Habitat Management Plan
for
Ashland Flats Wildlife Management Area
2016 – 2025

Photo: Irene Mazzocchi

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SUMMARY

Ashland Flats Wildlife Management Area (WMA) was originally acquired to provide wetland habitat for nesting and migratory waterfowl and upland habitat for various game and non-game species. In addition to being important for waterfowl and upland game species, Ashland Flats WMA is considered one of the most important areas in New York for breeding and wintering grassland birds. The WMA is located within one of eight designated grassland focus areas[1] in New York, falls within Bird Conservation Region[2] (BCR) 13, and is a New York State Bird Conservation Area.[3] Several state endangered or threatened species and Species of Greatest Conservation Need (SGCN) use the grassland habitat on the WMA for breeding and/or wintering. Due to the location of this WMA and the importance of maintaining quality grassland habitat in the state, this WMA is primarily managed using the best management practices for breeding grassland bird species.

Habitat management goals for Ashland Flats WMA include:

- Managing approximately 7% of the WMA as young forest (0-10 years, 22% of forested landscape) to promote American woodcock, ruffed grouse, and golden-winged warbler habitat, and to restore native hardwoods over time;
- Maintaining approximately 24% as intermediate and mature forest;
- Managing a minimum of 25% as grasslands to provide high-quality grassland breeding bird and wintering raptor habitat;
- Managing approximately 38% as early successional shrublands; and
- Maintaining approximately 4% as wetlands to provide prime breeding and migratory stopover habitat for marsh birds and waterfowl.

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, Wildlife and Marine Resources (DFWMR) initiated a holistic planning process for wildlife habitat management projects. Habitat Management Plans (HMPs) are being developed

[1] Morgan, M. and M. Burger. 2008. A Plan for Conserving Grassland Birds in New York: Final Report to the New York State Department of Environmental Conservation. Audubon New York, Ithaca, NY. Available online at http://ny.audubon.org/conservation/grassland-bird-conservation-program.
[2] Bird Conservation Region information is available online at http://www.nabci-us.org/bcr13.html.
[3] Bird Conservation Area information is available online at http://www.dec.ny.gov/animals/25341.html.

for WMAs and other properties administered by DFWMR 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 National Historic Preservation Act (NHPA), prior to implementation.

WMA OVERVIEW

LOCATION

Ashland Flats WMA is located in DEC Region 6, Towns of Cape Vincent and Lyme, Jefferson County (Figure 1).

TOTAL AREA

2,028 acres

HABITAT INVENTORY

A habitat inventory of the WMA was conducted in 2013 and is proposed to be updated every ten to fifteen 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 Ashland Flats WMA.

Habitat Type	Current Conditions (as of 2013)			Desired Conditions	
	Acres	Percent of WMA	Miles	Acres	Percent of WMA
Forest [a]	529	26%		495	Decrease to 24% [b]
Young forest	107	5%		141	Increase to 7% [b]
Shrubland	873	43%		770	Decrease to 38%
Grassland	415	21%		518	Increase to 26%
Agricultural land	0	0%		0	No change
Wetland (natural) [c]	8	< 1%		8	No change
Wetland (impounded) [c]	58	3%		58	No change
Open water	0	0%		0	No change
Other (Easements)	20	1%		20	No change
Roads	18	< 1%	16	18	No change
Rivers and streams			16		No change
Total Acres:	2028	100%		2028	

[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] The forest management proposed in this plan aims to replace poor quality forest, promote regeneration of native species, and establish a healthy mature forest for the future. See Landscape Context and Forest sections.
[c] Wetland acreage does not include forested wetlands, since they are included in the Forest category.

ECOLOGICAL RESOURCES

Wildlife Overview:

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

- Beaver, muskrat
- Savannah sparrow, bobolink, red-winged blackbird
- White-tailed deer, wild turkey
- Midland painted turtle, snapping turtle, wood 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 SGCN may occur on the WMA (Table 2).[4] SGCN listed below include species that have been documented on or within the vicinity of the WMA that 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,[5] NY Reptile and Amphibian Atlas,[6] DEC wildlife surveys and monitoring, and eBird.[7]

Table 2. Species of conservation concern that may be present on Ashland Flats 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 bittern		SC	x
	American black duck			HP
	American kestrel			x
	American woodcock			x
	Bald eagle		T	x
	Black-billed cuckoo			x
	Black tern		E	HP
	Blue-winged teal			x
	Blue-winged warbler			x
	Bobolink			HP
	Brown thrasher			HP
	Eastern meadowlark			HP
	Glossy ibis			x
	Golden-winged warbler		SC	HP
	Grasshopper sparrow		SC	HP
	Great egret			x
	Greater yellowlegs			x
	Henslow's sparrow		T	HP
	Northern harrier		T	x
	Pied-billed grebe		T	x

[4] 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.
[5] Available online at http://www.dec.ny.gov/animals/7312.html.
[6] Available online at http://www.dec.ny.gov/animals/7140.html.
[7] 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
	Prairie warbler			x
	Ruffed grouse			x
	Sedge wren		T	HP
	Short-eared owl		E	HP
	Upland sandpiper		T	HP
	Whip-poor-will		SC	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	Blanding's turtle		T	HP
	Blue-spotted salamander			HP
	Common ribbon snake			x
	Smooth green snake			x
	Snapping turtle			x
	Western chorus frog			x
	Wood turtle		SC	HP
Fish	None known			
Invertebrates	Nine-spotted lady beetle			HP
Plants	Awned sedge		E	
	Rocky Mountain sedge		T	

Significant Ecological Communities:

There are several rare and significant natural communities located on Ashland Flats 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; community descriptions are from *Ecological Communities of New York State, Second Edition* [8] (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.
- **Alvar pavement grassland** (S2) - a community composed of two vegetation associations; the first is a mosaic of pavement and grassland areas dominated by

[8] 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/97703.html.

characteristic native species; the second consists of exposed, flat limestone or dolostone pavement that is sparsely vegetated with a mosaic of mossy patches and exposed bedrock that is covered with crustose and foliose lichens.

- **Alvar woodland** (S2) - a mixed conifer woodland that occurs on shallow soils over limestone bedrock in alvar settings, and usually includes numerous rock outcrops.

Additional information about ecological communities is available in the Ashland Flats 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 Ashland Flats WMA include:

- Four wetlands 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.
- 40 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.[9]

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.*[10] Some habitat management activities may either be prohibited or restricted in order to protect these features. Any deviations from these guidelines will be addressed in the individual stand prescriptions.

LANDSCAPE CONTEXT

The goals of this HMP have been developed with consideration of surrounding landscape features, the availability of habitats, and other conservation lands adjacent to Ashland Flats WMA (Figures 4 and 5). The landscape within a three mile radius of the WMA is primarily privately-owned land including:

- Pasture/hay and grassland (49%)
- Wetlands (20% combining open water, emergent, and woody wetlands)
- Deciduous forest (14%)
- Early successional shrubland (6%)
- Cultivated crops (6%)
- Development (4%)

[9] Information about stream classification is available online at http://www.dec.ny.gov/permits/6042.html.
[10] Available online at http://www.dec.ny.gov/outdoor/104218.html.

- Evergreen forest (1%)

Since Ashland WMA lies within a grassland focus area and is recognized for its high value to grassland birds, the primary objective for this WMA is to maintain large fields (≥ 25 acres) of quality grassland habitat. The predominant land use in the surrounding landscape is agriculture, with pasture/hay and cultivated crops accounting for over half of the area (Figures 4 and 5). The timing of traditional agricultural practices is often incompatible with the nesting success of grassland birds, hence the grassland fields on the WMA are managed specifically for several targeted grassland bird species.

Currently, the forested landscape on Ashland Flats WMA includes 17% young forest, well over DFWMR's Young Forest Initiative (YFI) goal of managing at least 10% of the forested landscape on most WMAs as young forest.[11] The limited amount of mature forest on both the WMA and surrounding landscape makes the goal of creating additional young forest habitat almost undesirable. However, the forest management proposed in this plan aims to replace poor quality forest, promote regeneration of native species, and establish a healthy mature forest for the future. This will benefit wildlife and provide recreational opportunities, without adversely affecting grassland or mature forest dependent wildlife.

Nearby conservation lands include the Three Mile Creek Barrens Preserve, managed by The Nature Conservancy to protect alvar barrens and grasslands.

II. MANAGEMENT STRATEGIES BY HABITAT TYPE

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

- Maintain habitat characteristics that will benefit wildlife abundance and diversity within the New York landscape.
- Promote Best Management Practices for targeted wildlife and habitats.
- Provide opportunities for wildlife-dependent recreation such as trapping, hunting, 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:

[11] 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.

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 forest or shrub vegetation accounts for greater than 50% of hydrophytic vegetative cover and the soil or substrate is periodically saturated or covered with water.
Young forest: young or regenerating forested acres, which are typically aged 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 Ashland Flats 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 the majority of the existing mature forest (111 acres) and all forested wetlands (361 acres) due to the relative scarcity of mature forest in the surrounding landscape.
- Increase young forest from 107 to 141 acres (22% of the total forested area) to improve habitat for young forest-dependent wildlife, targeting golden-winged warbler, American woodcock, and ruffed grouse.
    - Conduct a 27 acre clearcut to regenerate with native hardwoods.
- Soften the transitions between young and mature forest (i.e., create feathered edges).
- Encourage dispersal of native hardwoods (oak and hickory) to promote regeneration and increase availability of hard mast for wildlife.

DESCRIPTION OF EXISTING FOREST HABITAT AND TARGET SPECIES

There are 636 forested acres on Ashland Flats WMA. The majority of the forested areas are located in a narrow stretch through the center of the WMA and are surrounded by grassland and/or shrublands (Figure 6). Table 3 provides a summary of the forested areas, including the most common species found in each.

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

Forest Type	Acres (as of 2013)	Desired Acres	Overstory species
Natural forest (mature/intermediate)	118	111	red maple, white oak
Plantation	50	23	white spruce, Scotch pine
Forested wetland	361	361	maple, ash, elm, oak
Young forest	107	141	ash, elm, oak
Young forest (forested wetland)	0	0	
Total Forested Acres:	636	636	

The soil across much of Ashland Flats WMA is shallow and often poorly drained, which limits the establishment and growth of many tree species. Soil groups include Kingsbury-Covington-Chaumont on the majority of the WMA, and Wilpoint-Guffin-Galoo-Chaumont on approximately the southeastern third of the WMA. [12] Due to these soil types and depth, tree growth is slow and the trees have moderate to poor health. There is also little understory regeneration in most stands due to competition from shrubs such as grey-stemmed dogwood, buckthorn, and honeysuckle.

Target species for young forest habitat management include American woodcock, ruffed grouse, and golden-winged warbler. These species rely on areas of young forest adjacent to mature forest 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 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.[13]
- 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.[14, 15]
- Golden-winged warbler:
  - Singing ground – Open patches from 5 to 25 acres, usually in a patch with maple, oak, or hickory trees to perch on in the opening.
  - Nesting – Fields or patches from 5 to 25 acres that are heavily vegetated with herbaceous cover with a moderate density of shrubs near a mature forest edge.
  - Brood rearing – Similar to nesting except also including clumps of younger trees.
  - Foraging – Open areas with herbaceous vegetation that support insects and spiders.[16] Males use mature forest during the breeding season.[17]

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[12] 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.

[13] US Department of Agriculture, Natural Resources Conservation Service. 2010. American Woodcock: Habitat Best Management Practices for the Northeast by Scot J. Williamson. Wildlife Insight. Washington, DC.

[14] Dessecker, D. R., G. W. Norman, and S. J. Williamson. 2006. Ruffed Grouse Conservation Plan. Association of Fish & Wildlife Agencies: Resident Game Bird Working Group. 94 pp.

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

[16] Golden-winged Warbler Working Group. 2013. Best Management Practices for Golden-winged Warbler Habitats in the Great Lakes Region. Available online at http://gwwa.org.

[17] Streby, H. M., J. P. Loegering, and D. E. Andersen. 2012. Spot mapping underestimates territory size and use of mature forest by breeding male Golden-winged Warblers. Wildlife Society Bulletin 36:40–46.

- Post-fledging – Mature forest. [18]

MANAGEMENT HISTORY

Forest management on Ashland Flats WMA has been minimal since the property is primarily managed for grassland habitat. Approximately 50 acres of white spruce and Scotch pine were planted on the WMA between 1970 and 1980. The plantations did not establish well and are now poorly stocked. In 2008, approximately three acres of Scotch pine were clearcut in Stand 28, an area that separated several of the grassland fields, and were converted to grassland habitat. Trees were also removed in Stands 27 and 29 to improve grassland breeding bird habitat (Figure 6).

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

The following management is proposed for the next 10 years with a young forest acreage goal of reaching approximately 141 acres:

- **Management planned for 2016-2020** (Table 4, Figure 6):
  - Clearcut white spruce and Scotch pine plantations in Stands 68 and 69 (27 acres).
  - Maintain young forest in Stand 4 (25 acres) by clearing patches of thick brush and controlling invasive species.
- **Management planned for 2021-2025** (Table 5, Figure 6):
  - Perform a shelterwood cut along the boundary of Stand 59 (7 acres) to soften the young forest/mature forest edge.

Table 4. Forest management schedule for the first five-year period of this HMP (2016-2020).

Stand	Acres	Size Class	Forest Type		Management Direction	Treatment Type
			Current	Future		
68	26.1	Pole Timber 6”-11” DBH	Plantation: White Spruce	Seedling-Sapling-Natural	Wildlife	Clearcut
69	0.9	Pole Timber 6”-11” DBH	Plantation: Scotch Pine	Seedling-Sapling-Natural	Wildlife	Clearcut
4	25.1	Pole Timber 6”-11” DBH	Other Natural Stands	Seedling-Sapling-Natural	Wildlife	Seed Tree

Table 5. Forest management schedule for the second five-year period of this HMP (2021-2025).

Stand	Acres	Size Class	Forest Type		Management Direction	Treatment Type
			Current	Future		
59	6.5	Pole Timber 6”-11” DBH	Oak-Hickory	Oak-Hickory	Wildlife	Shelterwood

[18] Streby, H. M., S. M. Peterson, G. R. Kramer, and D. E. Andersen. 2015. Post-independence fledgling ecology in a migratory songbird: implications for breeding-grounds conservation. Animal Conservation. 18:228-235

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 for each of these stands will include the following:

- **Stands 68 and 69:** Clearcut 27 acres of unsuccessful white spruce and Scotch pine plantations. The invasive brush, primarily buckthorn and honeysuckle, will be removed and/or treated following best management practices. A pre-treatment of brush clearing via mechanical means followed by an herbicide application is recommended. Cull trees would then be removed by mechanical means (e.g., chainsaw). Acorns, hickory nuts, and aspen seeds may be collected from nearby stands and dispersed across some of the cut acres. This will encourage establishment of native hardwood species that significantly benefit wildlife through rapid growth or future mast production. Increasing the young forest habitat as proposed will establish more habitat for American woodcock and ruffed grouse.
- **Stand 4:** Maintain 25 acres as young forest habitat by clearing some of the brush in order to create quality habitat for golden-winged warblers and other wildlife that require early succession habitat. Invasive species will be removed if present and identified for treatment.
- **Stand 59:** Thin the portion of this stand that is within 100 feet of the borders of Stands 29, 58, and 60 (~7 acres) to soften the forest edge (i.e., create feathered edges).

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 6).

Table 6. Best Management Practices for forest management on WMAs.

Resource	**Guidance Document** [19]
Soils	*Rutting Guidance on Wildlife Management Areas*
Water quality	*NYS Forestry Best Management Practices for Water Quality*
Wildlife	*Retention Guidance on Wildlife Management Areas*
Plantations	*Plantation Management Guidance on Wildlife Management Areas*

Wildlife Considerations:

Due to the sensitivity of endangered and threatened species or SGCN found on the WMA, especially grassland birds, cutting of trees and/or brush will be conducted outside the breeding or winter roost time period, or in a manner which avoids disturbance to areas used by these species. Due to the possibility of Indiana and Northern long-eared bats being on the area, tree selection for cuts and the timing of cuts will be evaluated to protect the bats.

Forest Health Considerations:

In general, trees in this area do not grow as rapidly as other parts of New York, due to soil and climate conditions. Desirable species (e.g., oaks, maples, hickories, and viburnums) that can grow in shallow or poorly drained soils will be favored when planning habitat management.

[19] All guidance documents referenced here are available online at http://www.dec.ny.gov/outdoor/104218.html.

Pre- and Post-treatment Considerations:

Hardwood regeneration is often out-competed by thick stands of grey-stemmed dogwood and invasive glossy buckthorn and honeysuckle. Treatment of the interfering vegetation may be required to promote desired regeneration and to achieve habitat goals.

Pre- and post-treatment actions to promote the desired forest regeneration will be addressed in detail in the silvicultural prescriptions.

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 guidelines that will be established in a Young Forest Initiative Monitoring Plan (in prep). The Monitoring Plan will establish 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 (i.e., planting) regeneration has been securely established. YFI wildlife target species selected for Ashland Flats WMA, which may be assessed to determine response to management, include:

- American woodcock
- Golden-winged warbler
- Ruffed grouse

SHRUBLAND

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

MANAGEMENT OBJECTIVES

- Provide 770 acres of shrubland habitat for shrubland obligate species and other wildlife, including several YFI target species.
- Convert 35 acres of dense shrublands to improved habitat for golden-winged warbler and other young forest species.
- Convert 103 acres of shrubland to grassland habitat.

DESCRIPTION OF EXISTING SHRUBLAND HABITAT AND TARGET SPECIES

There are 873 acres of shrublands on Ashland Flats WMA that consist of grey-stemmed dogwood, buckthorn, honeysuckle, willow, and red-cedar trees. This habitat type may not benefit the targeted grassland bird species that the WMA is primarily managed for, but incorporating early successional shrublands contiguous to grassland fields will benefit a suite of wildlife including several of the YFI target species:

- Golden-winged warbler
- American woodcock
- Ruffed grouse

- Wild turkey

MANAGEMENT HISTORY

Management of shrublands has consisted mainly of shrub removal as described in the grassland management section below. In the past 10 years, approximately 15 acres of shrubs and/or willows have been removed within the large fields.

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

- **Management planned for 2016-2020** (Figure 6, Table 7):
  - Mow Stands 49 and 74 (103 acres) annually to remove willows or other shrubs in order to create additional grassland habitat.
  - Remove or thin several stands of heavy shrubs or brush, as needed.
- **Management planned for 2021- 2025** (Figure 6,Table 7):
  - Remove thick brush and control invasive species in Stands 57 and 58 (35 acres) to improve golden-winged warbler habitat.

Habitat management will include the following:

- **Stands 57 and 58:** Additional golden-winged warbler habitat will be created by converting 35 acres of dense brush to better golden-winged warbler habitat by using mechanical harvesting to clear some of the brush, leaving patches of trees and shrubs scattered unevenly across the landscape. Overstory trees will be infrequent (5-8/acre) and widely spaced or clustered, resulting in a 10-30% canopy cover. At least 50% of the overstory trees will be deciduous. If necessary, invasive species will be removed and treated with herbicide. If it is determined that there are not enough desirable trees species remaining in the stands after clearing the brush, then planting patches of trees will be considered.

BEST MANAGEMENT PRACTICES

Brush hogging or hydro-axing will be conducted from mid-August through early October when dry conditions normally persist and there is minimal interference with nesting or wintering activities of wildlife.

MANAGEMENT EVALUATION

Future surveys may include golden-winged warbler point counts (pre- and post- treatment) to document any response to recent habitat management for shrublands and young forest.

GRASSLAND

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. Grassland management will restore and maintain habitat that will be used by migratory birds as well as contribute to the goal of building self-sustaining grassland bird populations.

MANAGEMENT OBJECTIVES

- Maintain and enhance the existing 415 acres of grassland fields, concentrating on managing large (≥25 acre) open fields to provide quality grassland bird habitat for breeding, nesting, and wintering species.
- Convert 103 acres of shrubland to grassland habitat (see Shrubland section).
- Continue to enhance the quality of grassland fields by removing shrubs or dense vegetation from the fields (e.g., brush hogging, disking and seeding, and/or hydro-axing), depending on the species the habitat is being managed to support.
- Provide nesting habitat and cover for waterfowl.
- Monitor fields for invasive species and eradicate where feasible.

DESCRIPTION OF EXISTING GRASSLAND HABITAT AND TARGET SPECIES

Grassland restoration in the St. Lawrence Valley helps meet priorities set forth by conservation and watershed plans including the North American Bird Conservation Initiative and the Comprehensive Wildlife Conservation Strategy for the northeast Lake Ontario-St. Lawrence Basin in NY. There are 415 acres of grassland habitat on Ashland Flats WMA. The fields provide habitat for nesting, foraging, roosting, and cover for several grassland birds. Grassland birds can begin nesting as early as March and may still occupy the habitat into September. Short-eared owls are known to winter on the area and need to be considered when planning management work for the late fall or winter. The recommended time period for mowing is mid-August through early October, so there is minimal interference with nesting or wintering activities of birds. Grassland management may also improve habitat for pollinators (insects).

Grasslands on this WMA are managed (mowed) by DEC Division of Operations staff or by utilizing cooperative agricultural agreements with local farmers. The agricultural lands are cut for hay, but are restricted to late season mowing.

Species that benefit from grassland best management practices include:

- Bobolink
- Eastern meadowlark
- Grasshopper sparrow
- Henslow's sparrow
- Northern harrier
- Savannah sparrow
- Sedge wren
- Short-eared owl
- Upland sandpiper

MANAGEMENT HISTORY

Recent work to enhance grassland habitat, eliminate invasive species, and establish productive habitat for migrating, wintering, and nesting grassland birds has been completed through funding from several grants. Beginning in 2006, efforts to reclaim grassland fields via increased mechanical mowing and shrub removal were accomplished through a Wildlife Habitat Incentive Program (WHIP) agreement with Natural Resources Conservation Service (NRCS) in partnership with Ducks Unlimited. Funding has also been provided by Great Lakes Fish and

Wildlife Restoration Act and Habitat & Access Stamp funds. Habitat management included: herbicide treatment, tree and brush clearing, removal of rocks, mowing, disking, cultipacking and seeding.

Project objectives included the completion of the following:

- Eliminated invasive plants such as quack grass and Kentucky bluegrass,
- Restored fallow fields to high quality grassland habitat by planting warm and cool season grasses that could be easily maintained over the long-term,
- Established productive habitat for migrating, wintering, and nesting grassland birds,
- Developed a long-term management plan and monitored the response of the targeted grassland birds.

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

- **Management planned for 2016-2025** (Figure 6):
    - Continue mowing large grassland fields (Stands 27, 28, 29, 53, 54, 56, and 76) on an annual, biennial, or triennial basis depending on vegetation growth to prevent woody growth while also allowing for thatch.
    - Utilize cooperative agreements to achieve the desired acres to be mowed annually.
    - Consider developing a burning prescription for several of the fields, considering vegetation present (i.e., avoid burning cool season grasses).

BEST MANAGEMENT PRACTICES

The following sub-sections provide guidelines for grassland habitat management on all WMAs in NY. For more detailed information and recommendations see *A Plan for Conserving Grassland Birds in New York*.[20] In particular, refer to the plan for species-specific habitat requirements and detailed recommendations regarding grassland management and restoration techniques.

General Management Recommendations

- Target management for grassland bird species known to be in the vicinity, and consider the needs of both breeding and wintering grassland bird species.
- Consider the surrounding landscape when making management decisions.
- Conduct baseline grassland bird surveys on newly acquired fields or fields targeted for management changes to determine species present.
- Increase field size by hedgerow removal, removing trees, etc. to benefit species that require large fields.
- Conduct invasive species control (glossy buckthorn, pale and black swallowwort, Canada thistle, Phragmites, etc.) to improve habitat quality.
- Consider a variety of factors, such as the targeted grassland bird species, pollinators, seed mix (warm versus cool season grasses, forbs, wildflower mixes, grass height and density), timing of planting, existing conditions, and vegetation removal techniques

[20] Morgan, M. and M. Burger. 2008. A Plan for Conserving Grassland Birds in New York: Final Report to the New York State Department of Environmental Conservation under Contract #C005137. Audubon New York, Ithaca, NY.

(including herbicide and intensive disking) in developing grassland planting or restoration projects..

- Utilize mowing, haying, burning, and grazing for maintaining grassland habitat, after evaluating the appropriateness of these methods relative to site conditions and management objectives. In particular, burning cool season grasses is not advisable in most situations in New York.

Timing of Management

- Fields over 25 acres (including all contiguous fields) or fields with a history of listed (federally listed and/or state E/T or SC) grassland bird species within the last 10 years, including fields of any size AND contiguous fields. Can also include nearby fields if deemed necessary:
    - Mowing or other management should be avoided between April 23 and August 15 unless at least one of the following criteria are met and the fields are assessed or surveyed to confirm there is no active nesting by E/T/SC grassland birds:
        - Management is to be done for long term benefits to the habitat/wildlife (such as invasive species management).
        - The fields are assessed or surveyed and there is no active nesting by E/T/SC grassland birds.
        - Nesting locations can be avoided, such as using spot treatment for invasive species, reducing any negative impact to the species of concern.
- Fields under 25 acres (including all contiguous fields) with no history of listed species:
    - Field can be managed/mowed within the period April 23 and August 15 if necessary to accomplish other goals and priorities that benefit other species that use the habitat. If early management is proposed, then the habitat requirements and nesting periods of other species should be considered (e.g., nesting waterfowl, American bittern, reptiles and amphibians).

Additional Mowing Guidelines

- Frequency of mowing, size of area mowed, and mowing techniques should be based on species present and current and desired habitat conditions.
- Block or spot mowing is preferred and strip mowing should be limited (especially in fields over 25 acres).
- Unmowed blocks should be in the shape of a square as opposed to long rectangles.
- When mowing, consider mowing from one side of the field to the other side or start in the center and mow outwards to avoid concentrating animals in the area yet to be mowed.
- In general, mow grass to a residual height of 6-12 inches.

MANAGEMENT EVALUATION

DEC staff have conducted annual presence/absence point counts for grassland breeding birds on the WMA since 2013. Surveys will continue at least once every three years as determined necessary by the Regional Wildlife Manager to determine species response to management, including threatened grassland bird species such as Henslow's sparrow, sedge wren and upland sandpiper. Winter raptor surveys have also been conducted on this area and will also be implemented or continued on an annual, biennial, or triennial basis.

AGRICULTURAL LAND

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

DESCRIPTION OF EXISTING AGRICULTURAL LANDS HABITAT

There is no acreage on Ashland Flats WMA that is managed as agricultural land and no plan to develop such habitat.

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 66 acres of emergent (32.5 acres), scrub-shrub (28 acres), and open water (5.5 acres) wetlands as they currently exist.
- Maintain 361 acres of forested wetlands as they currently exist.
- Maintain habitat for wetland-dependent wildlife such as waterfowl, black tern, muskrat, and beaver by manipulating water levels at the impoundments.

DESCRIPTION OF EXISTING WETLAND HABITAT AND TARGET SPECIES

There are 8 acres of natural wetlands and 58 acres of impounded wetlands (totaling 66 acres) on Ashland Flats WMA (Figure 3). The wetlands consist of scrub-shrub, emergent, and open water wetlands. There are also 361 acres of forested wetlands; please see the Forest section. The wetlands are diverse and provide habitat for species such as:

- American woodcock
- Beaver, muskrat
- Black tern, pied-billed grebe
- Blanding's turtle, midland painted turtle
- Chorus frog, bullfrog, northern leopard frog, green frog, eastern American toad, spring peeper
- Migratory waterfowl

MANAGEMENT HISTORY

There are currently two impoundments on the WMA that were designed and implemented by Ducks Unlimited (DU). One was built as part of an Army Corp of Engineers mitigation project (Figure 3, Wetland 1) in the fall of 2007. The goals of this compensatory mitigation project were to restore 6.22 acres of wetland habitat, comprised of 3.53 acres of palustrine scrub-shrub and 2.69 acres of palustrine emergent marsh (PEM), and to enhance an additional 0.72 acres PEM.

The site was planted in spring 2008 with additional planting completed in fall 2008. DU began monitoring of the restored hydrology and vegetation in 2008 with the final survey in 2012. Part of this project included herbicide treatment for reed canary grass (*Phalaris arundinacea*) and although it was not totally eradicated, it does function as nesting vegetation for several bird species. The wetland functions and values at the site are realized by herbaceous and shrub communities.

In 2010, a 70 acre impoundment (includes approximately five acres of forested wetland) was completed on the area. The restoration project, funded through a North American Wetlands Conservation Act (NAWCA) grant (Figure 3, Wetland 2), included the blocking of ditches and creation of a low berm around a historic wetland site that was used as farm ground until being purchased by DEC. A water control structure was placed to allow for water level management. The resultant wetland is primarily shallow emergent marsh with some scrub-shrub component. This impoundment is currently managed to enhance waterfowl production, nesting black terns, and a stopover area for migrating birds.

IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE

- **Management planned for 2016-2025:**
  - Continue routine maintenance on dikes and control structures so that they function to impound water (i.e., mowing dikes, beaver debris removal).
  - Maintain control structures as needed for water level management.
  - Conduct drawdowns every 5 to 10 years for vegetation growth.

BEST MANAGEMENT PRACTICES

Date restrictions for water level management or equipment in wetlands will be followed to protect species such as black terns (May 1st – July 31st) or Blanding's turtle (October 1st – March 31st).

MANAGEMENT EVALUATION

Continue to monitor black terns as part of the Black Tern Statewide Survey that has been conducted once every three years (or occasionally four) since 1989. Surveys occur in mid- to late-June, during the peak breeding season. Counts of active nests and/or breeding adults are completed twice at each site within the survey period.

OPEN WATER (WATERBODIES AND WATERCOURSES)

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, South Colwell Pond).

DESCRIPTION OF EXISTING OPEN WATER HABITAT

There are 40 streams, segments of streams, and old agricultural ditches on the WMA totaling about 16 miles. Beyond these streams, there is no other open water (no named lakes or ponds) or any plan to develop such habitat.

HABITAT MANAGEMENT SUMMARY

In summary, Table 7 lists the habitat management actions planned for Ashland Flats WMA over the next ten years. Any substantive changes will be appended to this HMP annually or as needed (Appendix D).

Table 7. Summary of habitat management actions recommended for Ashland Flats WMA, 2016-2025. (Also see Figures 3 and 6.)

Habitat	Management Action	Acres	Timeframe
Forest	Clearcut white spruce and Scotch pine plantations in Stands 68 and 69.	27	2016-2020
Forest	Maintain young forest in Stand 4 by clearing patches of thick brush and controlling invasive species.	25	2016-2020
Forest	Perform a shelterwood cut along the boundary of Stand 59 to soften the young forest/mature forest edge.	7	2021-2025
Shrubland	Convert shrubland in Stands 57 and 58 to golden-winged warbler habitat by thinning thick brush and controlling invasive species.	35	2021-2025
Shrubland	Remove or thin several stands of heavy shrubs or brush.		2016-2020, as needed
Shrubland/ Grassland	Mow Stands 49 and 74 annually to remove willows or other shrubs, with goal of converting to grassland.	103	Annual
Grassland	Continue mowing large grassland fields (Stands 27, 28, 29, 53, 54, 56, and 76) on an annual, biennial, or triennial basis depending on vegetation growth to allow for thatch and prevent woody growth.	± 415	Annual, biennial, or triennial
Grassland	Implement seeding, disking, cultipacking, and other treatments to improve grassland quality.	± 415	2016-2020, as needed
Grassland	Determine feasibility of developing a burning prescription for several fields.		2016-2025
Wetland	Continue routine maintenance on dikes and control structures so that they function to impound water (i.e., mowing dikes, beaver debris removal).	< 1	Annual
Wetland	Manage water levels in impoundments.	58	Every 5 to 10 years

III. FIGURES

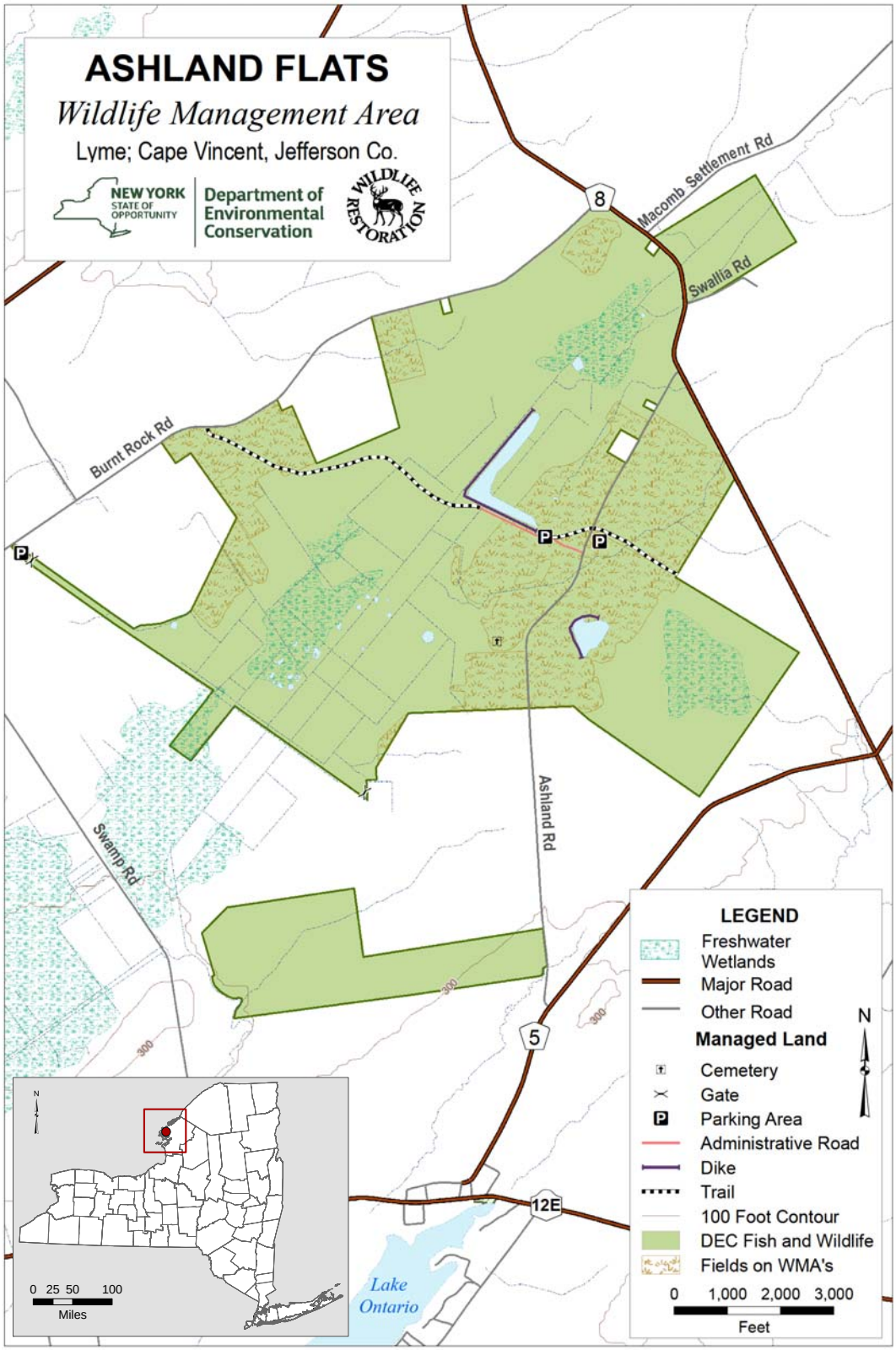

FIGURE 1. Location and access features at Ashland Flats WMA.

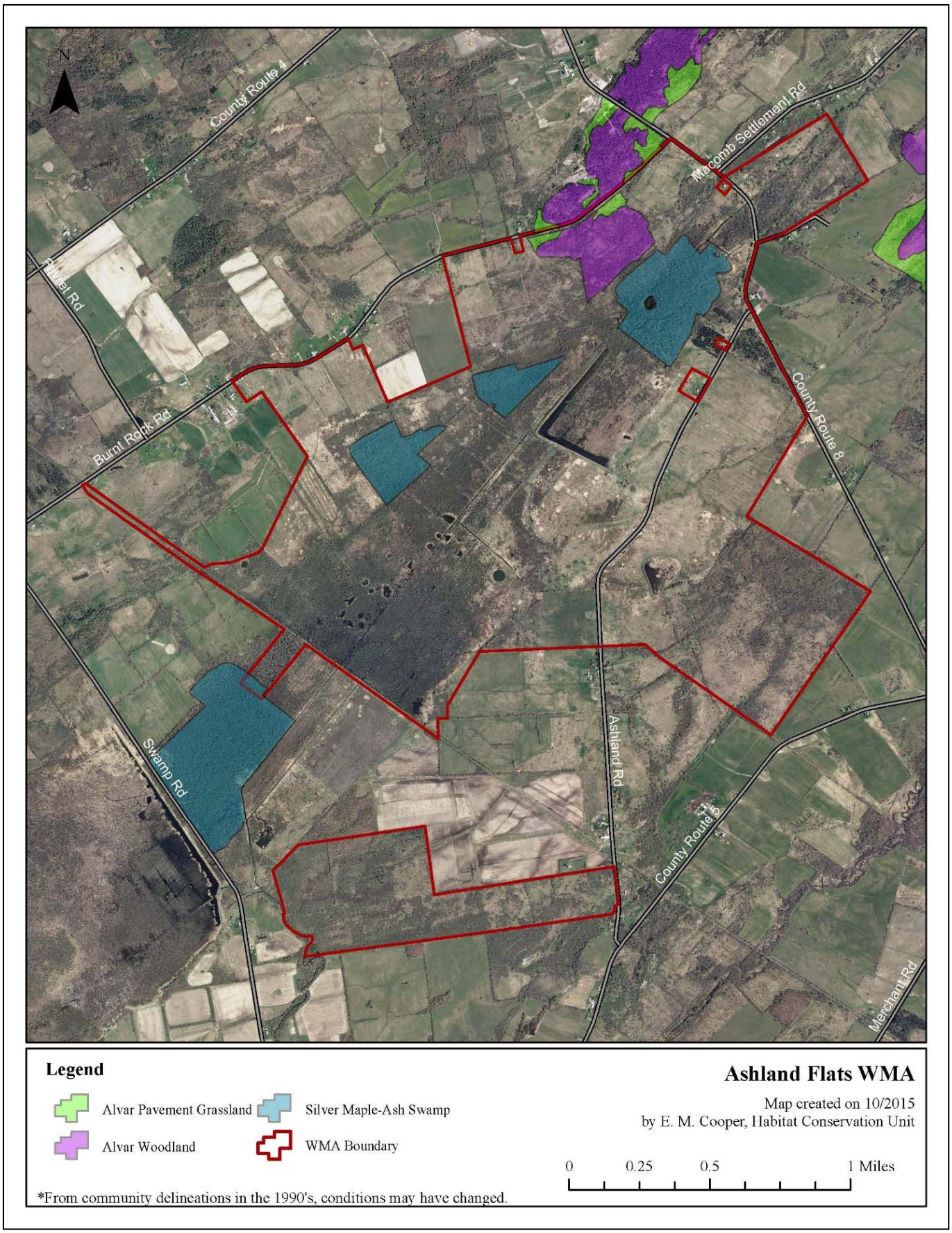

FIGURE 2. Significant ecological communities on Ashland Flats WMA. Data from the NY Natural Heritage Program.

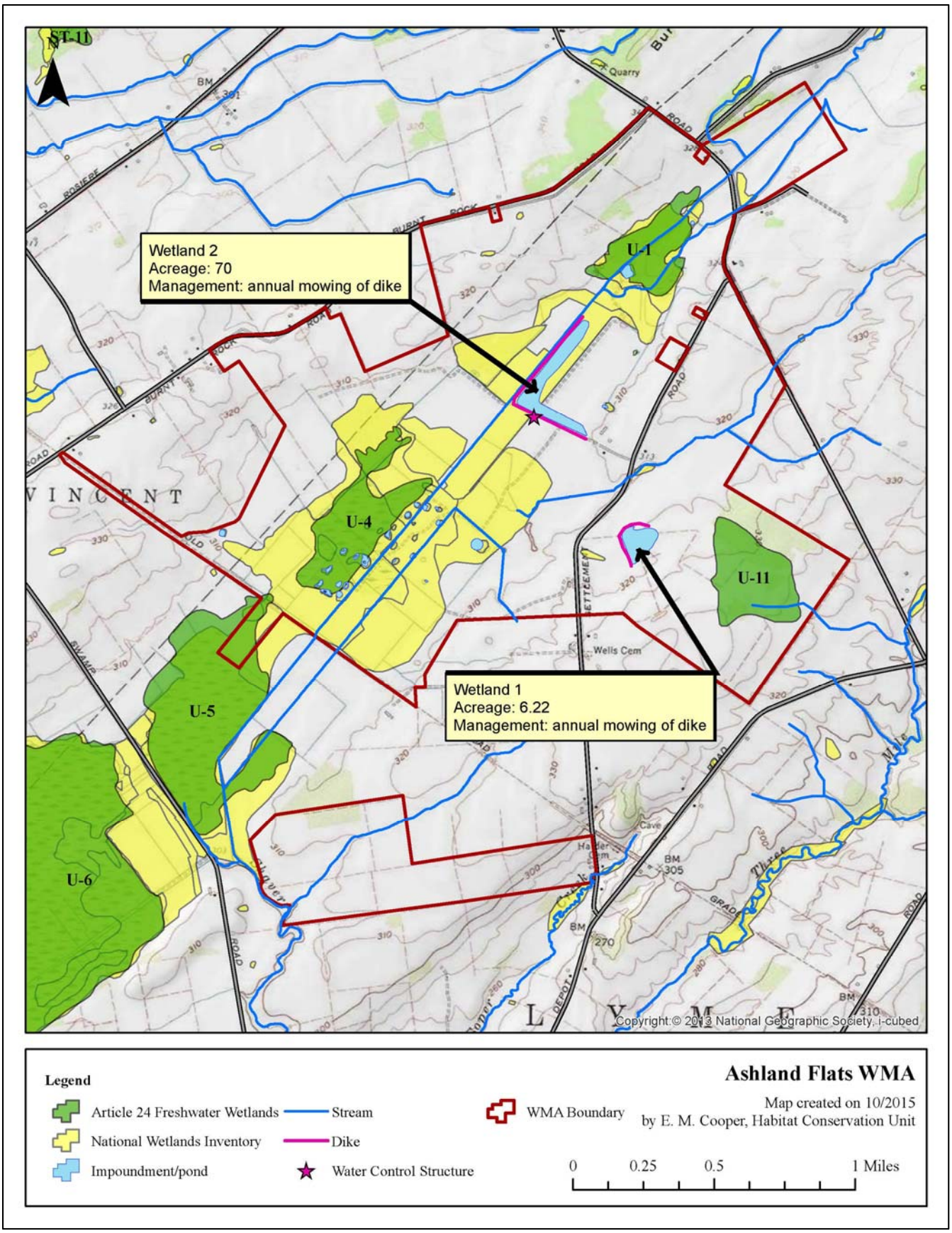

FIGURE 3. Wetlands, open water, and streams of Ashland Flats WMA. Note: Wetland boundaries are not exact and may not be used for regulatory purposes without a current delineation.

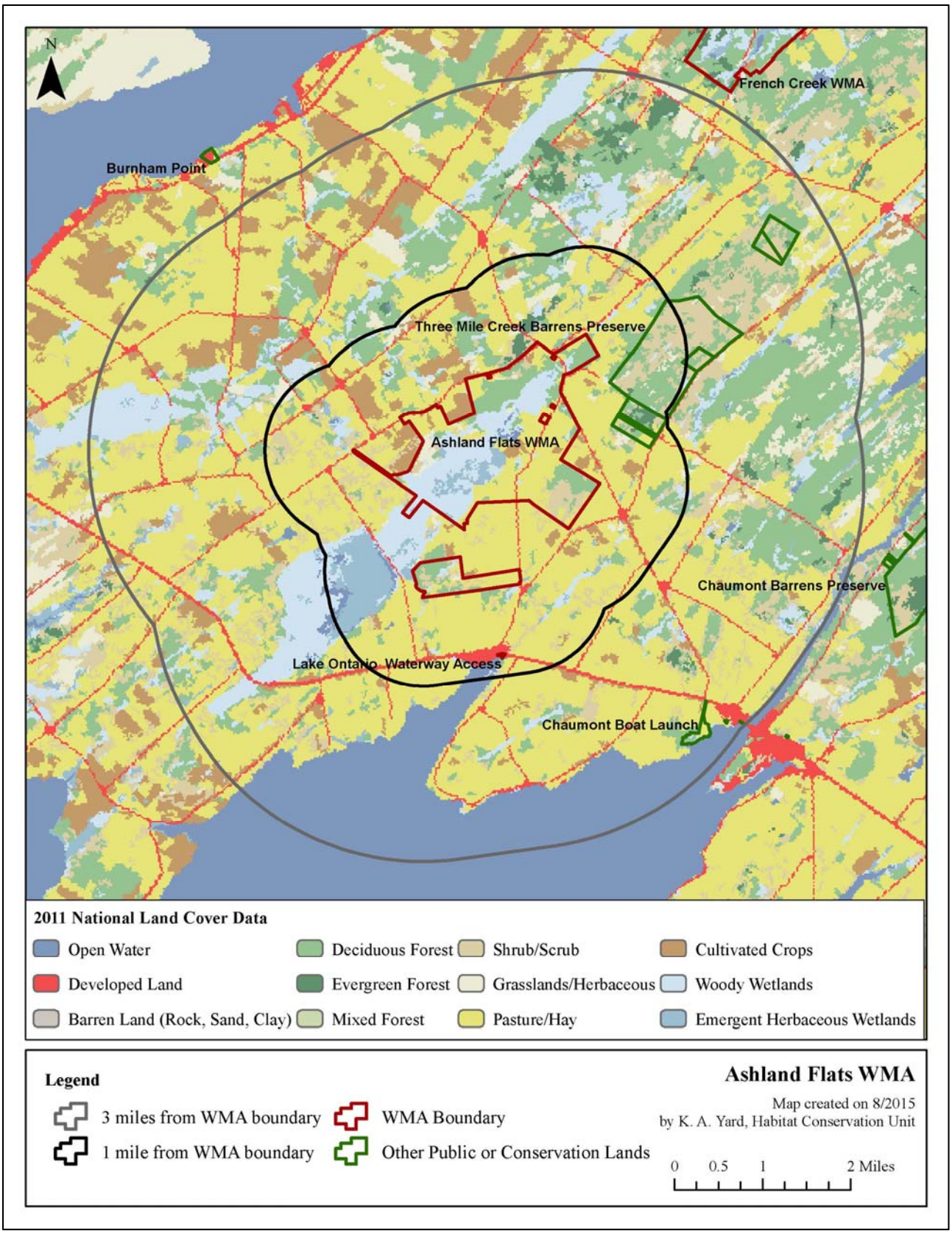

FIGURE 4. Land cover types and conservation lands in the landscape surrounding Ashland Flats WMA. Conservation lands are from the NY Protected Areas Database available online at http://www.nypad.org/. Land cover types are from the 2011 National Land Cover Data (NLCD) and differ from the habitat types used in the WMA habitat inventory. NLCD definitions are available online at http://www.mrlc.gov/nlcd2011.php.

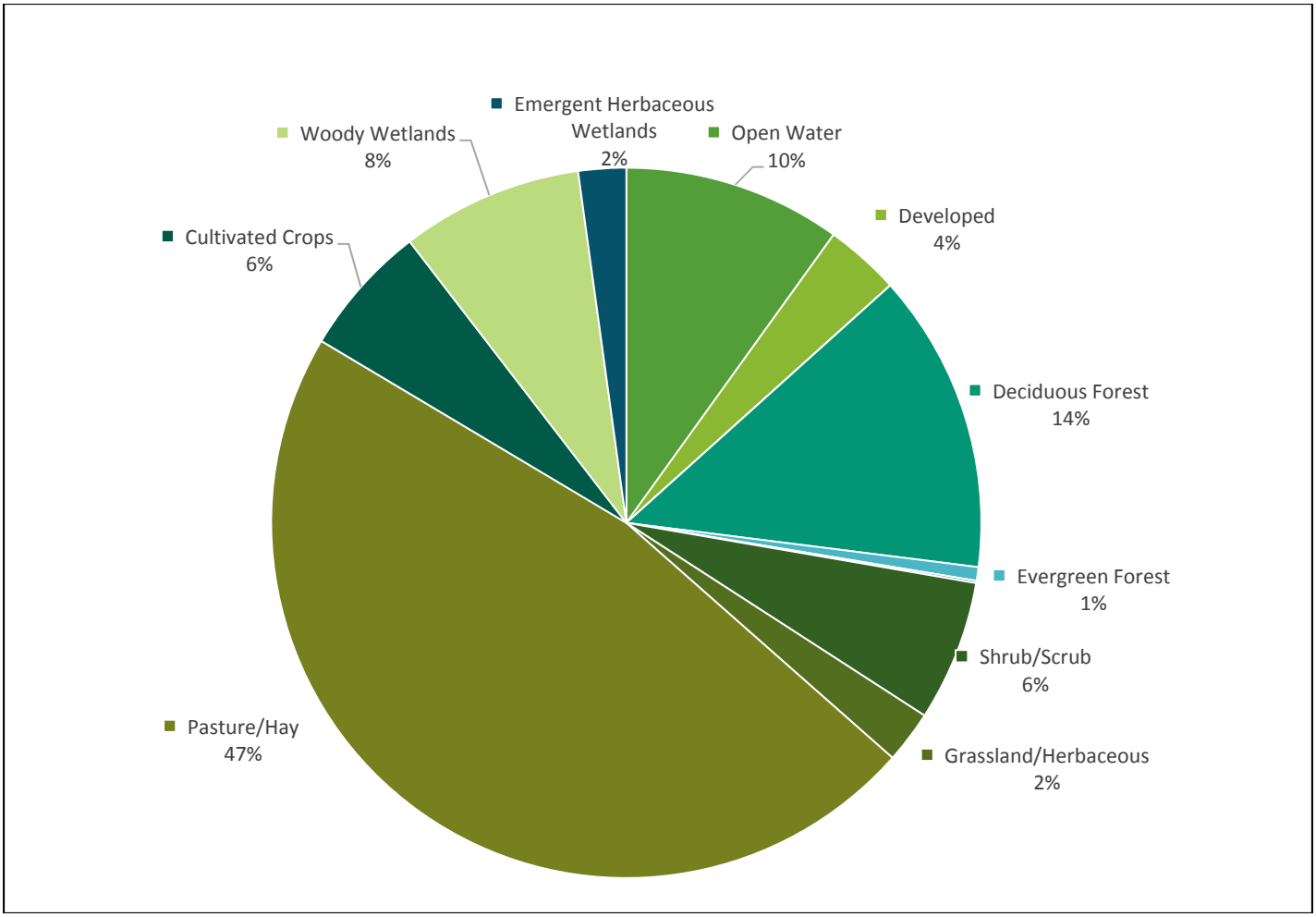

FIGURE 5. Percent cover of land cover types within three miles of Ashland Flats WMA.

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 http://www.mrlc.gov/nlcd2011.php.

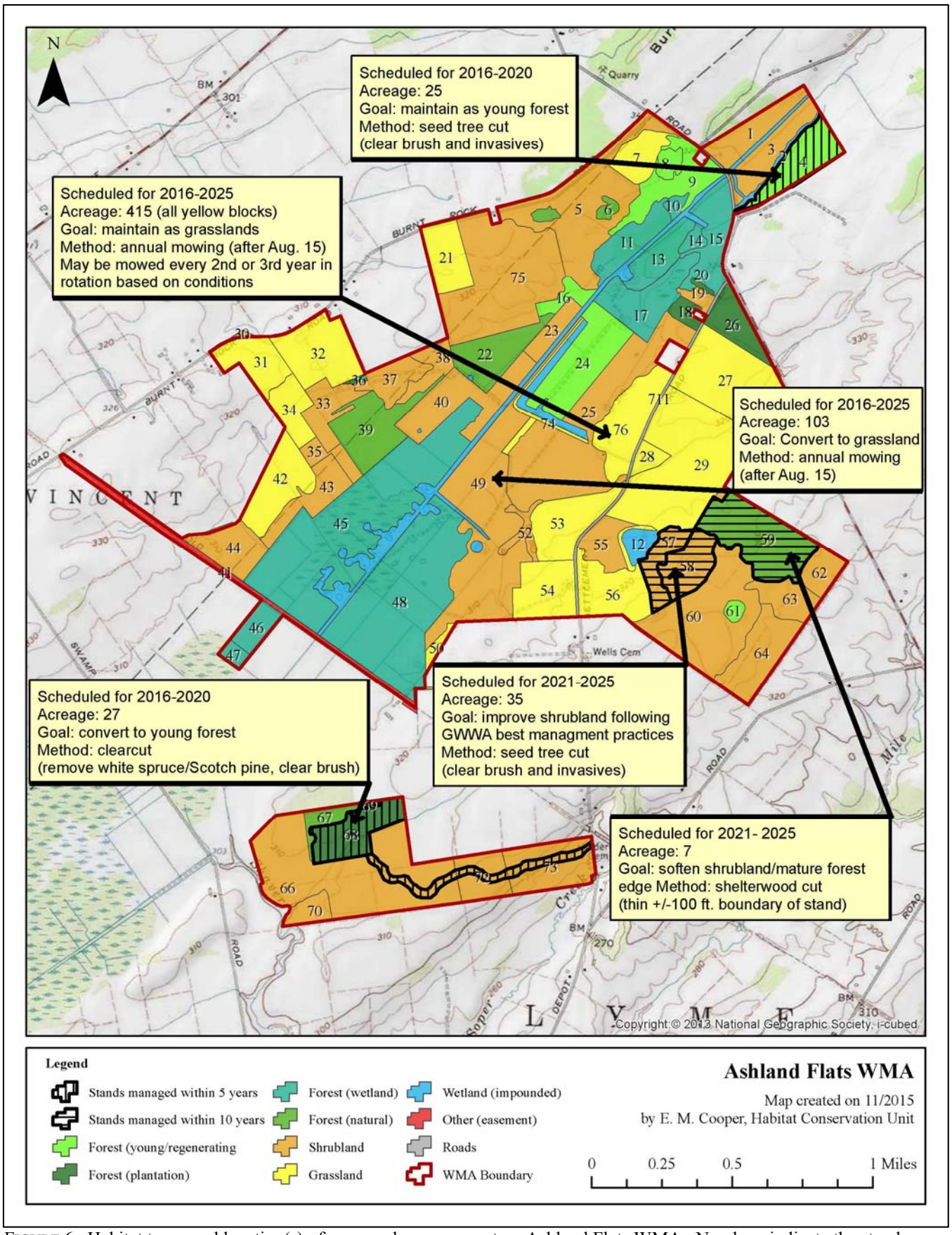

FIGURE 6. Habitat types and location(s) of proposed management on Ashland Flats WMA. Numbers indicate the stand number from habitat inventory.

IV. APPENDICES

APPENDIX A: DEFINITIONS

The following key words were used in the development of this Habitat Management Plan. Definitions are 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 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.

Shrubland: A community dominated by woody plants typically less than ten feet tall with scattered open patches of grasses and forbs that provide floristic diversity. Typically characterized by >50% cover of shrubs and <25% canopy cover of trees. (Adapted from Edinger et al. 2002. Ecological Communities of New York State, Appendix B)

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 Ashland Flats WMA include: American woodcock, golden-winged warbler, and ruffed grouse.

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. 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. STATEMENT OF CONFORMITY WITH SEQRA

Habitat Management Plans will be in compliance with the 1979 *Programmatic Environmental Impact Statement on Habitat Management Activities of the Department of Environmental Conservation; Division of Fish and Wildlife* by following the criteria for site specific assessments included in this Programmatic Environmental Impact Statement (EIS) and by discussing further in Appendix B, Statement of Conformity with the State Environmental Quality Review Act (SEQRA). Appendix B will be included in each plan, thereby satisfying overall compliance with 6 NYCRR Part 617, the State Environmental Quality Review. If any of these criteria are exceeded an additional site specific environmental review will be required.

Most activities recommended in this HMP are a continuation of habitat management that DEC routinely conducts under the Programmatic EIS. Beginning in 2015, DEC's Young Forest Initiative (YFI) will considerably increase forest management on Wildlife Management Areas (WMA); YFI's conformity with SEQRA is specifically addressed below. The overarching goal of the YFI is to restore and maintain young forest habitat on WMAs in order to address the declining amount of young forest habitat in the state and provide habitat for key species of conservation interest, including both at-risk and game species. The habitat management activities to be carried out under the YFI are in compliance with the above referenced document and these management activities:

- Will not adversely affect threatened or endangered plants or animals or their habitat.
    - Careful review of the NY Natural Heritage Program's "Natural Heritage Element Occurrence" database in conjunction with a field survey when necessary prior to management activities taking place allows field staff to assess the presence or absence of threatened and endangered species. Appropriate actions will be taken if a threatened or endangered plant or animal is encountered in the project area including, but not limited to: establishing adequate buffer zones around known occurrences, moving the project area, or aborting the project altogether.
- Will not induce or accelerate significant change in land use.
    - The forestland affected by the YFI will be regenerated and remain forested land, therefore no land use change will take place.
- Will not induce significant change in ambient air, soil, or water quality.
    - All projects carried out under the YFI will protect air, soil and water quality through careful project planning, use of appropriate NYS Best Management Practices for Water Quality, 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.
    - YFI projects will follow established plans or policies of other state and federal agencies. Additionally, all YFI projects will be in compliance with all relevant US Fish and Wildlife Service rules and regulations.
- Will not induce significant change in public attraction or use.
    - The WMA program 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. Projects carried out under the YFI 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 area.
    - Habitat management projects under the YFI will be carried out primarily through even-aged forest management. Even-aged silvicultural systems are designed to mimic natural disturbances, such as flooding, wildfire, insect and disease outbreaks and storm damage often found in nature.
- Will not result in areas of significantly different character or ecological processes.
    - The even-aged silvicultural techniques that will be employed for habitat management projects under the YFI intentionally result in areas of different character and ecological processes. However, they are not considered significant as they are ephemeral or transitional and will not permanently alter the landscape.
- Will not affect important known historical or archeological sites.
    - Each YFI project will be reviewed by DEC's State Historic Preservation Officer (SHPO) as well as the Office of Parks, Recreation and Historic Preservation (OPRHP) to determine whether

project sites may potentially affect any historical or archeological sites. In addition, thorough field review prior to management activities taking place allows field staff to assess the presence or absence of any apparent historical or archeological sites that may not be found during the review process. Should known important historical or archeological sites present themselves necessary actions will be taken to protect these resources under the direction of DEC's SHPO and the OPRHP Archaeology Unit staff.

- Will not involve the application of herbicides, pesticides or other such chemicals.
    - YFI projects may involve the judicious use of pesticides which may be necessary to control invasive species, to protect rare and endangered plants from competition, or to control vegetation interfering with forest regeneration. If projects do require the use of herbicides or pesticides an additional site-specific environmental review will be required.
- Will not stimulate significant public controversy.
    - It is not anticipated that YFI projects will stimulate significant public controversy. A significant amount of public outreach and notification will be conducted on an on-going basis as well as prior to projects being implemented on the ground including, but not limited to: public information sessions regarding the Habitat Management Plans for each WMA, signage installation at project sites informing the public of the scope and purpose of the project, establishment of one demonstration area in each region to showcase YFI management techniques to the public, periodic informational articles published in local media outlets and the development of a public YFI website. The YFI has one full time position dedicated to facilitating the program's public outreach and communication efforts.

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 "Hershiser-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.

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None.