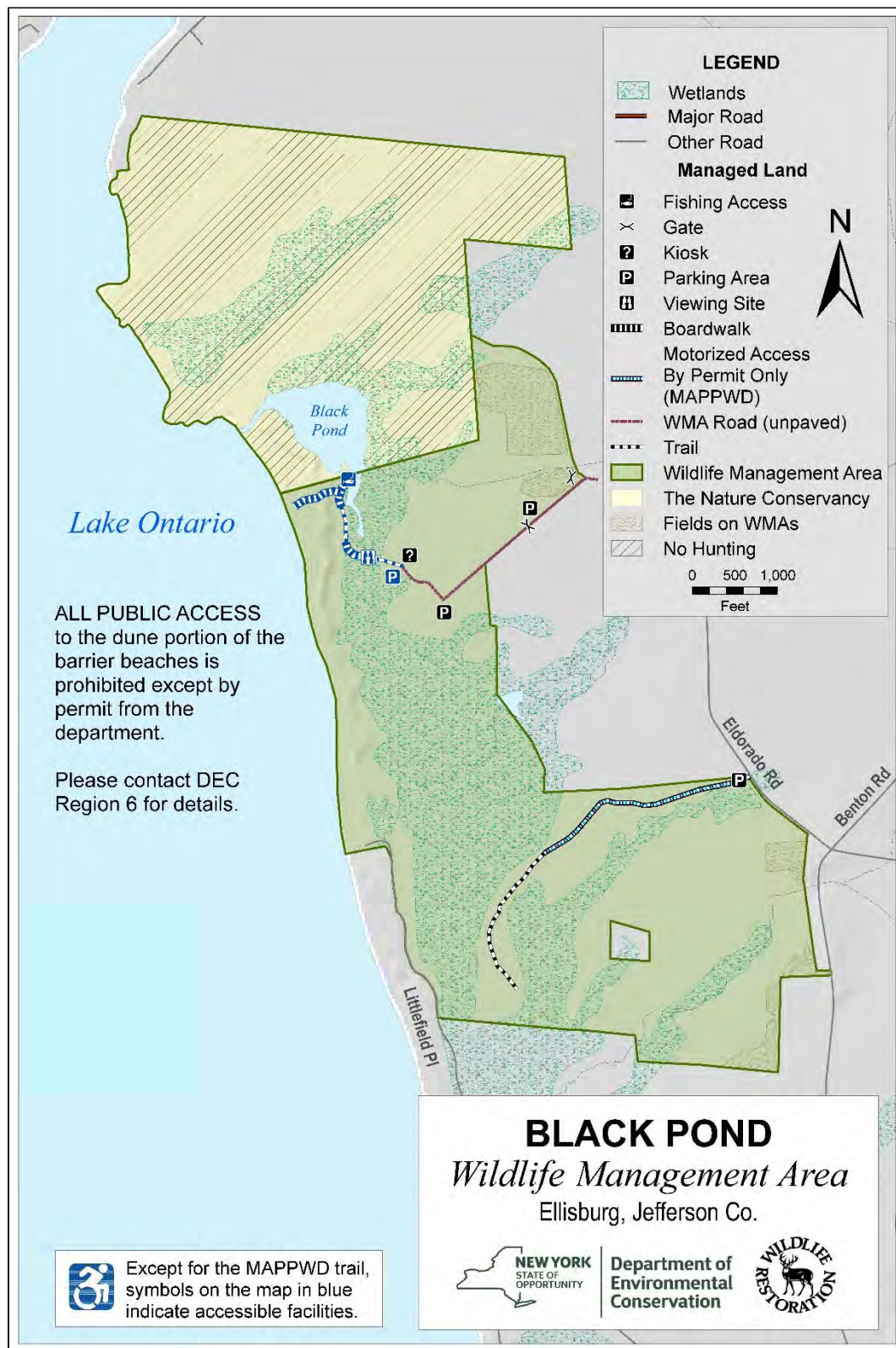
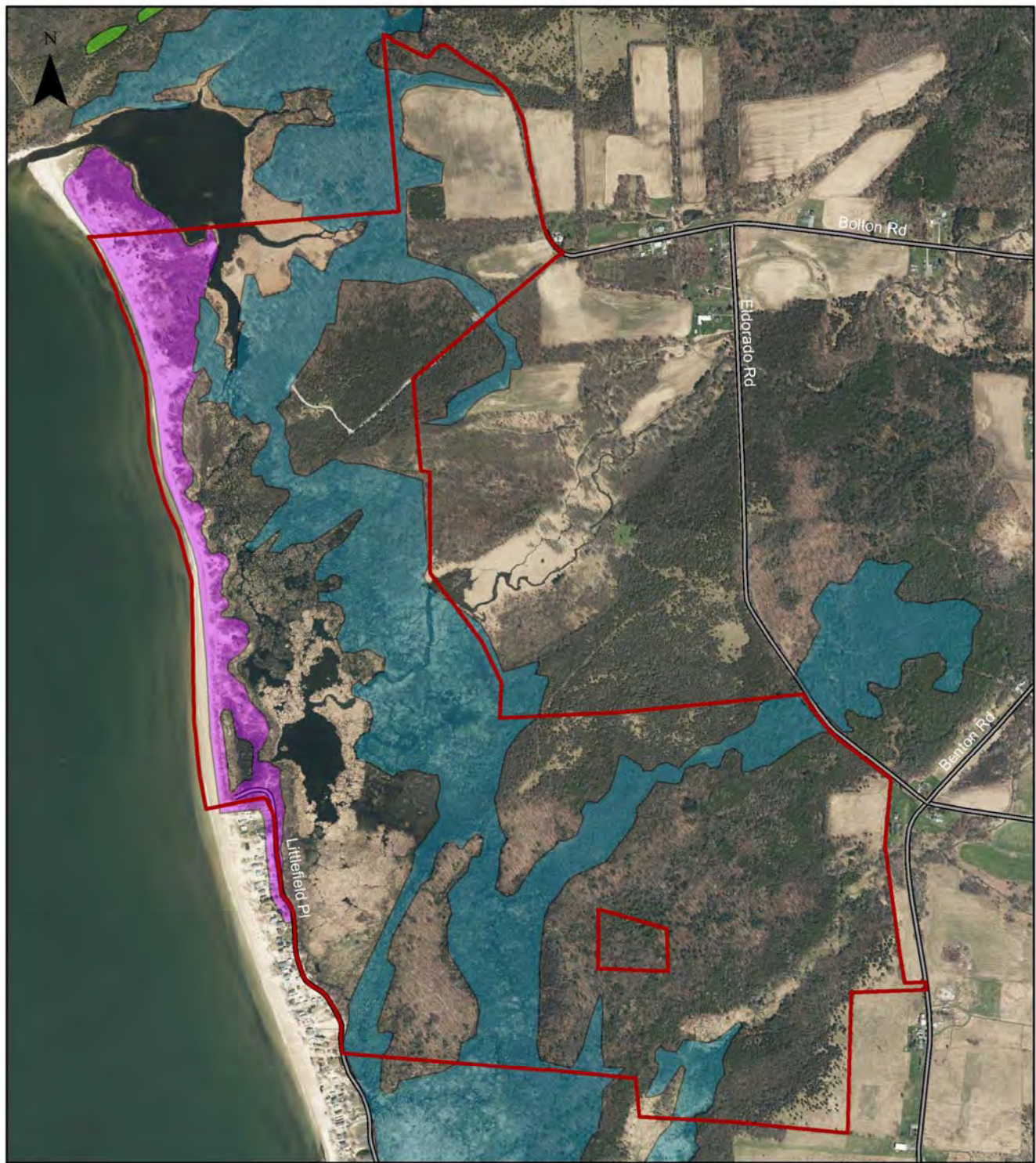


FIGURE 1. Location and access features at Black Pond WMA.



Legend

- | | |
|--|--|
|  Alvar Pavement Grassland |  Silver Maple-Ash Swamp |
|  Great Lakes Dunes |  WMA Boundary |

*From community delineations in the 1990s, conditions may have changed.

Black Pond WMA

Map created on 11/2018
by E. M. Cooper, Habitat Conservation Unit

0 0.1 0.2 0.4 Miles

FIGURE 2. Significant ecological communities on Black Pond WMA. Data from the NY Natural Heritage Program.

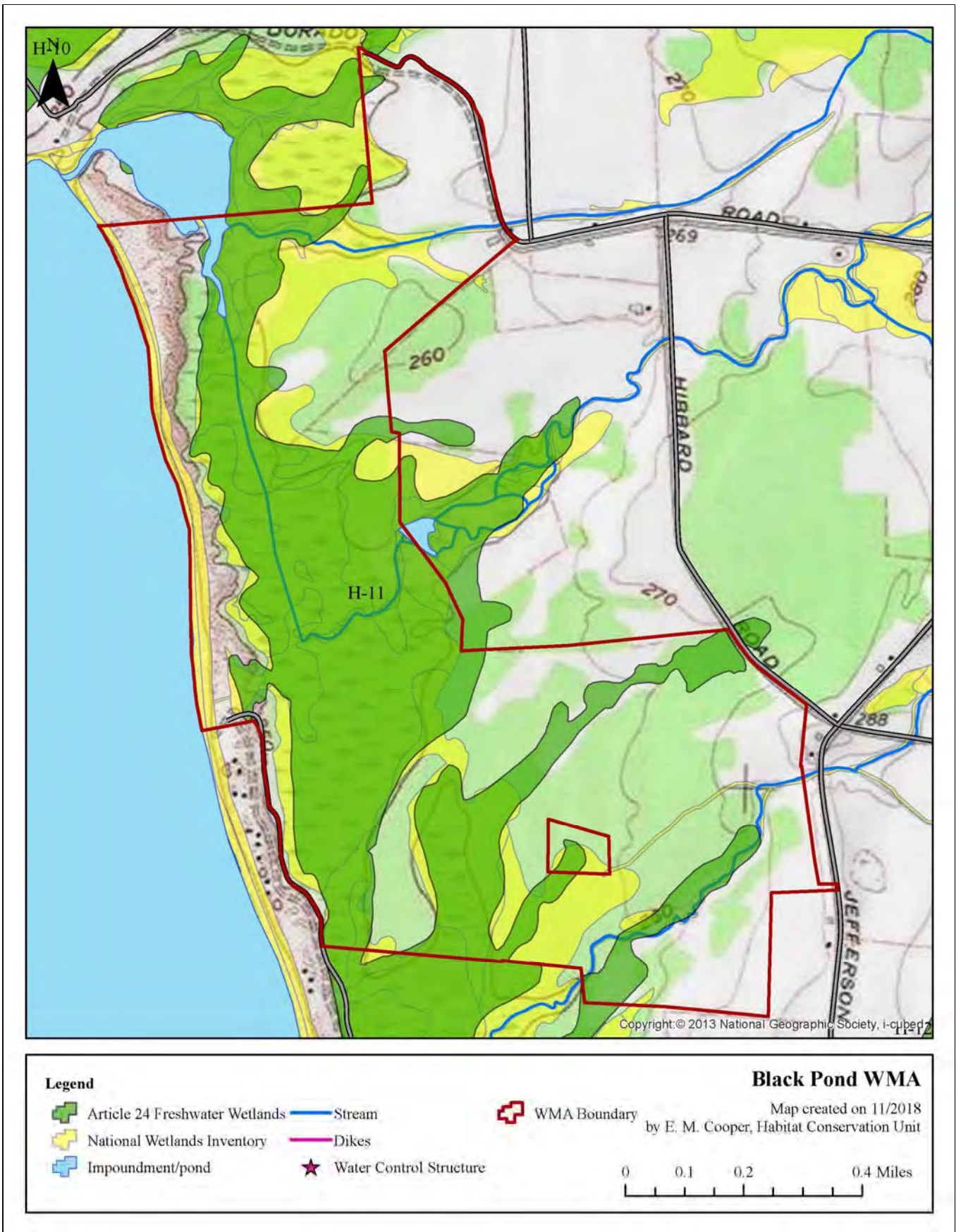


FIGURE 3. Wetlands, open water, and streams of Black Pond WMA. Note: Wetland boundaries are not exact and may not be used for regulatory purposes without a current delineation.

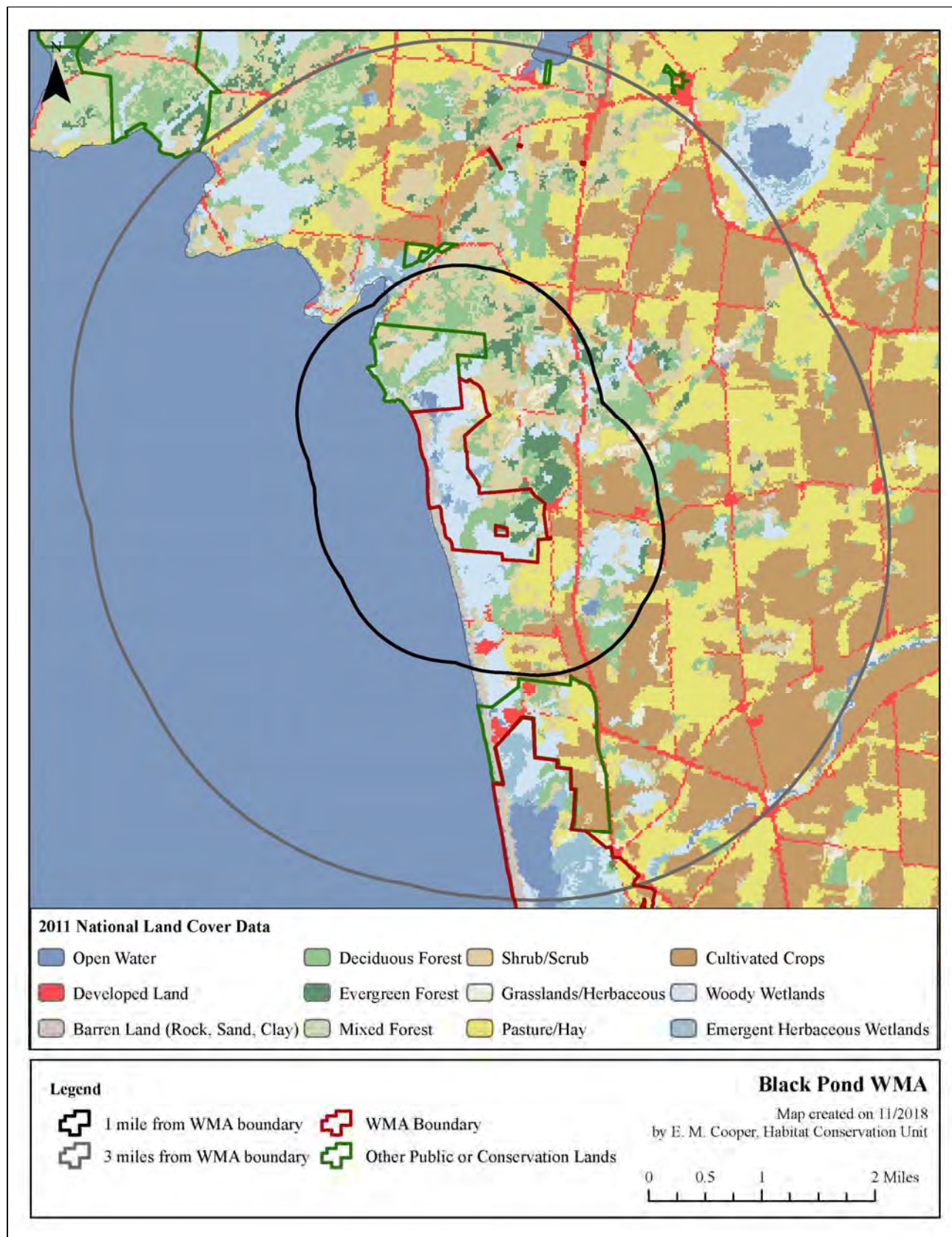


FIGURE 4. Land cover types and conservation lands in the landscape surrounding Black Pond WMA. Conservation lands are from the NY Protected Areas Database available online at <http://www.nypad.org/>. Land cover types are from the 2011 National Land Cover Data (NLCD) and differ from the habitat types used in the WMA habitat inventory. NLCD definitions are available online at <https://www.mrlc.gov/data/legends/national-land-cover-database-2011-nlcd2011-legend>.

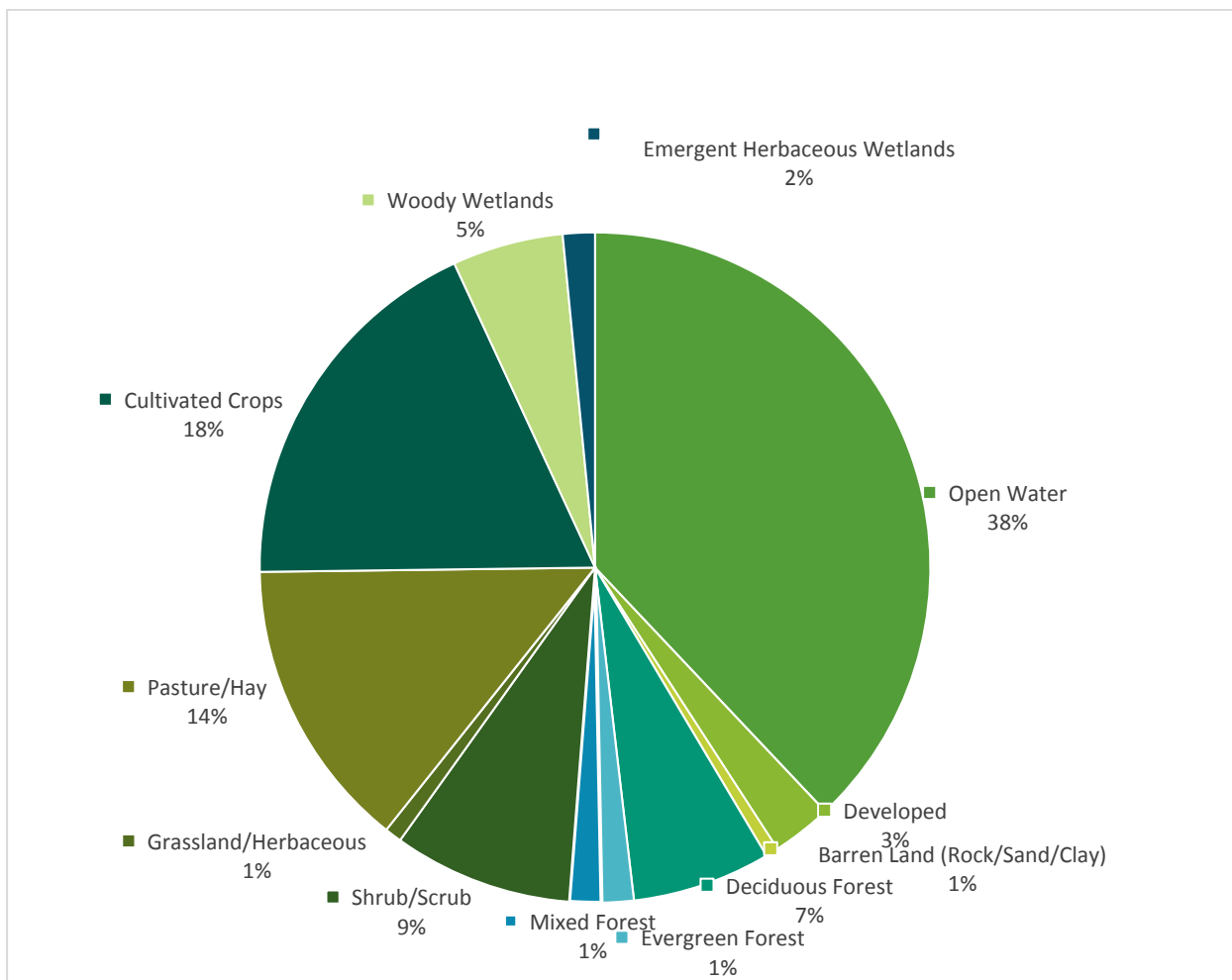


FIGURE 5. Percent cover of land cover types within three miles of Black Pond WMA.

Land cover types are from the 2011 National Land Cover Data (NLCD) and differ from the habitat types used in the WMA habitat inventory. NLCD definitions are available online at <https://www.mrlc.gov/data/legends/national-land-cover-database-2011-nlcd2011-legend>.

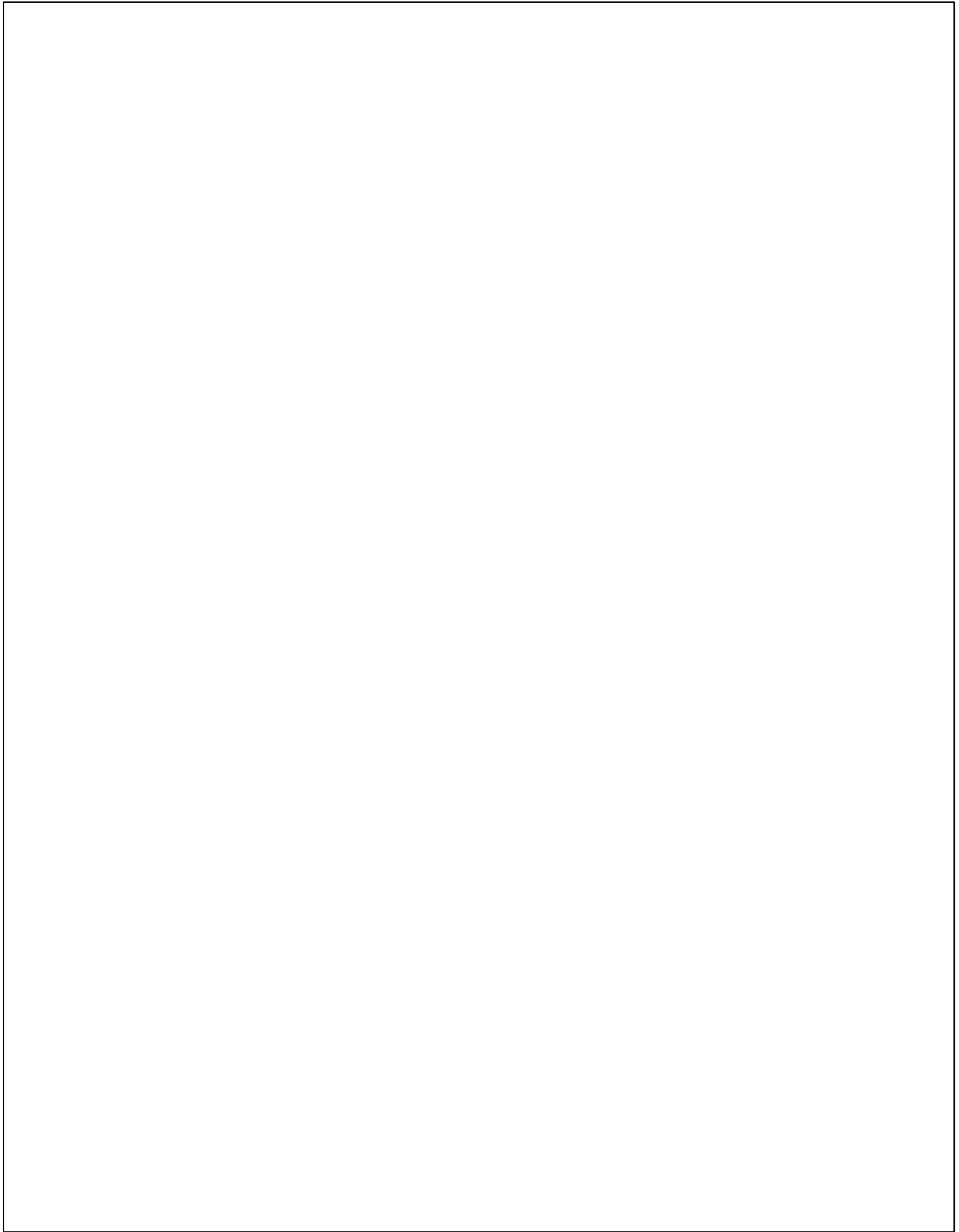


FIGURE 6. Habitat types and location(s) of proposed management on Black Pond WMA. Numbers indicate the stand number from habitat inventory.

IV. APPENDICES

APPENDIX A: DEFINITIONS

The following key words were used in the development of this Habitat Management Plan. Definitions are adapted from The Dictionary of Forestry, Society of American Foresters, J. A. Helms, Editor, unless otherwise noted.

Best Management Practices: (BMP) A practice or combination of practices that are determined to be the most effective and practicable means (including technological, economical, and institutional considerations) of avoiding negative impacts of habitat management.

Biodiversity: The variety and abundance of life forms, processes, functions, and structures of plants, animals, and other living organisms, including the relative complexity of species, communities, gene pools, and ecosystems at multiple spatial scales.

Clearcut: A forest regeneration or harvest method that entails the cutting of essentially all trees, producing a fully exposed microclimate for the development of a new age class. Depending on management objectives, a clearcut may or may not have reserve trees left to attain goals other than regeneration.

Community: An assemblage of plants and animals interacting with one another, occupying a habitat, and often modifying the habitat; a variable assemblage of plant and animal populations sharing a common environment and occurring repeatedly in the landscape. (NY Natural Heritage Program)

Endangered Species: Any species listed on the current state or federal endangered species list as being in danger of extinction throughout all or a significant portion of its range.

Forb: Any broad-leafed, herbaceous plant other than those in the Poaceae (Gramineae), Cyperaceae, and Juncaceae families (i.e., not grass-like).

Forest: An ecosystem characterized by a dense and extensive tree cover, often consisting of stands varying in characteristics such as species composition, structure, age class, and associated processes, and commonly including meadows, streams, fish, and wildlife.

Forest Health: The condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects or disease, and resilience to disturbance.

Grassland Focus Area: Regions of NY that support key, residual populations of grassland birds. There are currently eight focus areas, within which there is a concentrated conservation effort for these species. (A Plan for Conserving Grassland Birds in New York, Audubon NY.)

Habitat: A place that provides seasonal or year round food, water, shelter, or other environmental conditions for an organism, community, or population of plants or animals.

Hardwood: A broad leaved, flowering tree belonging to the botanical group Angiospermae, such as red maple, yellow birch, American beech, black cherry, etc.

Impoundment: A pond caused by a dam across a stream and used for purposes such as water supply, water power, or wildlife habitat. (Edinger et al. 2002. Ecological Communities of New York State, Appendix B)

Landscape: A spatial mosaic of several ecosystems, landforms, and plant communities across a defined area irrespective of ownership or other artificial boundaries and repeated in similar form throughout.

Mast: The fruit of trees considered as food for wildlife. Hard mast is the fruits or nuts of trees such as oak, beech, walnut, and hickories. Soft mast is the fruits and berries from plants such as dogwood, viburnum, elderberry, huckleberry, hawthorn, grape, raspberry, and blackberry.

Multiple Use Area: Lands that were acquired by DEC to provide outdoor recreation and wherever possible the conservation and development of natural resources. As their name suggests, they are to be managed for a broader range of public use. (Public Use of Lands Managed by the Bureau of Wildlife)

Native: A plant or animal indigenous to a particular locality.

Old Growth Forest: Forest with an abundance of late successional tree species, at least 180 - 200 years of age in a contiguous forested landscape that has evolved and reproduced itself naturally, with the capacity for self-perpetuation, arranged in a stratified forest structure consisting of multiple growth layers throughout the canopy and forest floor, featuring canopy gaps formed by natural disturbances creating an uneven canopy, and a conspicuous absence of multiple stemmed trees. (Adapted from the NYS Strategic Plan for State Forest Management)

Pole: A tree of a size between a sapling (1" to 5" diameter at breast height) and a mature tree.

Regeneration Cut: A cutting procedure by which a new forest age class is created; the major methods are clearcutting, seed tree, shelterwood, selection, and coppice. The Young Forest Initiative includes these silvicultural treatments: clearcuts, seed tree cuts, and shelterwood cuts. Salvage (following a natural disturbance) will be considered based on the size and scope of the disturbance.

Seed Tree Method: A forest regeneration or harvest method that entails cutting of all trees except for a small number of widely dispersed trees retained for seed production and to produce a new age class in fully exposed microenvironment.

Shelterwood Method: A forest regeneration or harvest method that entails the cutting of most trees, leaving those needed to produce sufficient shade to produce a new age class in a moderated microenvironment.

Softwood: A coniferous tree belonging to the botanical group Gymnospermae, such as white pine, Eastern hemlock, balsam fir, red spruce, etc.

Special Management Zone: A vegetation strip or management zone extending from wetland boundaries, high-water marks on perennial and intermittent streams, vernal pool depression, spring seeps, ponds and lakes, and other land features requiring special consideration. (Adapted from DEC Division of Lands and Forests Management Rules for Establishment of Special Management Zones on State Forests)

State Rank of Significant Ecological Communities:

S1 = Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.

S2 = Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.

S3 = Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

S4 = Apparently secure in New York State.

S5 = Demonstrably secure in New York State.

SH = Historically known from New York State, but not seen in the past 15 years.

SX = Apparently extirpated from New York State.

SE = Exotic, not native to New York State.

SR = State report only, no verified specimens known from New York State.

SU = Status unknown.

(Edinger et al. 2002. Ecological Communities of New York State, Appendix A)

Stand: In forestry, a contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable and manageable unit. In this HMP, the term “stand” is also applied to other habitat types (e.g., grassland, shrubland) to describe an area composed of similar vegetation composition and structure, as delineated during the habitat inventory.

Stand Prescription: A planned series of treatments designed to change current stand structure to one that meets management goals. Note: the prescription normally considers ecological, economic, and societal constraints.

Target Species: A suite of high priority wildlife species of conservation interest that are being targeted to benefit from management of a particular habitat type. For example, young forest target species at Black Pond WMA include: American Woodcock, Ruffed Grouse, and white-tailed deer.

Unique Area: Lands that were acquired by DEC for their special natural beauty, wilderness character, geological, ecological, or historical significance for inclusion in the state nature and historical preserve (ECL 51-0703.4). The primary purpose of these lands is to protect the feature of significance that led to the land being acquired by the state. (Public Use of Lands Managed by the Bureau of Wildlife)

Upland: Sites with well-drained soils that are dry to mesic (never hydric). (Edinger et al. 2002. Ecological Communities of New York State, Appendix B)

Wetland: “Freshwater wetlands means lands and waters of the state as shown on the freshwater wetlands map which contain any or all of the following:

- (a) lands and submerged lands commonly called marshes, swamps, sloughs, bogs, and flats supporting aquatic or semi-aquatic vegetation of the following types: wetland trees, wetland shrubs, emergent vegetation, rooted, floating-leaved vegetation, free-floating vegetation, wet meadow vegetation, bog mat vegetation, and submergent vegetation;
 - (b) lands and submerged lands containing remnants of any vegetation that is not aquatic or semi-aquatic that has died because of wet conditions over a sufficiently long period, provided that such wet conditions do not exceed a maximum seasonal water depth of six feet and provided further that such conditions can be expected to persist indefinitely, barring human intervention;
 - (c) lands and waters substantially enclosed by aquatic or semi-aquatic vegetation as set forth in paragraph (a) or by dead vegetation as set forth in paragraph (b) the regulation of which is necessary to protect and preserve the aquatic and semi-aquatic vegetation as set forth in paragraph (a) or by dead vegetation as set forth in paragraph (b) the regulation of which is necessary to protect and preserve the aquatic and semi-aquatic vegetation; and
 - (d) the waters overlying the areas set forth in (a) and (b) and the lands underlying.”
- (Refer to NYS Environmental Conservation Law, Article 24 § 24-0107 for full definition.)

Wildlife Management Area: Lands that were acquired by DEC primarily for the production and use of wildlife, including hunting and trapping. These areas provide and protect wildlife habitats that are particularly significant in their capacity to harbor rare, threatened or endangered species, host unusual concentrations of one or more wildlife species, provide an important resting and feeding area for migratory birds, provide important nesting or breeding area for one or more species of wildlife, or provide significant value for wildlife or human enjoyment of wildlife. (Public Use of Lands Managed by the Bureau of Wildlife)

Young Forest: Forests that result from a regeneration cut, typically having a dense understory where tree seedlings, saplings, woody vines, shrubs, and herbaceous vegetation grow together. Young forests are typically 0-10 years old. (Adapted from www.youngforest.org). It is acknowledged that “young forests” will differ in their character in different ecological areas of the state and that 0-10 years is a continuum into more mature forest types. (Refer to: A DEC Strategic Plan for Implementing the Young Forest Initiative on Wildlife Management Areas 2015-2020)

APPENDIX B: COMPLIANCE WITH STATE ENVIRONMENTAL QUALITY REVIEW

This plan identifies habitat management activities to be conducted on the Wildlife Management Area. These activities were analyzed in the 1979 *Programmatic Environmental Impact Statement on Habitat Management Activities of the Department of Environmental Conservation; Division of Fish and Wildlife* (PEIS), as updated and amended in 2017 by the *Supplemental Final Environmental Impact Statement* (SFEIS).¹⁶ Any activity that exceeds the thresholds of, or was not analyzed in the 1979 PEIS as amended in 2017, will require individual, site-specific environmental review. Environmental assessment forms prepared as a result of this review will be posted on the Environmental Notice Bulletin (ENB).¹⁷

The activities recommended in this plan:

- Will not adversely affect threatened or endangered plants or animals or their habitat.
 - Prior to implementation of any activity, staff review the NY Natural Heritage Program's "Natural Heritage Element Occurrence" database and perform field surveys when necessary. If a protected species is encountered in a project area, staff may establish buffer zones around the occurrence, move the project area, follow time-of-year restrictions, or cancel the project.
- Will not induce or accelerate significant change in land use.
 - All lands and waters within the WMA system are permanently protected as wildlife habitat.
- Will not induce significant change in ambient air, soil, or water quality.
 - Activities are designed to protect air, soil, and water quality through careful project planning, use of appropriate Best Management Practices, and establishment of Special Management Zones around sensitive land and water features requiring special consideration.
- Will not conflict with established plans or policies of other state or federal agencies.
 - Activities will follow established plans or policies of other state and federal agencies, including all relevant U.S. Fish and Wildlife Service rules and regulations.
- Will not induce significant change in public attraction or use.
 - The WMA system is part of a long-term effort to establish permanent access to lands in New York State for the protection and promotion of its fish and wildlife resources. Proposed activities will continue to protect, promote, and maintain public access to WMAs and their wildlife resources.
- Will not significantly deviate from effects of natural processes which formed or maintain an area or result in areas of significantly different character or ecological processes.
 - Activities will be conducted in a manner that maintains, enhances, or mitigates ecological processes and/or natural disturbances as appropriate for each WMA and habitat type. Some activities, such as even-aged forest management, intentionally result in areas of different character and ecological processes; however, they are not considered significant because they are ephemeral or transitional and will not permanently alter the landscape.
- Will not affect important known historical or archeological sites.
 - Activities that may result in ground disturbance are reviewed by DEC's State Historic Preservation Officer (SHPO) and/or the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) to identify potential impacts to historical or archeological sites. Sensitive sites will be protected under the direction of DEC's SHPO and the OPRHP Archaeology Unit.
- Will not stimulate significant public controversy.

It is not anticipated that activities on WMAs will stimulate significant public controversy. A public comment period was held during development of both the PEIS and the SFEIS; no relevant comments in opposition of proposed management activities were received during the SFEIS public comment period. Staff also hold a public information session upon completion of each HMP, consider comments gathered during these sessions, and may adjust management as deemed appropriate. Kiosks, signs, webpages, articles, demonstration areas, and other outreach materials also raise awareness about habitat management activities.

¹⁶ Available online at <http://www.dec.ny.gov/regulations/28693.html>.

¹⁷ Available online at <http://www.dec.ny.gov/enb/enb.html>.

APPENDIX C: FOREST MANAGEMENT PRESCRIPTIONS

PREScription FOR WILDLIFE MANAGEMENT AREA TIMBER HARVEST

Region: **Wildlife Management Area:** **Stand number:** **Stand acreage:**

Species composition:

Basal area: **Trees per acre:** **Mean stand diameter:**

Stand inventory or analysis date:

Regeneration data:

Natural Heritage Element Occurrence layer review:

SMZ layer review:

Retention data:

Soil types and drainage:

Interfering vegetation:

Acres to be treated: **Target basal area:**

Technical guidance/stocking guide:

Treatment purpose:

Management Objective: Even aged or Uneven Aged

-If even aged, specify treatment (i.e. shelterwood, seed tree, clearcut)

Clearcut acreage and configuration: (if applicable)

Natural Heritage /MHDB considerations and mitigation: (if applicable)

Retention considerations and adjustments:

Treatment descriptions:

Name and Title of Preparer:

Central Office Lands and Forests Staff

Date

Regional Wildlife Manager

Date

PRESCRIPTION NOTES

Species Composition: At a minimum, the three most common species found in the overstory should be included, assuming at least three species comprise the stand. Species that individually constitute less than 5% of the stand may be lumped together as “Other” or “Miscellaneous.” For instance, if beech, hemlock and yellow birch each make up 3% of the stand, they may be lumped together as “Other – 9%.”

Natural Heritage Element Occurrence layer review: List those species that the Natural Heritage Element Occurrence (EO) data layer indicates are or were known to be present in the stand, or could be affected by treatments to the stand. For instance, if a rare fish was indicated in a water body that is a short distance downstream of a creek that flows through the stand, it should be listed in the prescription.

SMZ layer review: The SMZ data layer includes Special Management Zones around all streams and wetlands, as well as vernal pools, spring seeps and recreation areas that staff have mapped and digitized. If any of these features are mapped incorrectly or are missing from current data layers, staff can correct their locations by editing their office layers.

Retention data: Include numbers of existing snags, cavity trees, Coarse Woody Material, Fine Woody Material, and legacy trees. Ocular estimates are acceptable.

Soil types and drainage: Specifically named soil types are useful, but not necessarily required. “Flat, sandy, well-drained hilltop” or “Steep, gravelly, moderately well-drained mid-slope” may be just as useful as “Hershisier-Koufax Sandy Silt Loam” in describing the soil conditions as they relate to management decisions. The important point is to note those characteristics that may limit equipment operation or establishment of regeneration. Soil type data is available for some counties on the Data Selector.

Interfering vegetation: Indicate the existing amount of interfering vegetation such as beech, striped maple, fern, etc. This may be quantified using mil-acre plots or by ocular estimate.

Technical guidance used: This may include stocking guides, articles found in technical journals, textbooks or other silviculture-related publications. Other sources of guidance may be acceptable as well.

Treatment purpose: As used here, “treatment purpose” and “management objective” (see below) are two different things. Also, “treatment purpose” is not what is to be done (i.e., “reduce basal area by 25%” or “remove every third row”), but rather is an explanation of why it is being done (i.e., “stimulate regeneration and increase growth of residual stand” or “regenerate current stand and convert to young forest”).

Management objective: As used here, the term “management objective” is somewhat general. At a minimum, the prescription should indicate the desired future age structure and stand type. An entry as general as “Even aged hardwood” is acceptable, but regional staff may be more specific if they so choose. The management objective for a stand may be specified in the Habitat Management Plan (HMP) for the Wildlife Management Area in question. If the existing HMP does not specify the management objective regional staff should choose the management objective when the prescription is written.

Clearcut acreage and configuration: If the harvest involves one single clearcut, indicate the total contiguous area, in acres. If the harvest comprises more than one clearcut, indicate the total combined area of clearcuts, as well as the area of the largest clearcut.

Natural Heritage/MHDB considerations: Indicate what measures will be taken to protect those elements or features that were found in the review of the Natural Heritage Element Occurrence and Special Management Zone (not applicable yet) layers.

Retention considerations: Indicate whether or not existing levels meet the standards set forth in the Division’s policy on Retention on State Forests, or whether they are expected to do so as a result of the proposed treatment. Also indicate if or how the treatment was adjusted in order to improve compliance with the policy standards.

Treatment description: The intended treatment should be clearly described. The amount of information necessary to accomplish this will vary greatly. For instance, in a row thinning of a pole timber sized plantation that had no SMZs or other special features, it may be sufficient to simply indicate “Remove two out of every six rows, taking two adjacent rows and leaving four rows between successive pairs being removed.” An intermediate thinning in a sawtimber sized hardwood stand with a recreational trail, two streams and a known occurrence of an endangered plant community would require significantly more detail. One rule of thumb that could be used is to describe the treatment so that a qualified forestry professional could use it to assist in marking the harvest.

Additionally, since we are focused on creating young forests you should also address the presence/absence of advanced regeneration. If you are planning on clearcutting without advanced regeneration, address how you are going to mitigate that. For example, “This aspen stand will be clearcut and it is anticipated that future regeneration will be established through aspen root sprouting”. Or, “This stand will be clearcut and replanted with Norway spruce to establish conifer cover.”

Furthermore, if you are planning on conducting a shelterwood or seed tree cut, please indicate when you are planning on returning to the stand to conduct the final harvest (overstory removal).

APPENDIX D: AMENDMENTS

Any substantive changes to the habitat management described in this plan will be amended to the plan annually or as needed. Such changes may include: land acquisition, unforeseen natural disturbance, or any other change that alters the need for or the scope, method, or timing of management.