

# Habitat Management Plan for Honeyville Wildlife Management Area 2017 - 2026



WMA entrance off Fuller Road.

anevari, NYSDEC

Division of Fish and Wildlife  
Bureau of Wildlife

317 Washington Street, Watertown, New York 13601

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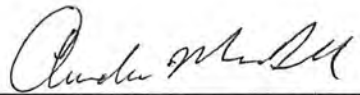
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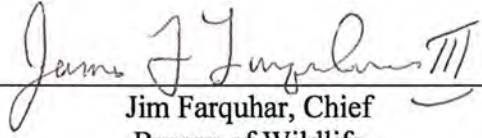
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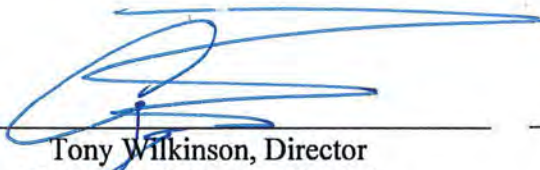
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## ***SUMMARY***

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Honeyville Wildlife Management Area (WMA), formerly known as Cassler Marsh, was acquired in 1966 with state funding to provide habitat primarily for nesting and migratory waterfowl. The area is a large wetland complex with open water, emergent marsh, and scrub/shrub swamp bordered by relatively small areas of forest, shrubland, and old field habitat. The wetland complex is a result of an earthen dike that was constructed in 1957 using grant money from the Small Marsh Program of that era. Recreational activities available on the area include bird watching, wildlife observation, trapping, hunting, and potentially fishing.

Honeyville WMA is managed primarily for wetland wildlife and some upland wildlife. Key habitat management goals include:

- Retaining 66% of the WMA as impounded wetland to provide habitat for migratory waterfowl, marsh birds, amphibians, reptiles, and aquatic furbearers.
- Maintaining 19% as forest to provide habitat for forest-dependent species.
- Managing 11% as old field/grassland/shrubland habitat to provide diversity of habitats within the WMA.
- Managing 4% of the WMA (16% of the forested acres) as young forest (0-10 years) to promote habitat for a suite of species including Ruffed Grouse, Wild Turkey, and American Woodcock.

## ***I. BACKGROUND AND INTRODUCTION***

### **PURPOSE OF HABITAT MANAGEMENT PLANS**

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#### **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 Wildlife Management Areas (WMA) 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

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### LOCATION

Honeyville WMA is located in DEC Region 6, Town of Adams, Jefferson County (Figure 1).

### TOTAL AREA

110 acres

### HABITAT INVENTORY

A habitat inventory of the WMA was conducted in 2015 and is proposed to be updated 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 Honeyville WMA.

Habitat Type	Current Conditions (as of 2015)			Desired Conditions	
	Acres	Percent of WMA	Miles	Acres	Percent of WMA
Forest <sup>a</sup>	21	19%		21	No change
Young forest	0	0%		4	Increase to 4%
Shrubland	12	11%		8	Decrease to 7%
Grassland	4	4%		4	No change
Agricultural land	0	0%		0	No change
Wetland (natural) <sup>b</sup>	0	0%		0	No change
Wetland (impounded) <sup>b</sup>	73	66%		73	No change
Open water	0	0%		0	No change
Other (easements)	0	0%		0	No change
Roads	<1	< 1%	<0.1	<1	No change
Rivers and streams			0		No change
<b>Total Acres:</b>	110	100%		110	

<sup>a</sup> 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.

<sup>b</sup> Wetland acreage does not include forested wetlands, since they are included in the Forest category.

### ECOLOGICAL RESOURCES

#### *Wildlife Overview:*

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

- Beaver, muskrat, mink, weasel
- American Woodcock, Ruffed Grouse, Wild Turkey, marsh birds, waterfowl

- White-tailed deer, cottontail rabbit
- Midland painted turtle, snapping turtle, wood turtle
- Bullfrog, northern leopard frog, green frog, eastern American toad, spring peeper
- Northern water snake, garter snake

***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).<sup>1</sup> 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,<sup>2</sup> NY Reptile and Amphibian Atlas,<sup>3</sup> DEC wildlife surveys and monitoring, and eBird.<sup>4</sup>

Table 2. Species of conservation concern that may be present on Honeyville 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 Kestrel			x
	American Woodcock			x
	Least Bittern		T	
	Pied-billed Grebe		T	x
	Ruffed Grouse			x
Mammals	Indiana myotis (Indiana bat)	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
	Eastern ribbon snake			x
	Smooth green snake			x
	Snapping turtle			x
	Western chorus frog			x
	Wood turtle			HP
Fish	None			
	None			
	None			
Plants	None			

<sup>1</sup> 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>.

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

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

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



### ***Significant Ecological Communities:***

There are no significant natural communities located on Honeyville WMA as identified by the NY Natural Heritage Program (Figure 2). Additional information about significant ecological communities is available in the Honeyville WMA Biodiversity Inventory Final Report (1998) prepared by the New York Natural Heritage Program and in *Ecological Communities of New York State, Second Edition*.<sup>5</sup>

### ***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 Honeyville WMA include:

- One wetland regulated by Article 24 of the Environmental Conservation Law and two 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 to determine impacts.
- One recreational trail located in the southern section of Stand A-1.



Entrance of the foot trail to the impounded wetland on the WMA.

Photo: NYSDEC

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*.<sup>6</sup> 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.

### ***Soils:***

The soil across much of Honeyville WMA is average depth for this area and poorly drained. The small amount of upland soils on the WMA, surrounding the wetland habitat, ranges from well-drained to excessively well-drained. Soil groups include Groton gravelly loam, Palms muck, and Galway silt loam.<sup>7</sup>

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<sup>5</sup> 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>.

<sup>6</sup> Available online at <http://www.dec.ny.gov/outdoor/104218.html>.

<sup>7</sup> 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

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

- Deciduous forest (22%)
- Wetlands (12% combining open water, emergent, and woody wetlands)
- Pasture/hay and grasslands (25%)
- Cultivated crops (21%)
- Development (7%)
- Evergreen forest (1%)
- Mixed forest (1%)
- Early successional shrubland (11%)

Currently, the forested landscape on Honeyville WMA includes no young forest, which is significantly less than DFW's Young Forest Initiative (YFI) goal of managing at least 10% of the forested landscape on most WMAs as young forest.<sup>8</sup> However, some of the shrubland habitat found in Stand A-6 is succeeding into young forest habitat. Management planned for this stand will help improve the young forest habitat. The remaining habitat types on the WMA consist of:

- Forest (19%)
- Wetland (66%)
- Shrubland/grassland (15%)

The forest management proposed in this plan aims to promote good quality habitat through native apple tree release, establishing a healthy mast-producing forest for the future. This type of habitat will create diversity in a surrounding landscape with extensive agricultural practices, and very little forested acreage. This will benefit wildlife and provide recreational opportunities for sportsmen and women.

Nearby conservation lands, several miles to the south and east of the WMA, include Gould's Corners State Forest (2,043 acres) and Tug Hill State Forest (9,521 acres), which are managed by the DEC's Division of Lands and Forests through the Tug Hill North UMP.

## *II. MANAGEMENT STRATEGIES BY HABITAT TYPE*

DEC will continue active management of wildlife habitats on Honeyville 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.

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<sup>8</sup> 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>.

- 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

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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 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.



Northern white cedar forest within Honeyville WMA.

Photo: NYSDEC

Forest management on Honeyville 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. A 1969 Game Management Plan for Honeyville WMA points out that forest management options on the area are limited given the size of the WMA and neighboring land uses. The wetland complex is the highlight of the WMA as it offers hunters and trappers opportunities for waterfowl and furbearers, respectively. Informal access across private land has been used to maintain the dike which is located on the southern end of the WMA.

### MANAGEMENT OBJECTIVES

- Increase young forest from zero to four acres (16% of the forested area) to improve habitat for young forest-dependent wildlife, targeting American Woodcock, Ruffed

Grouse, and Wild Turkey.

- Increase soft mast production of apple and cherry trees within a brushy overgrown area (four acres) to benefit Ruffed Grouse. This will also improve American Woodcock display habitat by creating open areas (see shrubland section).

### **DESCRIPTION OF EXISTING FOREST HABITAT AND TARGET SPECIES**

Honeyville WMA upland forests are primarily white ash, eastern hemlock, and sugar maple (Table 3). The forested wetlands consist of white cedar, black willow, black ash, and silver maple. The few white cedars growing in the northeastern section of the WMA provide cover for Ruffed Grouse and Wild Turkey, and forage for white-tailed deer. Several invasive species are found on the WMA, including buckthorn and honeysuckle. An overview of the habitat types can be found in 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 Honeyville WMA.

<b>Forest Type</b>	<b>Acres (as of 2015)</b>	<b>Desired Acres</b>	<b>Overstory species</b>
Natural forest (mature/intermediate)	10	10	ash, hemlock, maple, cherry
Plantation	0	0	-
Forested wetland	11	11	cedar, willow, ash, maple
Young forest	0	4	-
Young forest (forested wetland)	0	0	-
<b>Total Forested Acres:</b>	21	25 <sup>a</sup>	

<sup>a</sup>The increase in forested acres is due to converting shrubland habitat to young forest.

Target species for young forest include Ruffed Grouse, Wild Turkey, and American Woodcock. These species rely on forest and young forest areas for nesting, foraging, and cover and they will benefit from management that creates the following habitat requirements:

- 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.<sup>9, 10</sup>
- Wild Turkey (in Northern Hardwood Forests):
  - Roosting – Mature hardwoods and softwoods. Adults with poults tend to roost on the ground under large trees with a dense understory of young trees, shrubs, downed trees, rock outcrops, or brushy fields.<sup>11, 12</sup>

<sup>9</sup> 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.

<sup>10</sup> Jones, B. C. et al. Habitat Management for Pennsylvania Ruffed Grouse, Pennsylvania Game Commission. 10 pp.

<sup>11</sup> USDA – NRCS. 1999. Wild Turkey (*Meleagris gallopavo*) Fish and Wildlife Habitat Management Leaflet. 12 pp.

<sup>12</sup> Dickson, J. G. 1992. The Wild Turkey: Biology and Management. National Wild Turkey Federation and USDA Forest Service. Stackpole Books, PA. 480 pp.

- All other Wild Turkey habitat requirements are obtained on neighboring lands adjacent to the WMA.
- American Woodcock:
  - Singing/peenting ground – Open areas from 1 acre to over 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 but also including bare ground and dense ground cover.

### **MANAGEMENT HISTORY**

Two firewood sales occurred on the WMA, one in 1975 and the other in 1978. The 1975 firewood sale had two wind thrown trees removed, while the 1978 sale involved cutting two cords of firewood. Other than these two sales, forest management has not been a goal of previous management activities within the boundaries of the WMA.

### **IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE**

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

- **Management planned for 2017-2026** (Table 4, Figure 6):
  - **Stand A-6** – Seed tree cut four acres of shrubland to release native apple and black cherry trees.

Table 4. Forest management schedule for the ten-year period of this HMP (2017-2026).

Stand	Acres	Size Class	Forest Type		Management Direction	Treatment Type
			Current	Future		
A-6	4	Seedling/Sapling <5" DBH	Brushy Fields	Seedling-Sapling-Natural (Apple/Cherry)	Wildlife	Seed tree

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

- **Stand A-6** (12 acres): sparse apple, black cherry, white ash, and elm trees in a brushy field. The thick brush is primarily buckthorn, honeysuckle, and dogwood with some patches of prickly ash. A seed tree cut will be conducted on four acres in the southwestern part of the stand. A buffer of cover will be retained along the wetland and along the private land bordering the stand. The thick brush and most of the sparse ash and elm trees will be cleared to reduce competition for the remaining apple and black cherry trees. Herbicide will be applied to control invasive species such as honeysuckle and buckthorn. Once the brush has been treated, small groups of hardwoods (e.g., oak, apple) and softwoods (e.g., spruce) will be planted. These management activities will



improve wildlife habitat by increasing mast production. Retention of the riparian buffer around the impounded wetland will reduce erosion and provide sediment control.

### **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.

<b>Resource</b>	<b>Guidance Document <sup>13</sup></b>
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:***

The existing forested habitat will be retained as a buffer around the wetland complex to protect the wetland from excessive nutrient runoff from neighboring agricultural activities. Retaining the existing forest will also protect roosting and foraging habitat for Indiana and northern long-eared bats.

#### ***Forest Health Considerations:***

The forest habitat on Honeyville WMA is in moderately good health, considering the poorly drained soils across much of the area. Access to most of the forest would require crossing either private land or wetland habitat. Due to the limited forest habitat on the WMA and surrounding landscape, and the access challenges, little forest management is planned for the area.



Typical forest and an old growth sugar maple at Honeyville WMA.

Photo: NYSDEC

<sup>13</sup> All guidance documents referenced here are available online at <http://www.dec.ny.gov/outdoor/104218.html>.

### ***Pre- and Post-treatment Considerations:***

Mechanical or chemical methods will be used to treat and control invasive species and interfering brush in the managed stands, as directed by the YFI team, WMA land manager, or Regional Wildlife Manager. Several invasive plants are located in or near the forested areas, including honeysuckle and buckthorn.

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 responses have been achieved by the management outlined above, pre- and post-management assessments will be conducted in accord with guidelines in the *Young Forest Initiative Monitoring Plan: 2016-2025*.<sup>14</sup> 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 (i.e., planting) regeneration has been securely established. YFI wildlife target species selected for Honeyville WMA, which may be assessed to determine response to management, include:

- Ruffed Grouse
- Wild Turkey
- American Woodcock



Jack-in-the-pulpit at Honeyville WMA.

Photo: NYSDEC

## **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. Shrublands are typically characterized by >50% canopy cover of shrubs and <25% canopy cover of trees.

### **MANAGEMENT OBJECTIVES**

- Maintain eight acres of shrubland habitat for shrubland obligate species and other wildlife.

### **DESCRIPTION OF EXISTING SHRUBLAND HABITAT AND TARGET SPECIES**

There are 12 acres of shrublands on Honeyville WMA, which consist primarily of buckthorn and honeysuckle with sparse wild apple and white ash trees. A four acre seed tree harvest intended

<sup>14</sup> New York State Department of Environmental Conservation (NYSDEC). 2016. Young Forest Initiative Monitoring Plan 2016-2025. Albany, NY. Available online at: <http://www.dec.ny.gov/outdoor/104218.html>



to release apple trees and convert a portion of the stand to young forest will provide greater soft mast production to better support wildlife including several of the YFI target species:

- Ruffed Grouse
- Wild Turkey
- American Woodcock

### **MANAGEMENT HISTORY**

Limited management has occurred in the shrubland habitat on the WMA, other than occasional apple tree pruning and brush clearing.

### **IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE**

- **Management planned for 2017-2026** (Figure 6, Table 6):
  - Convert four acres of thick shrubs and brush in Stand A-6 to young forest habitat (see forest section, above, for more information).
  - Maintain existing shrubland through periodic brush clearing.

### **BEST MANAGEMENT PRACTICES**

Brush hogging or hydro-axing will be conducted primarily 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 Ruffed Grouse spring drumming surveys and spring Wild Turkey gobbling surveys to document any response to recent habitat management for shrublands and young forest. Also, American Woodcock singing ground surveys will be performed in the surrounding area.

## **GRASSLAND AND OTHER OPEN SPACE**

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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.

### **MANAGEMENT OBJECTIVES**

- Maintain the existing habitat (four acres) to prevent succession to shrubland habitat to provide nesting areas for Wild Turkey.
- Monitor fields for invasive species and eradicate where feasible.



Grassy area on Honeyville WMA.

Photo: NYSDEC

## **DESCRIPTION OF EXISTING GRASSLAND HABITAT AND TARGET SPECIES**

There are four acres of grasslands within Honeyville WMA (Figure 6). Grasslands adjacent to wetlands provide important habitat for waterfowl and marsh bird nesting. While this area is not large enough to provide optimal habitat for grassland species, it does provide important open habitat for pollinators (insects) and wildlife such as American Woodcock and Wild Turkey. The grassland habitat on the WMA consists of a mix of cool season grasses with areas of thick thatch with various goldenrod species.

Species that benefit from grassland best management practices include:

- Wild Turkey
- American Woodcock

## **MANAGEMENT HISTORY**

Past management focused on the maintenance of grassland habitat through rotational mechanical mowing based on presence of woody stem species. At times, the entire grassland area has been mowed annually or every two years.

## **IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE**

- **Management planned for 2017-2026** (Figure 6):
  - Continue mowing four acres of grassland fields (Stand A-4) on an annual rotation as required to prevent woody stem species from succeeding.

## **BEST MANAGEMENT PRACTICES**

For more detailed information and recommendations see *A Plan for Conserving Grassland Birds in New York*.<sup>15</sup> In particular, refer to the plan for species-specific habitat requirements and detailed recommendations regarding grassland management and restoration techniques.

### ***General Management Recommendations***

Management of fields should occur after July 15<sup>th</sup> each year to avoid impacts to nesting birds.

## **MANAGEMENT EVALUATION**

None.

## **AGRICULTURAL LAND**

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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.

## **MANAGEMENT OBJECTIVES**

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

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<sup>15</sup> 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.

## **WETLANDS (NATURAL AND IMPOUNDED)**

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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 73 acres of impounded emergent, scrub-shrub, and open water wetlands as they currently exist.
- Provide habitat for wetland-dependent wildlife such as waterfowl, Black-crowned Night-Heron, Pied-billed Grebe, muskrat, and beaver by maintaining the impoundment.
- Prevent woody vegetation from growing on the impoundment dikes.
- Maintain the control structure and earthen dike for water level management.

### **DESCRIPTION OF EXISTING WETLAND HABITAT AND TARGET SPECIES**

There are 73 acres of wetlands within Honeyville WMA. The impounded wetland is of great value to migratory waterfowl, hunters, and trappers within Jefferson County. The wetlands are impounded with one water control structure that benefits a wide range of wetland dependent species (Figure 3). The wetlands are diverse and provide habitat for species such as:

- Least Bittern, Black-crowned Night-Heron, Pied-billed Grebe, Virginia Rail
- Migratory waterfowl
- Beaver, muskrat
- Midland painted turtle
- Bullfrog, northern leopard frog, eastern American toad, spring peeper

### **MANAGEMENT HISTORY**

Management of the impoundment has historically focused on maintaining water flow through the control structure to keep water levels below the dike and limiting muskrat damage to the dike.

### **IMPLEMENTATION PLAN AND ANTICIPATED SCHEDULE**

- **Management planned for 2017-2026:**
  - Continue routine maintenance on the dike so that it functions to impound water (i.e., mowing dike, beaver debris removal).

### **BEST MANAGEMENT PRACTICES**

Date restrictions for water level management or equipment in wetlands will be followed to protect species such as Pied-billed Grebes (May 1<sup>st</sup> – July 31<sup>st</sup>). Protect the shallow emergent marshes to benefit Least Bitterns, by limiting mechanical access to these areas.

### **MANAGEMENT EVALUATION**

None unless the WMA is selected for the Marsh Monitoring Program.

## OPEN WATER (WATERBODIES AND WATERCOURSES)

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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., Upper Lake, Lower Lake).

### MANAGEMENT OBJECTIVES

The open water habitat within the impounded wetlands is included in the wetland section, above. There is no other open water habitat on the WMA or any plan to develop such habitat.



## HABITAT MANAGEMENT SUMMARY

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In summary, Table 6 lists the habitat management actions planned for Honeyville 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 recommended for Honeyville WMA, 2017-2026.

Habitat	Management Action	Acres	Timeframe
Shrubland	Release apple trees in Stand A-6 by utilizing a seed tree cut.	4	2017-2026
Shrubland	Maintain shrubland through periodic brush clearing.	8	As needed
Grassland	Continue mowing grassland fields on an annual rotation.	± 4	Annual
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.	73	Every 5 to 10 years



### III. FIGURES

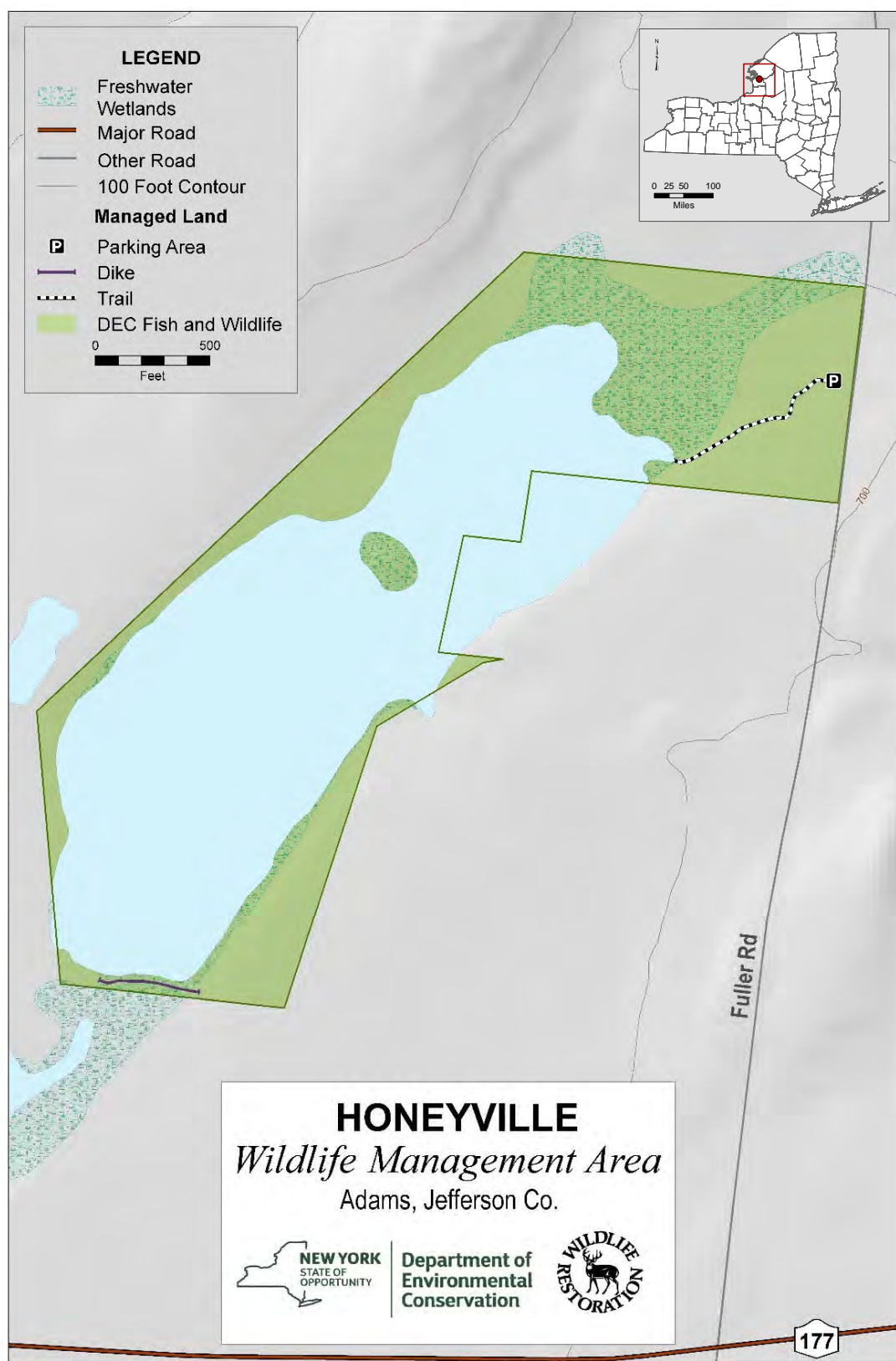


FIGURE 1. Location and access features at Honeyville WMA.

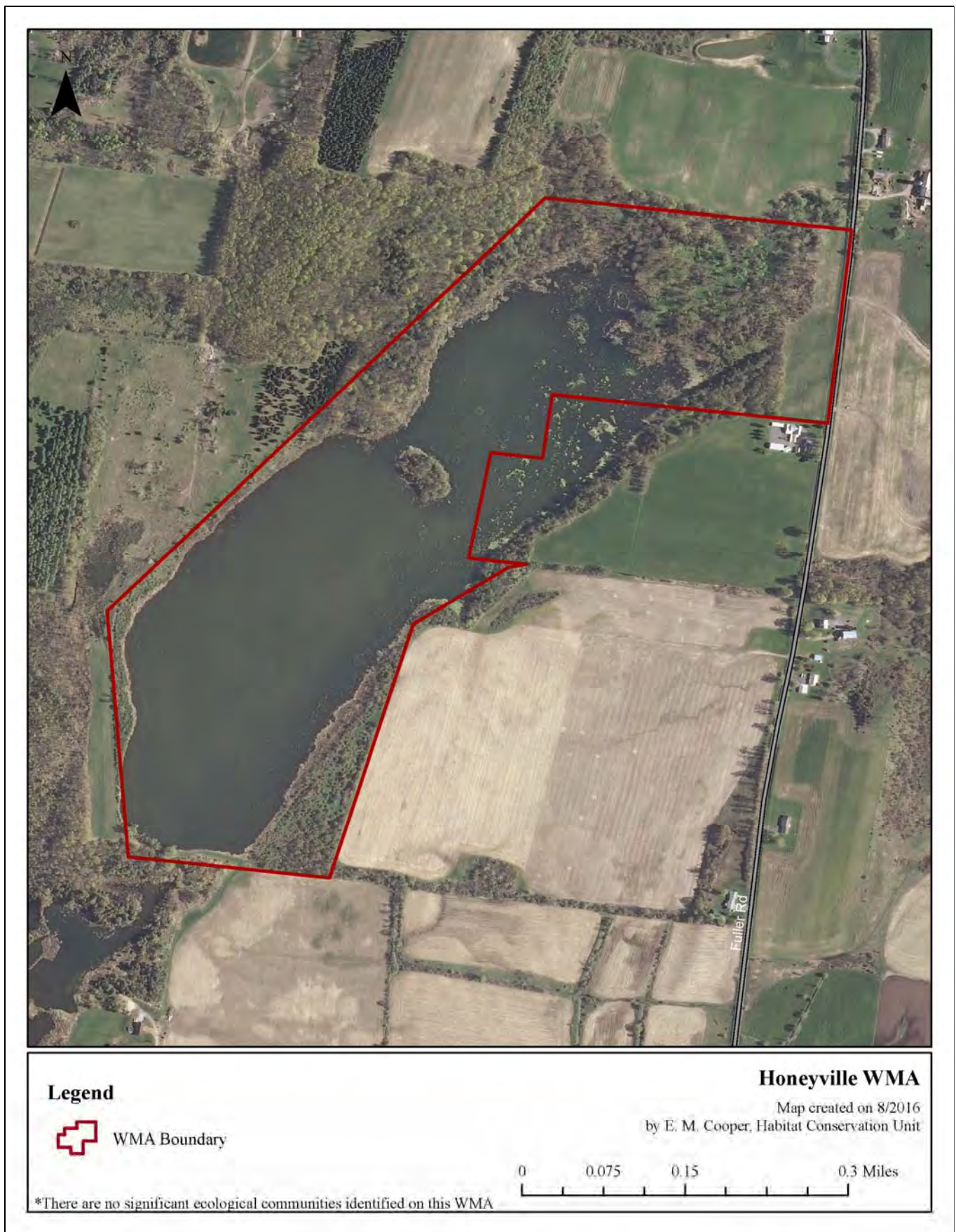


FIGURE 2. There are no significant ecological communities on Honeyville WMA. Data from the NY Natural Heritage Program.



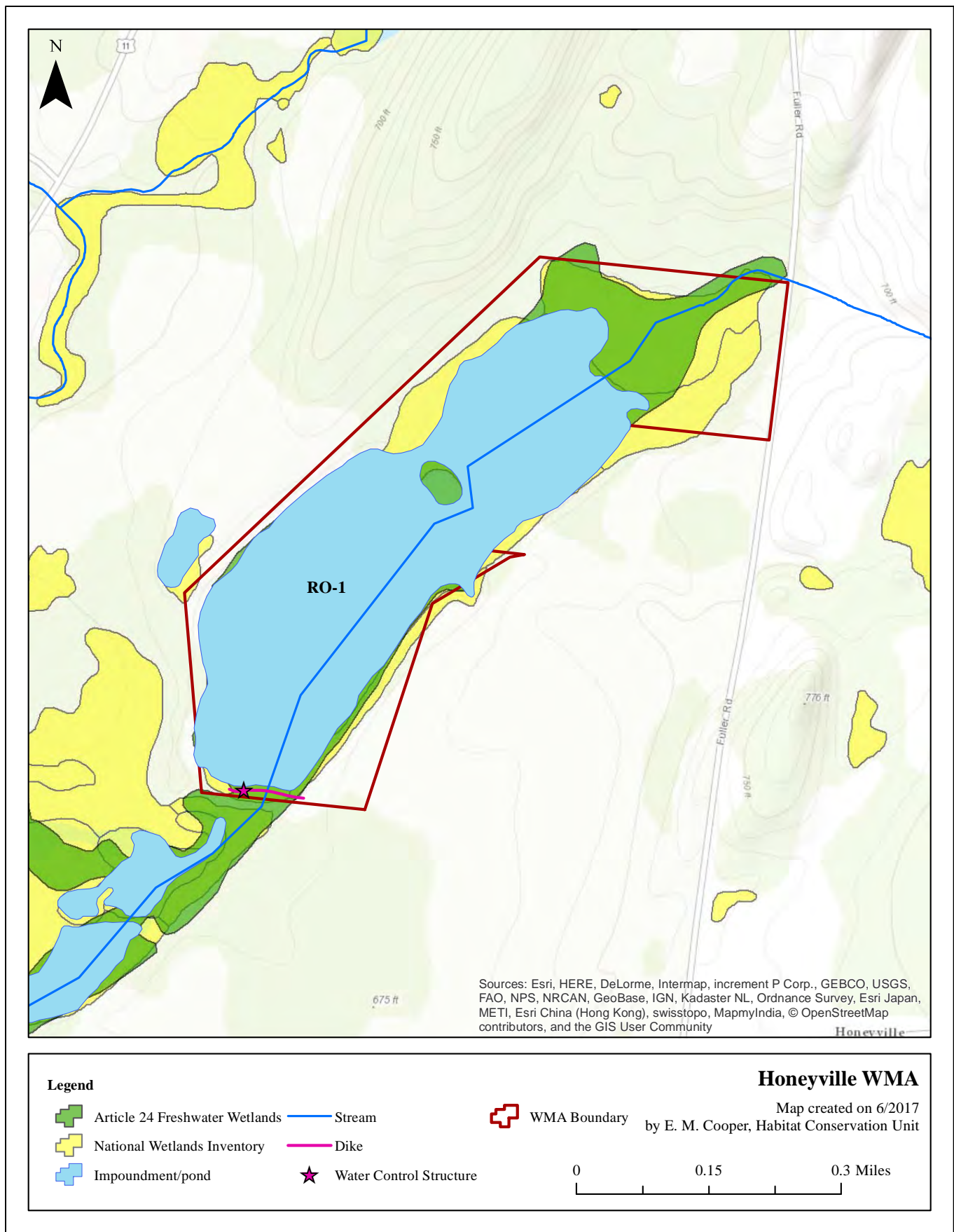


FIGURE 3. Wetlands, open water, and streams of Honeyville WMA. Note: Wetland boundaries are not exact and may not be used for regulatory purposes without a current delineation.

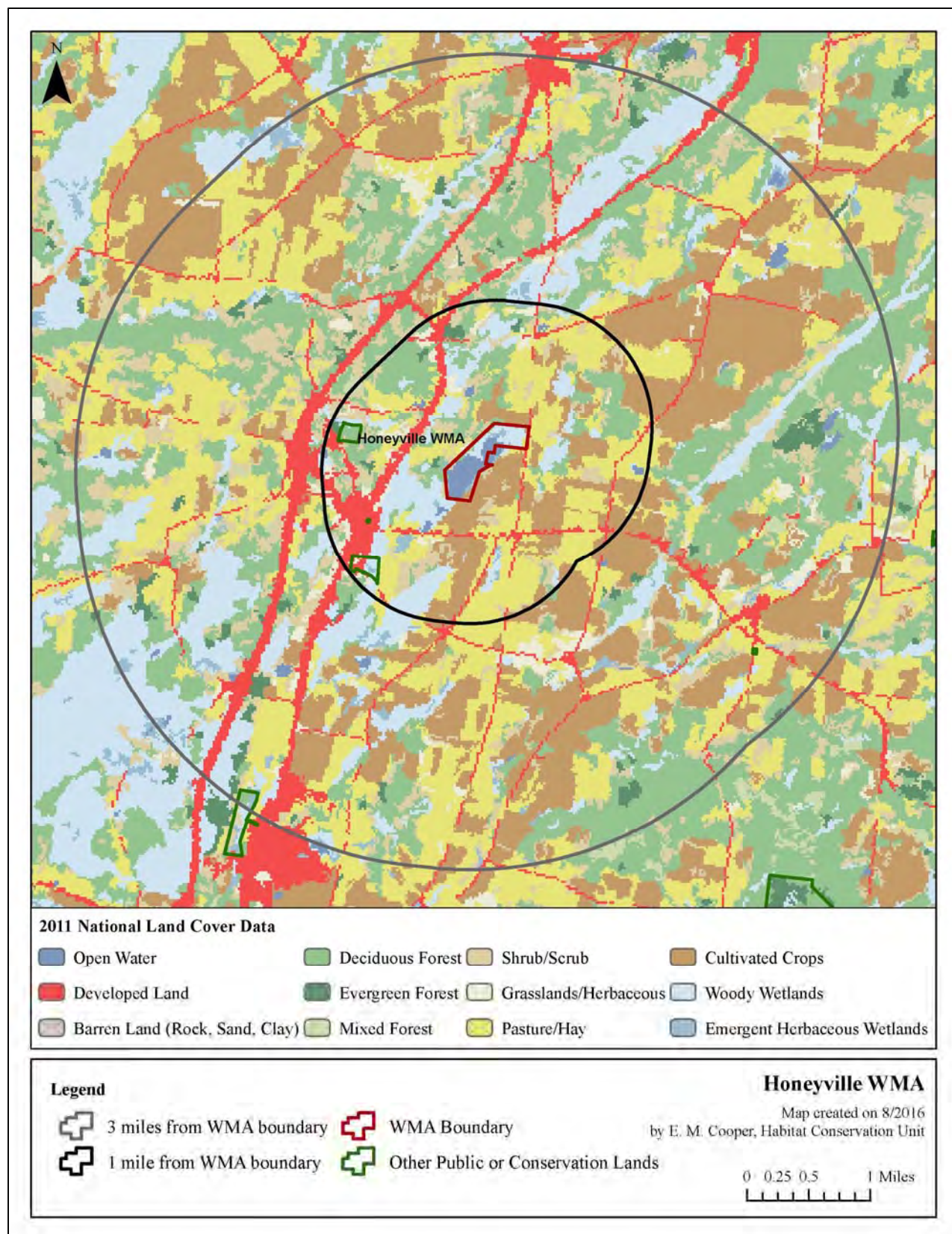


FIGURE 4. Land cover types and conservation lands in the landscape surrounding Honeyville WMA. Conservation lands are from the NY Protected Areas Database available online at <http://www.nypad.org/>. Land cover types are from the 2011 National Land Cover Data (NLCD) and differ from the habitat types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

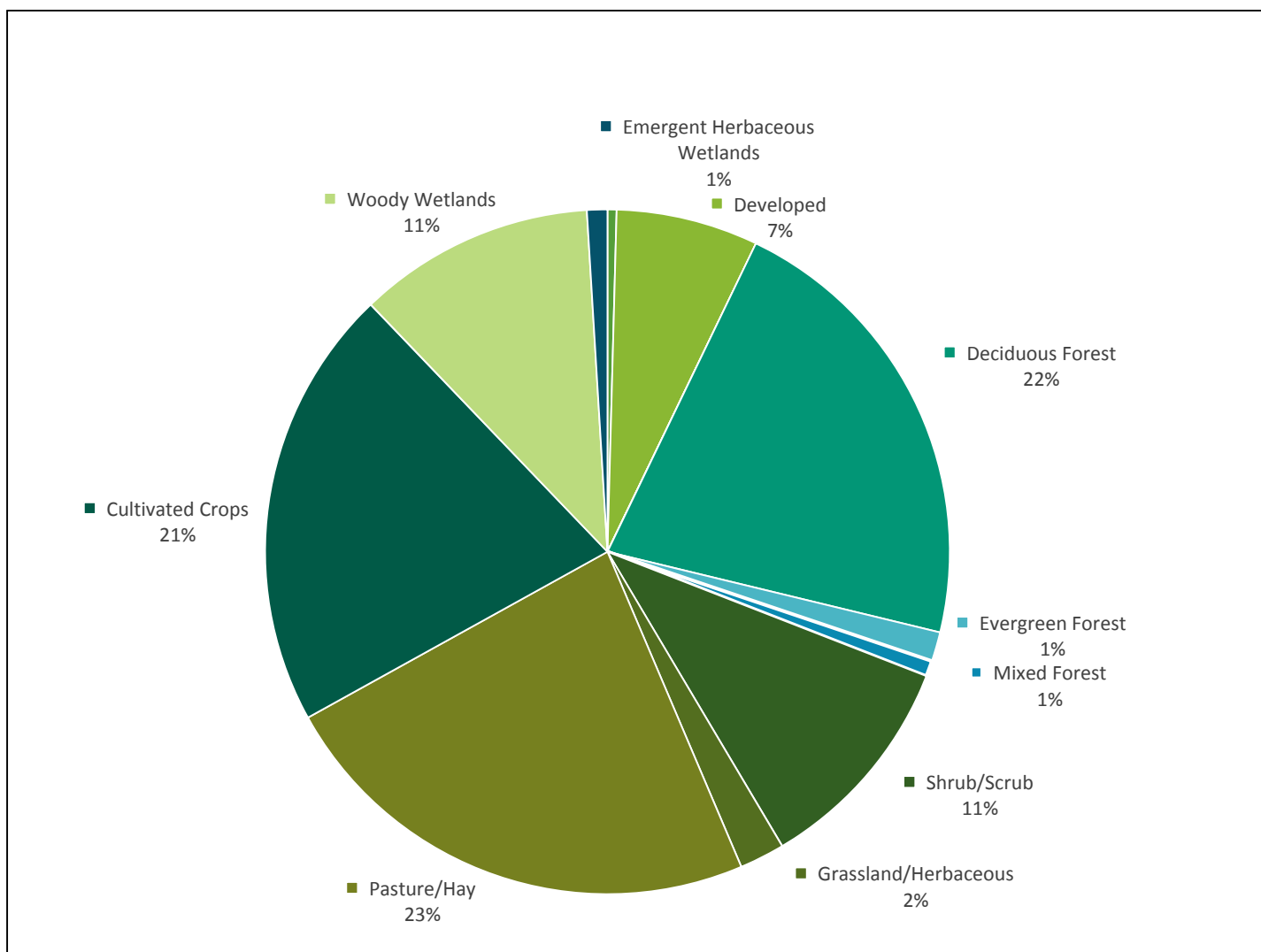


FIGURE 5. Percent cover of land cover types within three miles of Honeyville WMA. Land cover types are from the 2011 National Land Cover Data (NLCD) and differ from the habitat types used in the WMA habitat inventory. NLCD definitions are available online at <http://www.mrlc.gov/nlcd2011.php>.



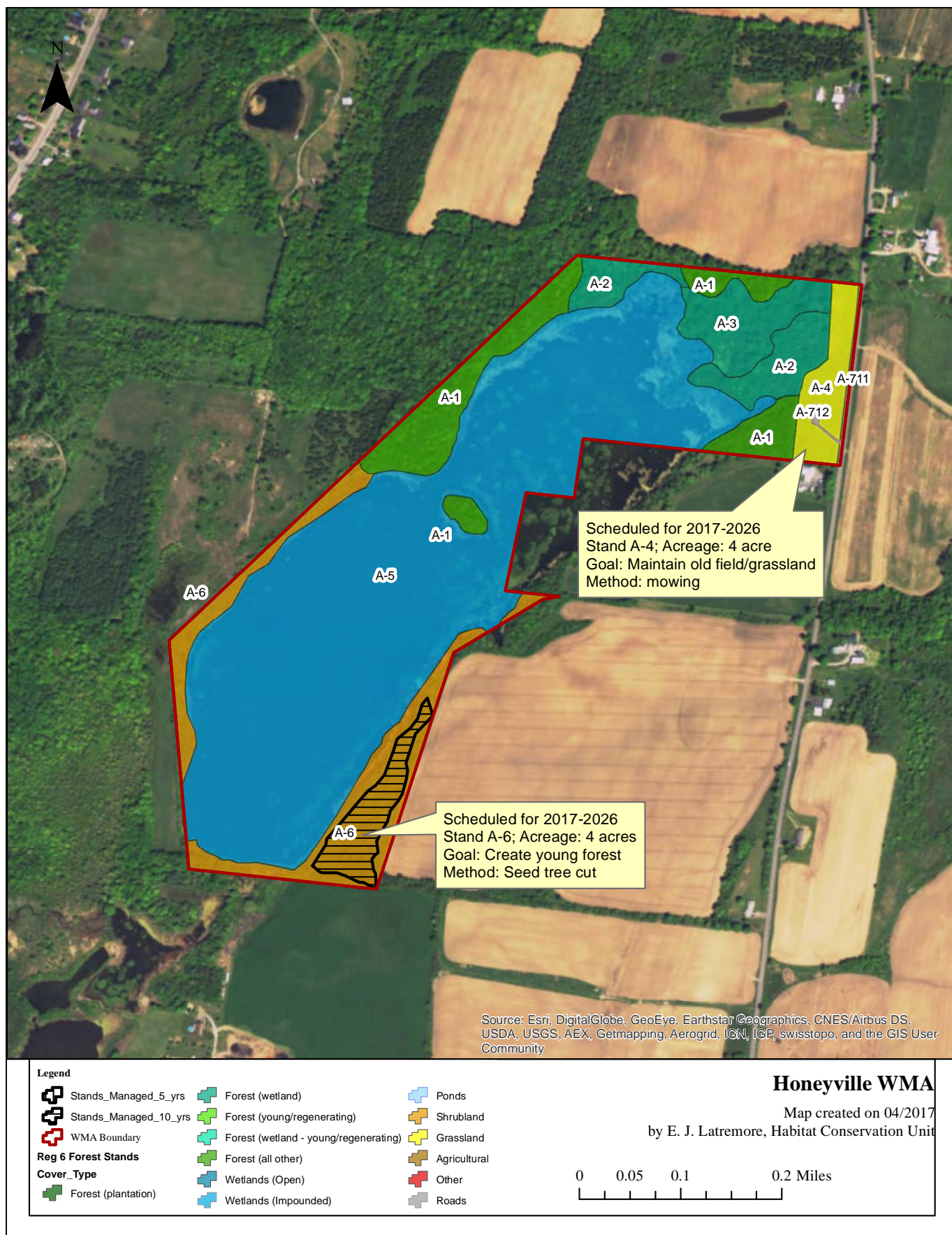


FIGURE 6. Habitat types and locations of proposed management on Honeyville WMA. Numbers indicate the stand number from habitat inventory.

## IV. APPENDICES

### APPENDIX A: DEFINITIONS

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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-leaved, 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 Honeyville WMA include: American Woodcock, Wild Turkey, 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 (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](http://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

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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

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### 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:**

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**Central Office Lands and Forests Staff**

**Date**

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**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**

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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.