

# Woodsom Farm Park & Amesbury Town Forest

Draft Land Stewardship Recommendations

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# Mass Audubon

- Protects 45,000+ acres
- Making nature accessible to all
- >1/2 million visitors / year
- 21 nature centers
- Nature education for 250,000 kids & adults/yr.
- Conservation research
- Advocacy
- 160,000 members



# Ecological Extension Service

- Assists conservation partners
  - Cities, towns, land trusts, state & federal agencies, etc.
- Sharing our experience in land stewardship since 1992

# Acknowledgment of Land & History

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We acknowledge that Amesbury is located on the traditional, contemporary, and unceded territories of the Pentucket, a branch of the Pennacook-Abenaki people. These lands were taken from the Indigenous people, creating a legacy of injustice that persists to this day.



We acknowledge that Indigenous stewardship of the land we now call Massachusetts kept its ecological and human communities vibrant, strong, and interconnected for thousands of years. And to this day Indigenous peoples, including the 37,000 individuals who currently reside in Massachusetts, are still at the forefront of climate action, ecological stewardship, and environmental justice.

Mass Audubon is committed to the work of learning, listening, and evolving so that someday soon we may live in right relationship with the people who have been the rightful stewards of this land for thousands of years. **How we care for the land will determine how well it will sustain us and our descendants.**



- It is not enough to acknowledge, we need to be good stewards
- Good land stewardship provides
  - The air we breathe
  - The water we drink
  - The food we eat
  - Sequestration and storage of carbon
  - Climate moderation
  - Protection from flooding
  - Re-creation that renews our spirits & helps maintain our health
  - The lumber we use to build our shelters
  - Filtration and decomposition of our wastes, &
  - Habitats for a diversity of plants and animals



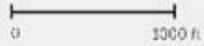
# WOODSOM FARM

Road Trail

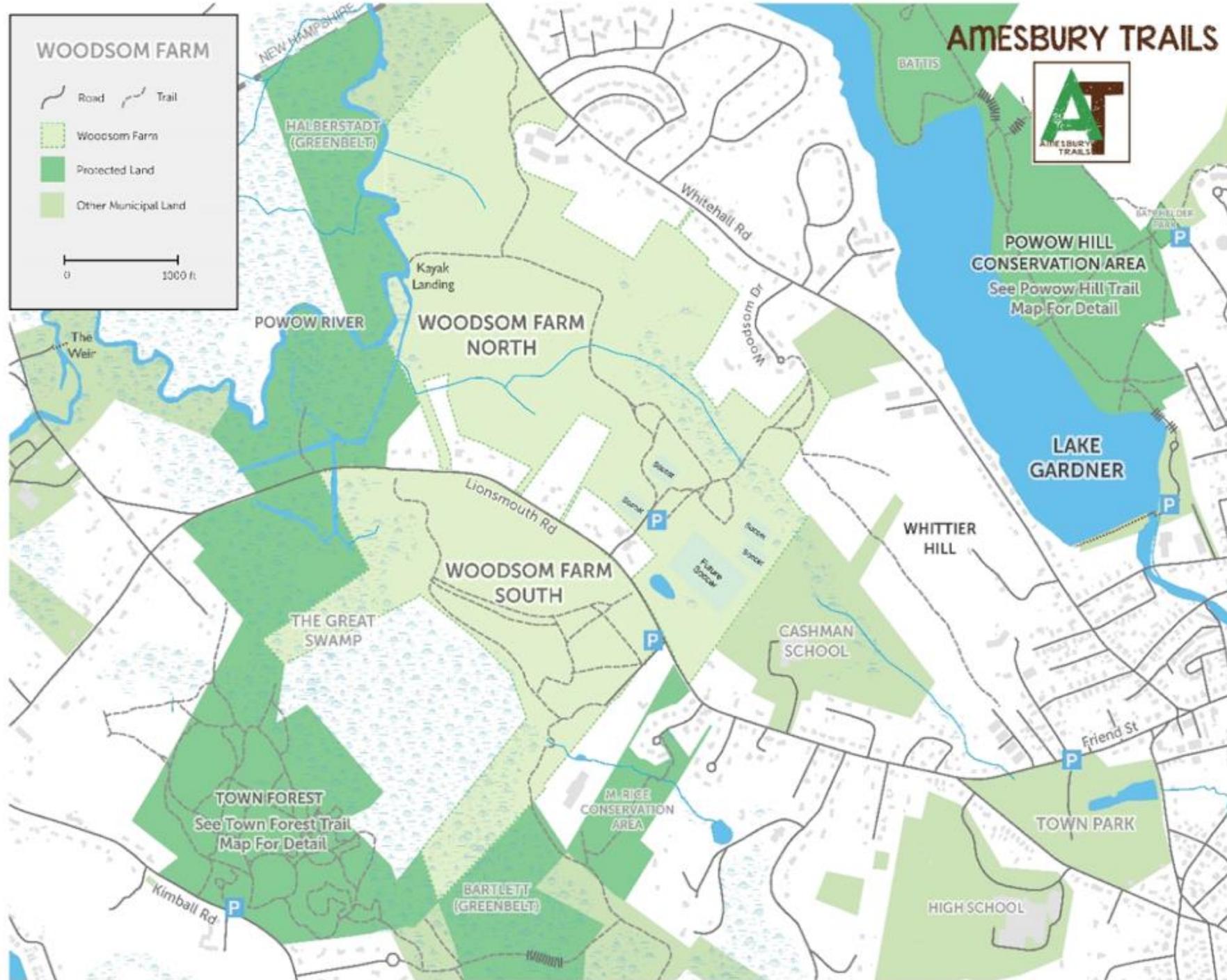
Woodsom Farm

Protected Land

Other Municipal Land



# AMESBURY TRAILS





# Woodsom Farm Park

- Purchased by City in 1989
- 350 acres
- Declared “city park” in 2019
- Many popular uses
  - Nature observation
  - Sledding
  - Hiking
  - Soccer
  - Dog walking
  - Cross-country skiing/running, &
  - Various organized events including 4<sup>th</sup> of July celebration



# Town Forest

- Established in 1938
- 70 acres, connected to much more including Essex County Greenbelt's Bartlett Preserve
- 300-foot-long boardwalk connection to Woodsom Farm Park
- Many popular uses
  - Nature observation
  - Hiking
  - Dog walking, &
  - Cross-country skiing



# Natural Assets

- Fields
- Forests
- Wetlands
- Views
- Varied topography
- Large areas
- Close to center of town
- Opportunities to experience nature



# Ecological Features

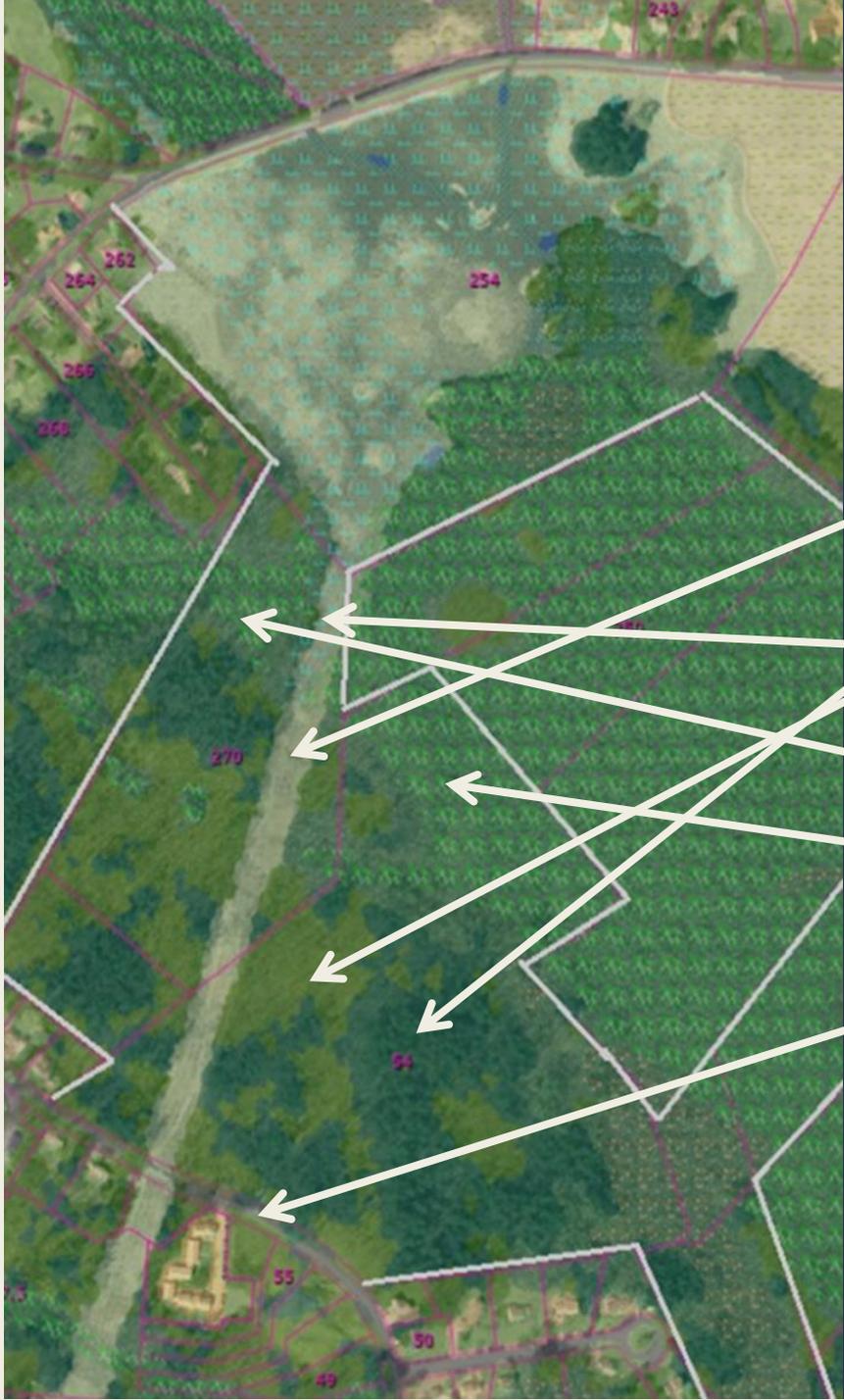
- Geology
  - Berwick Formation formed 420 million years ago
- Laurentide Ice Sheet (12,000 years ago)
  - Erratics, moraines,
  - Drumlins (like Whittier Hill & Powow Hill), &
  - Eskers (like along Kimball Road & in Town Forest)
- Soils
  - Prime agricultural soils
- Natural Communities

# Natural Communities



- Woodsom Farm
  - Cultural Grasslands (22 acres)
  - Hayfields (160 acres)
  - White pine forest (>12 acres)
  - Oak-hickory forest (12 acres)
  - Shallow marsh (68 acres)
  - Shrub swamp (5 acres)
  - Forested wetlands (26 acres)
  - Developed (12 acres – soccer fields & parking)

# Natural Communities



- Town Forest
  - Shrubland (5 acres under transmission line)
  - White pine forest (22 acres)
  - Oak-hickory forest (16 acres)
  - Shallow marsh (1 acre under transmission line)
  - Shrub swamp (5 acres)
  - Forested wetlands (14 acres)
  - Developed (1 acre – parking area)



# Grasslands

- Hayfields & Cultural Grasslands
- Maintained by mowing
- Of conservation interest for grassland birds & pollinators
- Important for
  - **American Kestrels**
  - **Northern Harriers**
  - Snowy Owls
  - **Bobolink**
  - **Eastern Meadowlark**
  - Snow Buntings, &
  - Short-eared Owls
- 182 acres



# Oak-hickory Forest

- Deciduous & evergreen trees averaging about 30'- 60' high
- **Black oak, other oaks, black cherry, & red cedar** are common
- Often include **greenbrier, poison ivy, Virginia creeper, & grape**
- Common birds include Eastern towhee, **gray catbird, common yellowthroat, ovenbird, & black-and-white warbler**
- 28 acres



# White Pine Forest

- **White pine (>75% cover)**
- **White oak, red oak, red maple, & early successional trees such as birches and aspens**
- **Black elderberry, black cherry, & maple-leaved viburnum**
- **Birds include Blackburnian warblers, ovenbird, yellow warbler, & Cooper's hawk**
- **34 acres**



# Forested Wetlands

- **Red maple** is dominant
- **Yellow birch, black gum, white ash, white pine, eastern hemlock, & white oak**
- **Atlantic white cedar** occurs in Great Swamp
- Common plants include **sweet pepperbush, swamp azalea, greenbriers, highbush blueberry, winterberry, skunk cabbage, & spicebush**
- Habitat for many wide-ranging wildlife species
- 40 acres



# Shallow Emergent Marsh

- Short grasses, sedges, & rushes with scattered forbs
- Often include **sensitive fern**, marsh fern, **St. John's-wort**, **Joe-Pye-weeds**, bonesets, & low shrubs such as **alder & spiraea**
- Excellent habitat for muskrats, leopard, pickerel, green, & bull frogs, & some vernal pool obligate species, such as **wood frogs**
- 69 acres



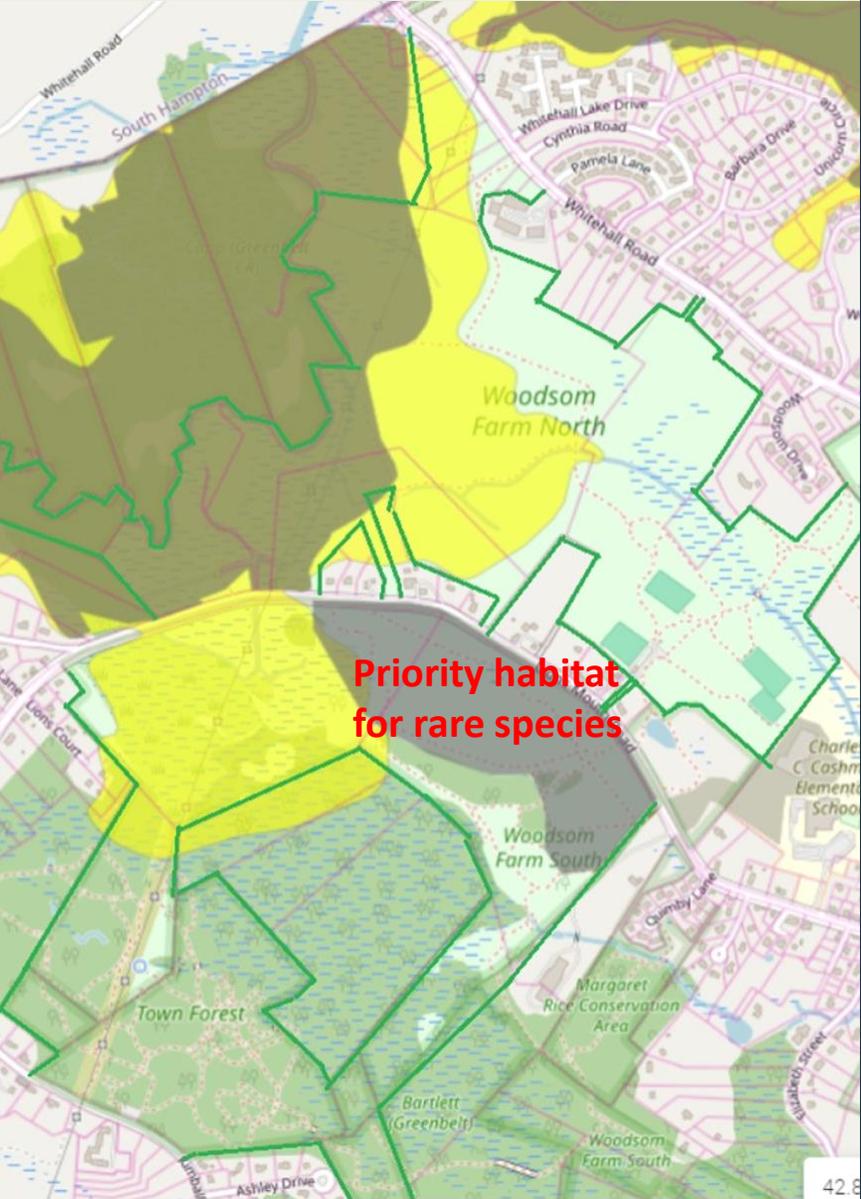
# Shrub Swamp

- Shrubs include **speckled alder**, smooth alder, **meadowsweet**, steeplebush, buttonbush, **maleberry**, swamp azalea, silky dogwood, etc.
- Other plants may include **arrowhead**, **skunk cabbage**, **cinnamon fern**, **sensitive fern**, royal fern, marsh fern, & sedges
- Migratory birds use dense thickets as nesting habitat, many rare & common moth species feed on the variety of shrubs
- 10 acres



# Shrubland

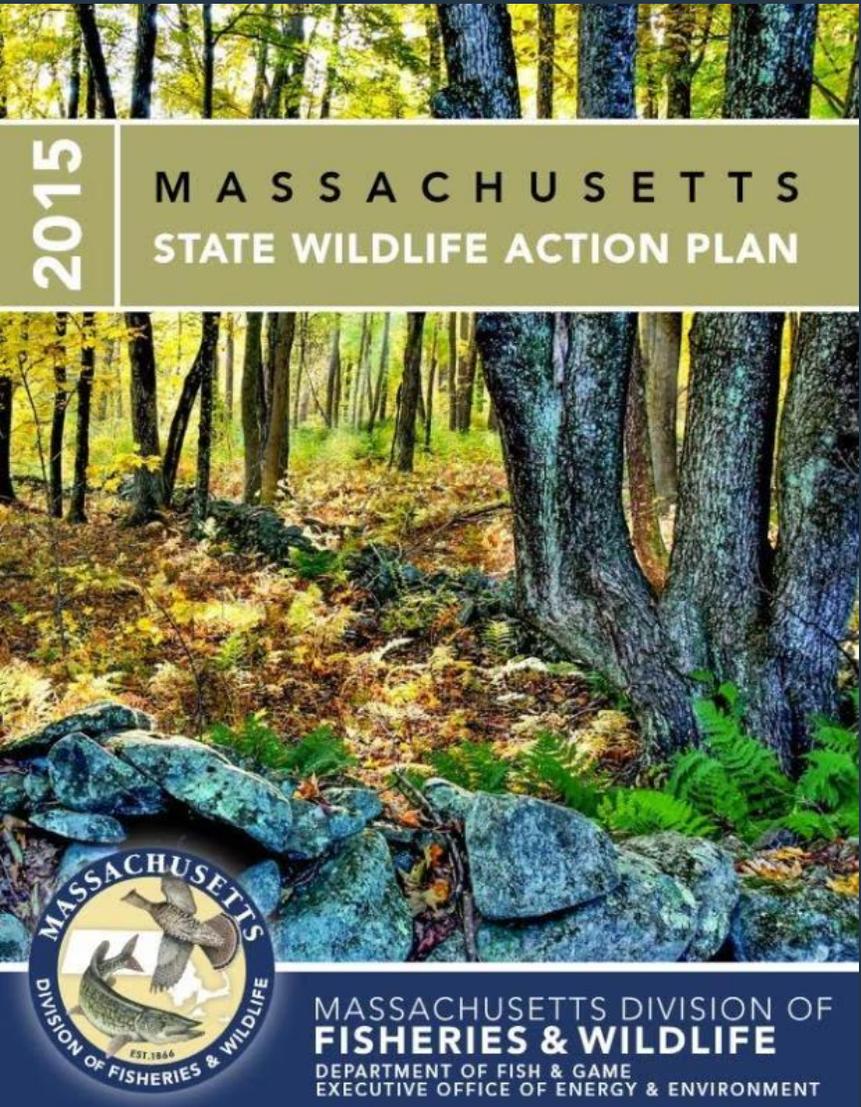
- Area under transmission lines
- Maintained by utility
- Declining habitat type – 5% of forestland in state
- Dominated by pioneer species that provide food and cover for wildlife
- Birds include chestnut-sided warbler, **gray catbird**, Eastern towhee, indigo bunting, prairie warbler, etc.
- Most important habitat for many rare and endangered lepidoptera



# BioMap Areas

- Project of The Nature Conservancy & MassWildlife
- Identifies lands most important for maintaining biological diversity
- Core Habitat
- Critical Natural Landscape
- Both enhance connectivity and resilience

Core Habitat = grey  
Critical Natural Landscape = yellow



# State Wildlife Action Plan

- Required by Congress
- Identifies 570 Species of Greatest Conservation Need (**SGCNs**)
- 24 habitats that support these species – 8 occur on these sites
- Important information to guide conservation efforts



# Wildlife

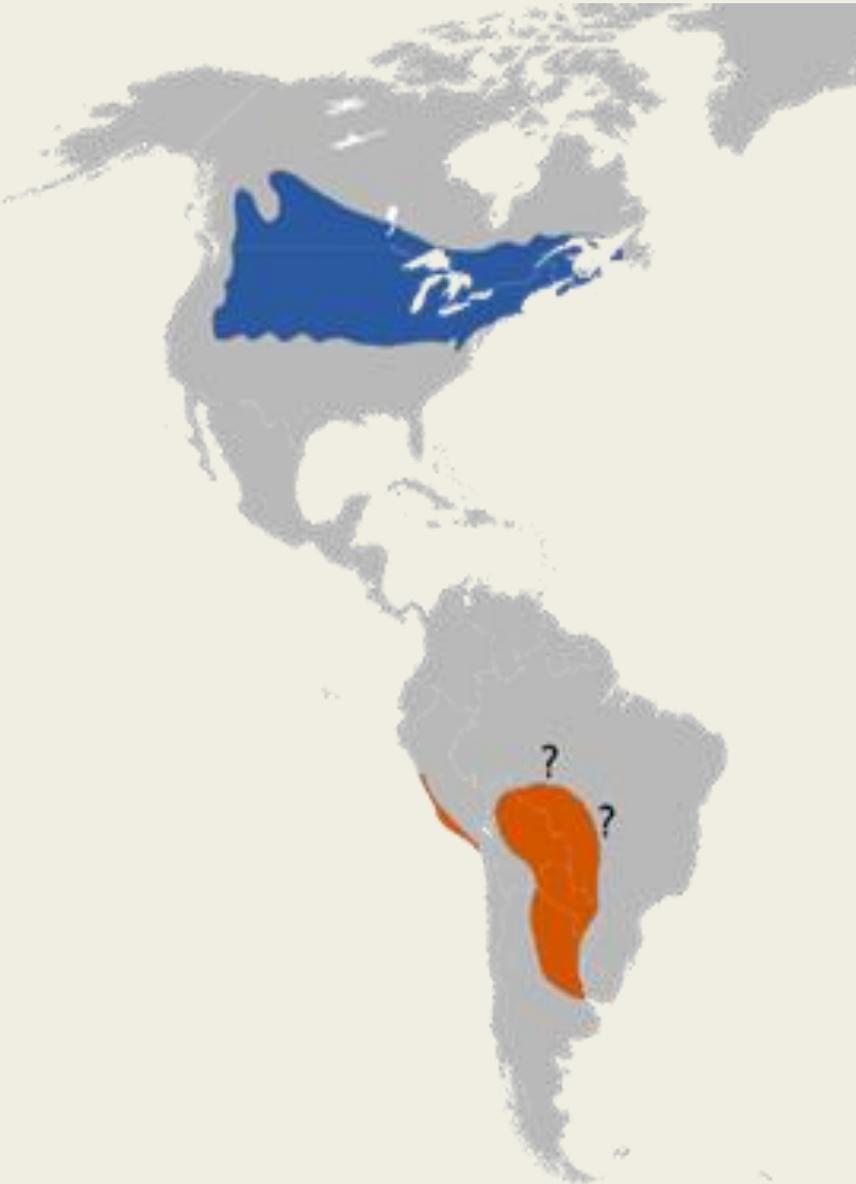
- Powow River corridor is a BioMap Core Habitat & much of Woodsom Farm is Critical Natural Landscape
- State Wildlife Action Plan (SWAP) lists many of the species recorded at these sites as Species of Greatest Conservation Need (SGCN)
- Birdwatchers have reported 135 species of birds – 22 are SGCNs
- Habitats for many other species of plants and animals



# Wildlife

- Mass Audubon 2008-2009 study found Woodsom Farm to be “**without doubt among the most important breeding sites in the state**” for **bobolinks**
- Also, likely one of top 5 breeding sites for **eastern meadowlark**
- One of top 10 breeding sites for **savannah sparrows**

# Bobolinks



- Declining
- Breed only in unforested areas across northern US and southern Canada
- 99% of original prairie has been converted to farmland
- Prefer **large** fields with a mixture of
  - Grasses
  - Legumes
  - Wildflowers
  - Insects & seeds to feed their young
- Migrate 10,000 miles per year



# Amphibians & Reptiles

- One certified vernal pool at Town Forest
- 23 species likely in Amesbury vicinity
- **Spring peeper**, and **wood frog** have been recorded for these properties
- Likely to occur at these sites
  - American toad, bullfrog, common snapping turtle, Eastern garter snake, Eastern milk snake, four-toed salamander, Fowler's toad, green frog, & several other species
- An inventory would be a good community science project



# Mammals

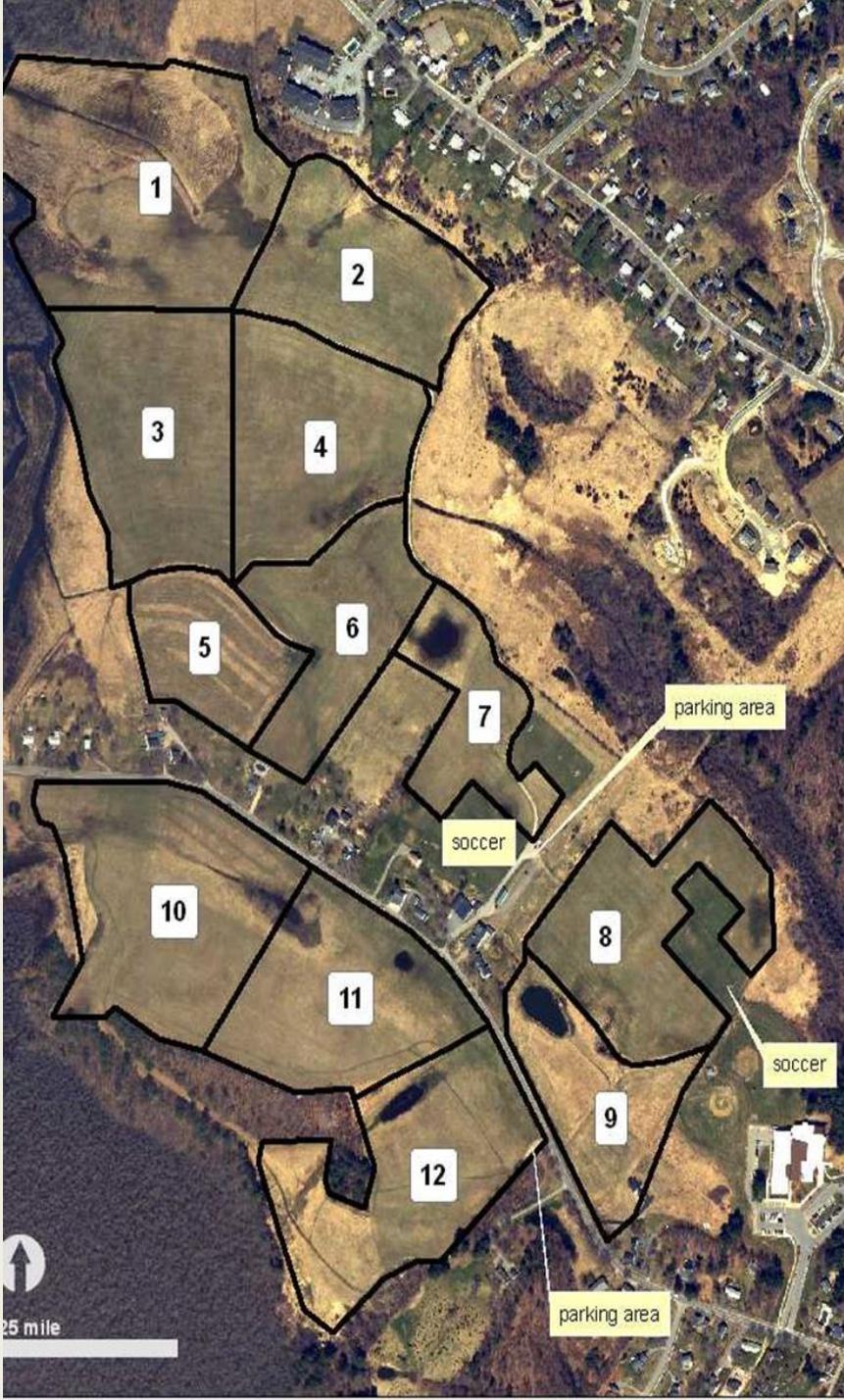
- Sites provide habitat for variety of species
- Thirteen species have been recorded including
  - **American beaver**
  - **White-tailed deer**
  - **Common racoon, &**
  - **Bobcat** (nearby)



# Insects

- Butterflies, bees, & other insects pollinate wildflowers & are important sources of food for many mammals & birds
- Sixty-four species reported
  - 7 wasps & hornets
  - 13 butterflies
  - 6 moths
  - 12 dragonflies/damselflies
- 80% of world's crop species require pollination to set seed

# Past Management



- Generally followed MassAudubon 2017 recommendations
  - Mow most fields after Aug. 15 at the earliest (except for areas used for 4<sup>th</sup> of July) & before Sept. 15
  - Maintain numerous “dogs on leash” signs between May 1 & Aug. 15

May

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			



# Stewardship Recommendations

- Active recreation
  - Individual or group activities
  - Organized & competitive
    - Field sports, biking, running, etc.
  - May have adverse effects on nature
- Passive recreation
  - Individual or small group activities
  - Usually not organized or competitive
    - Birdwatching, snowshoeing, walking, etc.
  - Generally compatible with nature
- Not every site needs to accommodate both



# Stewardship Recommendations

- Goals & objectives (2020-2027 OS&RP)
  - Preserve & enhance natural resources
    - Increase resilience to effects of climate change
    - Protect water supply
    - Expand opportunities for passive & active recreation
  - Maintain & enhance recreational facilities
  - Improve access & connectivity
  - Improve collaboration to improve stewardship



# Stewardship Recommendations

- Goals & objectives (2023 Principles & Policies for Stewardship of Conservation Land)
  - Identify & protect sensitive habitats & species (e.g. BioMap areas)
  - Minimize spread of invasive species
  - Increase public education about natural & cultural resources
  - Create use regulations consistent with goals



# Stewardship Recommendations

- Special attributes of Woodsom Farm (3/27/2024 Forum)
  - Large size
  - Treasured agricultural landscape
  - Active recreational area
  - Use for city-wide events
  - Ecologically sensitive areas
    - State-wide importance



# Stewardship Recommendations

- Not every area should be treated the same
- “Zone” Woodsom Farm into 2 areas
  - Recreation zone
  - Conservation zone
- Mowing plan to preserve agricultural landscape
- Improve public education



# Climate Change Effects

- More hot days & days with degraded air quality
- More erosion, blowdowns, & flooding impacts on trails
- More storm associated risks
- Effects on species composition
- Increase in non-native invasive pests
- Increase in vector-borne illnesses



# Increase Resilience

- Reduce non-climate stressors
  - Control invasive plants
- Restore form & function
  - Remove a dam to promote fish spawning
- Increase complexity
  - Increase diversity & micro-climates
- Create linkages
  - Connect to nearby lands & create corridors



# Non-native Invasive Plants

- Seventy-two introduced plant species categorized as “invasive”, “likely invasive”, or “potentially invasive”
- Why are invasive plants a problem?
  - Can out-compete, displace, & kill native species
  - Grow fast & produce a lot of seeds
  - Often first to leaf out in spring, & last to lose leaves in fall
  - Use up moisture & nutrients that are then not available for native plants
  - Lack insects or diseases of their place of origin that might keep them in check



# Non-native Invasive Plants

- Non-native invasive plants at Woodsom Farm & Town Forest
  - Oriental bittersweet
  - Autumn olive
  - Winged euonymus
  - Garlic mustard
  - Japanese knotweed
  - Multi-flora rose,
  - Honeysuckles, &
  - Buckthorns

# Woodsom Farm “Zones”



- Recreation Zone (80 acres)
  - Managed by Recreation Commission
  - Active recreation
- Conservation Zone (270 acres)
  - Managed by Conservation Commission
  - Passive recreation

# Mowing Plan



- Continue to have DPW mow Recreation Zone
  - Events, etc. – mow every 3 weeks from May 15 to Sept. 15
  - Soccer fields mowed by ASA
- Continue to have farmer mow Conservation Zone (should be no cost to city)
  - Mow only after Aug. 15 & before Sept. 15
  - Install & maintain “symbolic fencing” & dog leashing signs
  - Public education program

# Mowing Plan

- Conservation Zone future alternatives
  - Rotational mowing
    - Divide fields into sections
    - Mow each section every other year
    - Remove thatch every 3<sup>rd</sup> year
    - Consider controlled fire as a means of removing thatch
  - Apply for MassWildlife Habitat Management Grant Program





# Prescribed Fire

- Benefits
  - Natural community maintenance
  - Habitat improvement
  - Soil nutrients improvement
  - Invasive plant control
- Requires expertise
- Highly regulated



# Forest Management

- Passive Forest Management
  - Encourages “old growth” forests
    - Sequestering carbon (NE forests off-set 14% of region’s annual emissions)
  - 200 years or more
- Active Forest Management
  - Can be used to increase forest habitats
  - “Foresters For The Birds” program
  - “Climate Smart Forestry” program
- Develop a Forest Management Plan



# Wetlands Management

- Some former hayfields are transitioning to wetlands – nature restoring
- Some shrub swamp may transition to forested wetlands
- Monitor for non-native invasives
- Control invasives if necessary

# Wildlife Enhancement

- Brush piles
- Snags
- Nest boxes
- Pollinator plantings



# Recreation Management

- Dogs
  - Dog leash policy
  - Effect on wildlife
    - Chasing/killing wildlife
    - Disrupting nesting or foraging
    - Scent marking
    - Diseases
    - Dog waste
    - People see more wildlife when dogs are not allowed



# Recreation Management



- Education
  - Entrance kiosk with sign & information on the precarious state of grassland birds
  - Volunteers to talk about grassland birds & importance of keeping dogs on leash
  - “Symbolic” fencing & reminder signs

# Stewardship Activities

	Winter	Spring	Summer	Fall
	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov
<b>Permitting for Planned Projects</b>				
<b>Monthly Property Visits</b>				
<b>Annual Work Plan with Staff and Stewards</b>				
<b>Safety Meeting with Staff, Stewards, Police &amp; Fire</b>				
<b>Trail Walk/Clean Up (downed limbs, drainage issues, signage needs)</b>				
<b>Repair Equipment and tools</b>				
<b>Building Projects (kiosks, signposts, etc.)</b>				
<b>Invasive Plant Management</b>				
<b>Mowing of Grassland (After August 15<sup>th</sup>)</b>				
<b>Expand grassland by cutting back along edges</b>				
<b>Trail mowing/maintenance</b>				
<b>Boundary Walk (monitoring for encroachments, signage, etc.)</b>				

# Short-term Projects

- Continue mowing fields (Aug. 15 to Sept. 15)
- Work with volunteers to do invasive plant management
- Obtain herbicide applicator's license if use of herbicides is intended
- Wildlife enhancement – dependent on volunteer/staff resources
- Implement dogs on leash policy
  - Signs & symbolic fencing



# Long-term Projects

- Continue mowing fields (Aug. 15 to Sept. 15)
- Explore rotational mowing & prescribed burning
- Strategically treat invasives
  - Treat along trails
  - Treat along edges of fields
  - Treat within forested areas working from trail edges
- Wildlife enhancement – dependent on volunteer/staff resources
- Clear hazards & repair structures (boardwalks, etc.)





Total = \$25,000 to \$30,000/yr.  
Sign = \$2,500

Estimated Costs/Time	Quantity	Cost
Permitting for Planned Projects	Varies	Staff/Volunteer Time
Monthly Property Visits	4 hours/ month	Staff/Volunteer Time
Annual Work Plan with Staff and Stewards	16 to 24 hours	Staff/Volunteer Time
Safety Meeting with Staff, Stewards, Police and Fire Dept.	4 hours	Staff/Volunteer Time
Trail Walk/Clean Up (downed limbs, drainage issues, signage needs)	Varies	Staff/Volunteer Time
Repair Equipment and tools	Varies	Staff/Volunteer Time Materials
Building Projects (kiosks, signposts, etc.)	Varies	Staff/Volunteer Time
Invasive Plant Management	40 hours/ year	Staff/Volunteer Time Materials & Tools
Mowing of Grassland (August 15 to Sept. 15)	80 hours/ year	Staff/Farmer Time Equipment, fuel
Expand grassland by cutting back shrubs and overhanging limbs	8 hours/year	Staff/Volunteer Time
Trail maintenance	40 hours/ year	Staff/Volunteer Time
Boundary Walk (monitoring for encroachments, signage, etc.)	12 hours/ year	Staff/Volunteer Time



Questions & Discussion

Thank you!