



DIVISION OF FISHERIES & WILDLIFE

Eugene D. Moran WMA Habitat Restoration (North Street) FY25 Project Summary

Location

Site: Eugene D. Moran Wildlife Management Area (WMA)

Town: Windsor

District: Western

Project Acres

35 Acres

MassWildlife's Approach to Habitat Management

MassWildlife uses habitat restoration and management to conserve both common wildlife and vulnerable species, including rare plants and animals protected by the Massachusetts Endangered Species Act (MESA) and other declining Species of Greatest Conservation Need (SGCN) identified in the Massachusetts State Wildlife Action Plan (SWAP). As part of this effort, biologists plan and implement projects to create, restore, and maintain a variety of healthy habitats to increase biodiversity and climate resiliency across our forests, wetlands, streams, fields, and more.

Biologists plan habitat projects that may include tree cutting, mowing, and mulching to strategically increase open habitats, promote patches of vigorous young forest, restore natural processes, and remove invasive plants. This project has been designed to ensure consistency with recommendations for climate-oriented forest management provided by the Climate Forestry Committee ([Climate Forestry Committee Report, 2024](#); see below).

Site Significance

The project area lies within the 1,870-acre [Eugene D. Moran WMA](#) (Fig 1). This WMA is located within a unique and diverse high elevation landscape containing a mix of upland and wetland habitats including spruce fir northern hardwood forests, aspen/alder stands, red spruce swamps, wet meadows, emergent marsh, and abandoned agricultural fields. It is home to 9 MESA-listed species including birds, moths, and plants. The site is also designated by National Audubon Society as an Important Bird Area (IBA).

This project will build on past successful habitat work in the area. Targeted management will add ecological diversity to this already-rich landscape and will directly benefit plants and animals listed as Species of Greatest Conservation Need as identified in the Massachusetts State Wildlife Action Plan along with common wildlife.

Project Activities and Expected Outcomes

Selective tree removal will be conducted on 35 acres and will occur at varying intensities to stimulate different vegetation responses. Most of the project area (22 acres) is planned for young forest habitat where 70% of the overstory trees will be removed to promote the rapid growth of dense vegetation that needs full sunlight, like aspen and pin cherry. Individual trees or clusters of trees with high habitat value will be retained across the site to provide food and/or winter cover to wildlife. The remaining portion of the project area will be left as closed canopy forest and five ¼-acre canopy gaps will be created to promote pockets of dense understory vegetation of hobblebush and sugar maple saplings. Project planning and oversight will be implemented by a team of experienced Habitat Biologists.

Highlights:

- Tree harvesting will promote the growth of dense and diverse native vegetation that will provide high-quality nesting, foraging, and cover habitat for numerous declining and threatened wildlife species like the mourning warbler.
- Overstory tree removal will stimulate the growth of dense ground vegetation and hardwood tree saplings that will create high-quality nesting, foraging, and migratory habitat for numerous species, including ruffed grouse, moose, white-throated sparrow, and bobcat. Trees reserved on the site will produce important mast, like fruit and nuts, and nesting cavities for wildlife.
- Hand felling of select overstory hardwoods in certain areas will prevent the shading out of important shrub species and will add coarse woody debris habitat on the ground. This will benefit species such as the American woodcock and Canada warbler along with numerous pollinators like native bees. In other areas, hand felling will promote pockets of forest regeneration, which will create a complex and resilient ecosystem that will better support declining forest songbirds like the wood thrush and black throated blue warblers.

Climate Considerations

This project was designed to ensure consistency with recommendations for climate-oriented forest management provided by the Climate Forestry Committee, and includes:

- select removal of overstory trees to promote a forest with diverse age classes, species composition, and structure that enhances overall forest resiliency;
- retention of specific trees that support biodiversity (e.g. large dead trees, cavity trees, diverse tree species mix);
- and partial cutting via small group selection that will store carbon on the landscape for extended periods and improve growth and carbon sequestration rates on remaining trees.

See page 4 for more details.

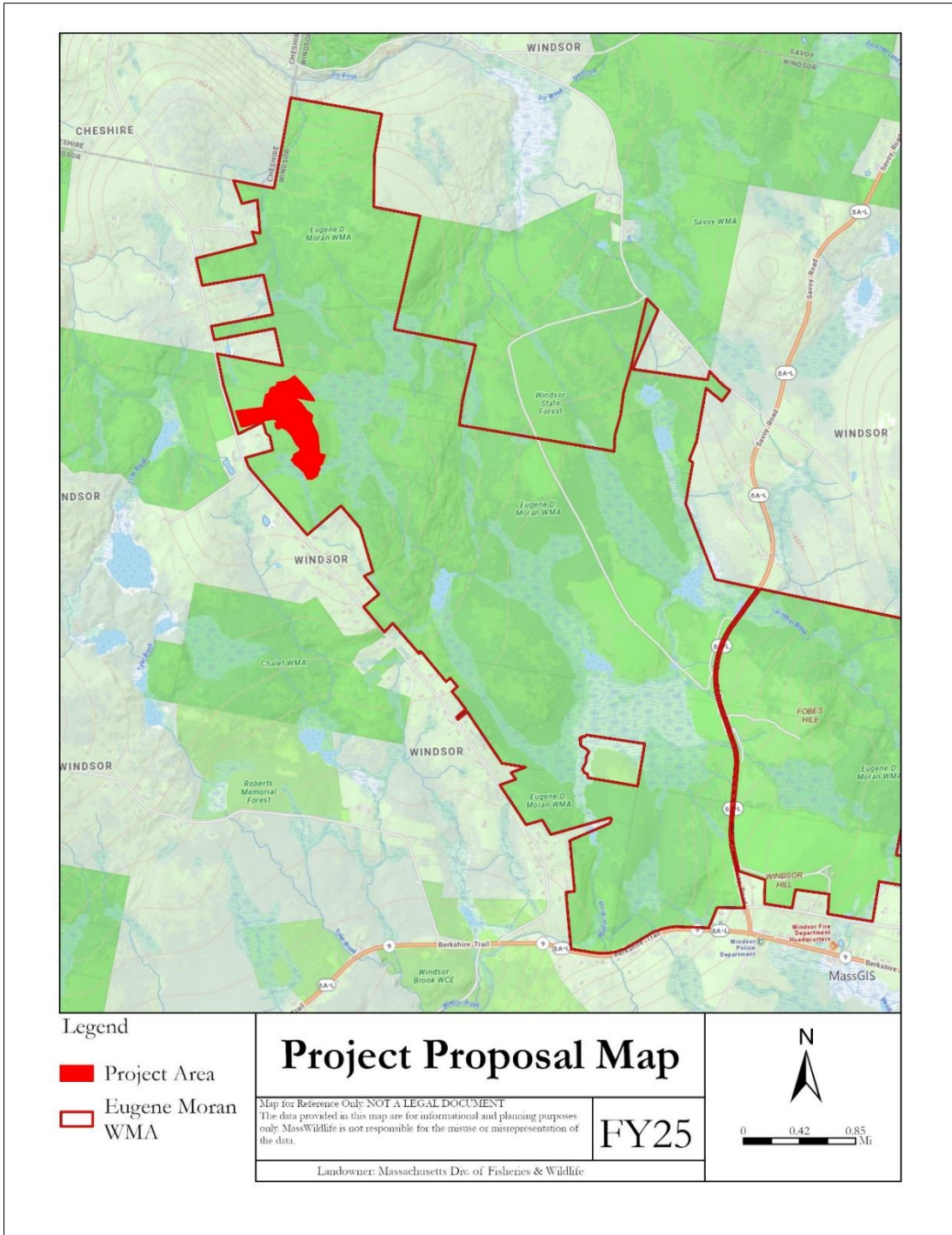


Figure 1. Map of Eugene D. Moran Wildlife Management Area with highlighted project area.

Climate Considerations Details

MassWildlife has determined that the decision to implement this project is consistent with EEA climate goals and guidelines and agency land management objectives. Carbon and climate change considerations specific to the activities proposed for this project are discussed below.

Proposed Activity	Alignment of Activity with Climate Oriented Strategies and Recommendations
<p>Access improvements (landing improvements, gravel, road grading, ditch maintenance, road widening, straightening, and alteration of intersections).</p>	<p>Roads, landings, and associated infrastructure are critical for access by both the public and natural resource managers. These infrastructure elements are also associated with both vulnerabilities and opportunities in terms of climate change resiliency.</p> <p>Vulnerabilities:</p> <ul style="list-style-type: none"> • Roads occupy areas that would otherwise be carbon rich forest. • Road edges can become avenues for the spread of invasive species. • Roads have the potential for sediment transport into surface water resources. <p>Opportunities:</p> <ul style="list-style-type: none"> • A well-designed and well-maintained access system makes all other land management and monitoring activities possible while minimizing impacts. • Roads provide for public access including hiking, hunting fishing, etc. • Roads are critical for both Emergency Response (Injuries, Accidents, etc.) and Incident Stabilization (fire, flood, storm damage, etc.) <p>Most log landings are temporary in nature. Permanent landings that are properly located and well-built can serve as permanent access infrastructure, concentrating activities and minimizing the non-forested footprint required to conduct agency management. Whether temporary or permanent, the use, maintenance, and stabilization of landings will include considerations of future climate change impacts. Landing BMPs include:</p> <ul style="list-style-type: none"> • Post-harvest stabilization measures such as grading and smoothing to prevent erosion and sedimentation. • Seeding to provide cover and further stabilize the soil. • Invasive plant survey and control to minimize further infestation risks. • Periodic mowing of permanent landings to allow herbaceous and shrubby vegetation to dominate the site between harvests, adding diverse habitat opportunities for local wildlife.
<p>Erosion and sedimentation control installation, including water bar installation and seeding landings and other disturbed areas.</p>	<p>Water bars help stabilize skid trails and ensure that excessive erosion is avoided while maintaining the site for future forestry operations. Properly stabilized skid trails will revegetate naturally while being discernable enough to use in future operations. Beyond compliance with the BMP manual standards, the size and frequency of water bar installation, and degree of stabilization, should be determined by:</p> <ul style="list-style-type: none"> • Other uses that may occur between operations, e.g. hiking trails, snowmobiles trails, use as firebreaks, or unauthorized uses (OHV/ATV). • The impacts of future climate conditions, especially more frequent storms. If the area is already known to be wet, and in the future more frequent storms are expected, more water bars than what may be normally installed are encouraged. <p>Soil type. Land managers may consider seeding and mulching water bars on highly erodible soils, steep slopes, or excessively wet areas to ensure longevity and prevent water bar degradation.</p>

<p>Invasive plant control, including pre- and/or post-harvest and follow up treatments.</p>	<p>Strong consensus exists among land managers and climate science experts regarding the threat to future forest health posed by the introduction and spread of invasive plants. Invasive plants can:</p> <ul style="list-style-type: none"> • aggressively outcompete native plant species, • dominate understory communities, and even climb, kill, and topple mature trees, • threaten overall biodiversity, and • threaten soil health and long-term carbon storage. <p>Monitoring and controlling invasive and interfering plant populations prior to and following forestry operations is a critical practice for minimizing the risk of further impacts inadvertently (though not unexpectedly) spread by harvesting-related activities.</p>
<p>Full overstory removal, partial stand, variable retention harvesting</p>	<p>Variable retention (VR) is a regeneration technique based on natural disturbance ecology that retains important biodiversity components of the stand during the harvest to meet habitat objectives. The retained components include a diverse species mix of live and dead trees in a range of diameters with an emphasis on the larger sizes, cavity trees, and large snags and logs of different decay stages. These are in a patchwork pattern across the stand from single trees to large groups measured in acres.</p> <ul style="list-style-type: none"> • This practice more closely aligns with natural disturbance patterns. • Promotion of a diversity of age classes, species composition and structural diversity enhances overall forest resiliency. • More carbon is left on the landscape for longer periods, in live trees, snags, and coarse woody material while regeneration develops. • Improving conditions for a wide variety of local wildlife through the creation of temporary young forest habitat. • Maintenance of continuous forest corridors provides for wildlife habitat connectivity. • As part of a regeneration system this method can be used to help guide species diversity towards more future-adapted mixes.
<p>Diffuse overstory removal, partial cut, late rotation regeneration related.</p>	<p>Partial cutting via single trees or small groups in a mature stand can advance a variety of management objectives as well as climate-smart practices. Single tree or very small group removals, if used exclusively and repeatedly, will perpetuate an uneven-aged stand condition with a species mix shifted towards higher shade tolerance. However, this type of harvest can also serve within an even-aged system to establish regeneration of species of lower shade tolerance under a partial canopy for subsequent release using larger group or patch cuts (irregular shelterwood) or complete-stand overstory removals. Advantages of partial overstory removals include, but not limited to:</p> <ul style="list-style-type: none"> • Partial cutting retains carbon on the landscape for extended periods while regeneration develops. • Reducing competition for resources improves growth and carbon sequestration rates on residual trees. • Promotion of a diversity of age classes enhances overall forest resiliency. • Maintenance of continuous forest corridors provides for wildlife habitat. <p>As part of a regeneration system this method can be used to help guide species diversity towards more future-adapted mixes.</p>

Posted: 9/9/24, Updated: 10/31/24