Massachusetts Department of Conservation and Recreation

Division of Water Supply Protection, Office of Watershed Management

Forest Management Project Proposal Summary for Public Comment

Location, goals, and summary of proposed forest management.

Proposal Summary Item	Item Information/Description
Lot Proposal ID	**HA-26-01-01**
Fiscal Year	2026
Watershed	Quabbin
Town(s)	Ware
Forester	Douglas Hutcheson
Estimated Acres by Treatment Type	**Spillway East:** 18 acres of oak woodland establishment similar to shelterwood retention. 6 acres of regeneration openings and 4 acres of thinning. 3 acres of mowing under the internal powerline. **Spillway West:** 8 acres of white pine removal to expand rare inland sandplain grassland
Total Proposal Acres	48
Block	Hardwick
Compartment and/or Working Unit	01
Location and Boundary Description	**Spillway East**: The proposal area is immediately east and uphill from the Quabbin Reservoir spillway. The Spillway East Branch Road bounds the project area to the west, the Spillway Trail to the east, the Winsor Dam Road to the north, and River Road and the National Grid powerline to the south. **Spillway West:** The proposal area is the white pine stand in between the Winsor Dam and the lower spillway.
Previous Proposal?	No
Project Goals and Summary Description	The goal of this proposal is to restore a mosaic of fire adapted communities at the site, as specified in the 2017 Land Management Plan. The lower spillway has historically been and is currently being maintained free of woody vegetation using prescribed fire. The associated habitat benefits of that infrastructure management will be further enhanced by expanding fire adapted community types to the east and west. This type of management is a small part of DWSP's overall management but is important to DWSP's goal of maintaining and enhancing overall biodiversity on the landscape.

Forest Cover Types and Acreages

Overstory Forest Types	Acres
White pine	27.0
Northern Red oak	11.5
Oak/Hardwoods	4.0
White pine/oak	2.5
Internal powerline	3.0

Understory Cover Types and Relative Importance

Understory Cover Type	Relative area covered (Dominant, Secondary, Minor, None)
Tree seedlings and saplings	Dominant
Mountain laurel	None
Mesic site - witch hazel, highbush blueberry	None
Dry site -Huckleberry, blueberry	Minor
Mesic site - cinnamon fern, mixed hardwood	None
Hayscented fern	Minor
Invasive shrubs/vines	Minor
Other	

Forest Vegetation Description

Vegetation Topic	Description
General Description, Forest Composition, Stand History, and Harvest History	The project area was identified in the 2017 land management plan as an oak woodland natural community within a broader area suitable for barrens restoration. The underlying soils, oak overstory, and presence of huckleberry and blueberry in the understory, favor the creation of an oak woodland in the northern portion of this site and its maintenance with periodic prescribed fire as these communities are highly fire influenced. The stone walls present indicate the project area was formerly in agricultural production. The forest is comprised of the following stands: Northern Red Oak to the north, a central transition zone of red oak, mixed hardwoods, and white pine, and Eastern White Pine to the south. • The Northern Red oak canopy is mixed quality, large saw timber sized red oak with black and white oak, and some red maple, averaging 95 square feet of basal area per acre. The midstory is dominated by dense, low quality white pine saplings. Sparse red and white oak seedlings, high bush blueberry, huckleberry, and pockets of hayscented fern are found in the understory. • The white pine/oak and oak/hardwood stands contain mixed quality, small-large sawtimber sized oak species, including white oak, white pine, and sporadic red maple and hickory averaging 67 square feet of basal area per acre. The midstory is dominated by dense, low quality white pine saplings, with occasional red oak, white oak, black birch and red maple saplings. • The southern portion of the site is dominated by low quality, large diameter white pine stems averaging 100 square feet of basal area per acre in the canopy. The midstory is represented by poor to fair pole sized stems and in the seedling/sapling layer has poor to fair advanced regeneration. Within the pine stand is a 1-acre gravel pit that has revegetated to large diameter white pine. The northern red oak and transition stands were significantly impacted by the spongy moth infestation of 2015-2017. The area was previously thinned in 1988 and received a shelterwood harvest in 2000.
Advance Regeneration description	The proposal area is dominated by white pine regeneration of mixed quality. White pine was observed in 100% of all survey plots, followed by red maple in 30%. Oak, typically red, but also white, black, and scarlet oak, were observed in 10% of the plots.
Terrestrial Invasive Plants description	In the southern sections of the white pine stand, oriental bittersweet and grape vine were observed, as was Japanese barberry and honeysuckle in the old quarry. Aralia elata, Japanese angelica tree, is present along the internal powerline.

Description of Wetland Resources Present

Resource Type	Description of resources present
Wetlands	None
Streams	The Quabbin Reservoir spillway and the Swift River run along the western edge of the proposal area.
Vernal pools	None
Seeps	None

Description of Soils by Hydric Class

Soil Hydric Classes	% of area	Soil series and any further comments
Excessively Drained	0	
Well-drained Thin	0	
Well-drained thick	100	Canton fine, loamy sand
Moderately well-drained	0	
Poorly to very poorly drained	0	

Proposed Silvicultural Activities

Topic	Description
Site Selection and Silvicultural Objectives	**Spillway East:** In the oak stands the proposed harvest is the first step in the process to restore an oak woodland. The desired future condition is a relatively open forest with well spaced, healthy overstory oaks, pitch pines, and hickories that can be maintained by applying periodic low intensity prescribed fires. In the white pine stand the objective is to create conditions where other species can become established. Prescribed fire will be used to favor fire-adapted species. Periodic fire will be applied to maintain a more open structure and stimulate understory growth of the ericaceous plants. A state-listed plant species that will benefit from increased sunlight and periodic fire is present. **Spillway West:** The area surrounding the white pine stand is currently being managed as a grassland/meadow maintained by annual mowing. The proposed project will convert the stand to a small barrens community with scattered overstory pitch pines and oaks.

Topic	Description
Silviculture Prescription	**Standing dead trees will be removed throughout the proposal to facilitate the application of prescribed post-harvest fire.** **Spillway East:** In the oak stands in the northern section generalist species and poorly formed and non-vigorous oak stems will be removed. Large crowned, healthy overstory oaks, hickories, and pitch pines will be retained. The post-harvest overstory will resemble a shelterwood with an open understory. In the white pine stand to the south approximately 6 acres of regeneration openings will be created in 0.5-to-1-acre groups. Approximately 10 square feet of basal area of overstory trees will be retained in the openings, favoring healthy oaks, pitch pines, and hickories and trees with unique wildlife features such as cavities where they occur. Roughly 4 acres of thinning will occur between new and existing openings. Thinning will aim to give healthy overstory oaks, pitch pines, and hickories more growing space where the occur, and give the healthiest overstory white pine space where the fire adapted species do not occur. Thinning will also put more sunlight into regeneration openings and facilitate post-harvest prescribed burns. **Spillway West**: The white pine stand will be removed while healthy overstory oaks and pitch pines that are present will be retained. The result will be a grassland community with scattered overstory pitch pines and oaks that will become part of a mosaic of fire adapted communities at the site.

General Climate Change Considerations:

The proposed silvicultural approach is designed to restore and maintain a fire-adapted forest community, enhancing ecological resilience and biodiversity across a landscape historically influenced by fire. Fire-maintained systems reduce fuel loads, helping mitigate wildfire risk under future climate regimes. This effort aligns with DWSP's broader biodiversity goals by enhancing habitat for specialized flora and fauna and increasing structural and compositional diversity across the landscape.

DWSP has determined that the decision to implement this project is consistent with EEA climate goals and guidelines and agency land management objectives. 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
Habitat restoration and maintenance prescribed fires -- heath, shrubland, woodland, or grassland.	Prescribed Fire is the planned use of fire in a particular place and time, under established conditions and safety requirements to accomplish resource management goals. Prescribed fire improves habitat for a **variety of wildlife and native plants, including roughly 40% of the state listed terrestrial species,** and **restores natural communities** dependent on fire. • In fire-influenced natural communities, fragmentation of the landscape and the suppression of fires (prescribed or natural) leads to accumulation of volatile hazardous fuels in the surface, mid-story, and canopy vegetation layers. • Excessive vegetation density **negatively impacts the habitat quality** of the natural community and may eventually lead to fuel buildup and unplanned, catastrophic wildfire. • Prescribed fires that reflect natural return intervals increase below-ground **carbon storage and sequestration.** The consequences of **catastrophic wildfires** include: • The release of large amounts of **carbon** including **soil carbon**. • Tree mortality. • Severe soil, duff, and below ground vegetation impacts. • Potential alteration of soil chemistry. • Threats to firefighter safety, human communities, and property damage. • Threats to human health from severe smoke impacts both locally and potentially at long distances.

Proposed Activity	Alignment of Activity with Climate Oriented Strategies and Recommendations
Diffuse overstory removal, partial cut, habitat modification and/or maintenance.	Open **woodlands, savannas, barrens, and heathlands** are low tree-density, **fire-dependent** forests with diverse understory vegetation critical for conserving many state-listed rare species. They are **imperiled** across Massachusetts due to development and negative ecological alterations resulting from a lack of management primarily decades of fire exclusion. Climate experts recommend **prioritizing and maintaining sensitive or at-risk species and habitat**, with the expectation that pressure on these will only increase with changing climate. Ecological restoration of these sites ensures continued habitat function and reduces climatic vulnerability: • Reducing tree **density reduces vulnerability** to pests like southern pine beetle and to drought stress. • Restoring **native species** that are best adapted to the site **promotes resilience** to future drought, wildfire, and harmful insects. • Reintroducing low-intensity fire **promotes resilient native vegetation**. • Removing heavy fuel loads **reduces vulnerability to wildfire**. • Restoration better positions these sites **to adapt to climate change**. • Restored sites are **more reliable carbon sinks in the long term** than highly vulnerable dense fire-excluded forests. The agency recognizes that this site may store less carbon than denser forests in the short term. But climate models predict an increase in disturbance on these sites including drought, wildfire and range expansion of harmful insects that puts a dense fire suppressed forest at greater risk of becoming a carbon source in the long term. Projects like this are undertaken on Federal, state agency, and other conservation lands across the Commonwealth, under the guidance of collaborative teams consisting of biologists, restoration ecologists, foresters, and fire management professionals.
Additional comments	none

Equipment and Access Constraints and Considerations

Constraint Topic	Description and Considerations
Proposed Equipment requirements	Whole tree harvesting will be required to facilitate post-harvest prescribed burns by removing excessive fuels.
Proposed wetland or stream crossings	None
Further wetland comments	Wetland to the east of the harvest boundary will not be impacted.
Vernal Pools	Yes but no longer pools. Verified vernal pools (VVP 656 and VVP 657) were surveyed in 1990 and labeled as active pools. The pools' locations and the surrounding area within the lot were surveyed again, and no vernal pools or areas suspected of holding water were located. The verified pools were changed to 'not a pool'. Several factors may cause a pool to dry permanently, such as sediment and leaves filling it in, altered hydrology, or changes to the nearby landscape.

Constraint Topic	Description and Considerations
Access improvements needed	**Spillway East**. The log landing will be located in the northeastern corner of the harvest. Material will be needed for log trucks to transition from Winsor Dam Road into the landing. **Spillway West**. The log landing will be located on the southside of the pine island. Logs truck will access it from the dirt road heading south from the Power Station Road.
Other EQ issues	None
In-kind Services	None
Other Access Concerns (parking, trails, etc.)	A public parking area is located across Winsor Dam Road immediately north of the harvest area. The Spillway Trail forms the eastern, the Spillway East Branch Road the western, and River Road the southwestern borders of the harvest area; all of which are used for recreation by the public.

Subwatershed Analysis

Sub-Watershed number/name	Total DCR-owned acres in this sub-watershed	Acres regenerated on DCR land in the last 10 years in this sub-watershed	Total DCR-owned acres remaining for regenerating up to the 25% per 10 year limit for this sub-watershed	Acres in this sub-watershed that are part of this proposed lot
Off-Watershed				48

Additional comments on Subwatershed analysis: Analyses not conducted for lands outside the watershed boundary.

Wildlife and Habitat Observations and Considerations

Wildlife/Habitat	Observations and Considerations
Natural Heritage Priority Habitats?	Yes
State Listed species present:	NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed activity.
Rare Natural Communities:	None known. Goal is to create/enhance the value of this area for open oak woodland habitat.
General Wildlife Comments	Evidence of deer and turkey on-site. No uncommon wildlife species detected during reviews.

Cultural Resources Description and proposed protection measures

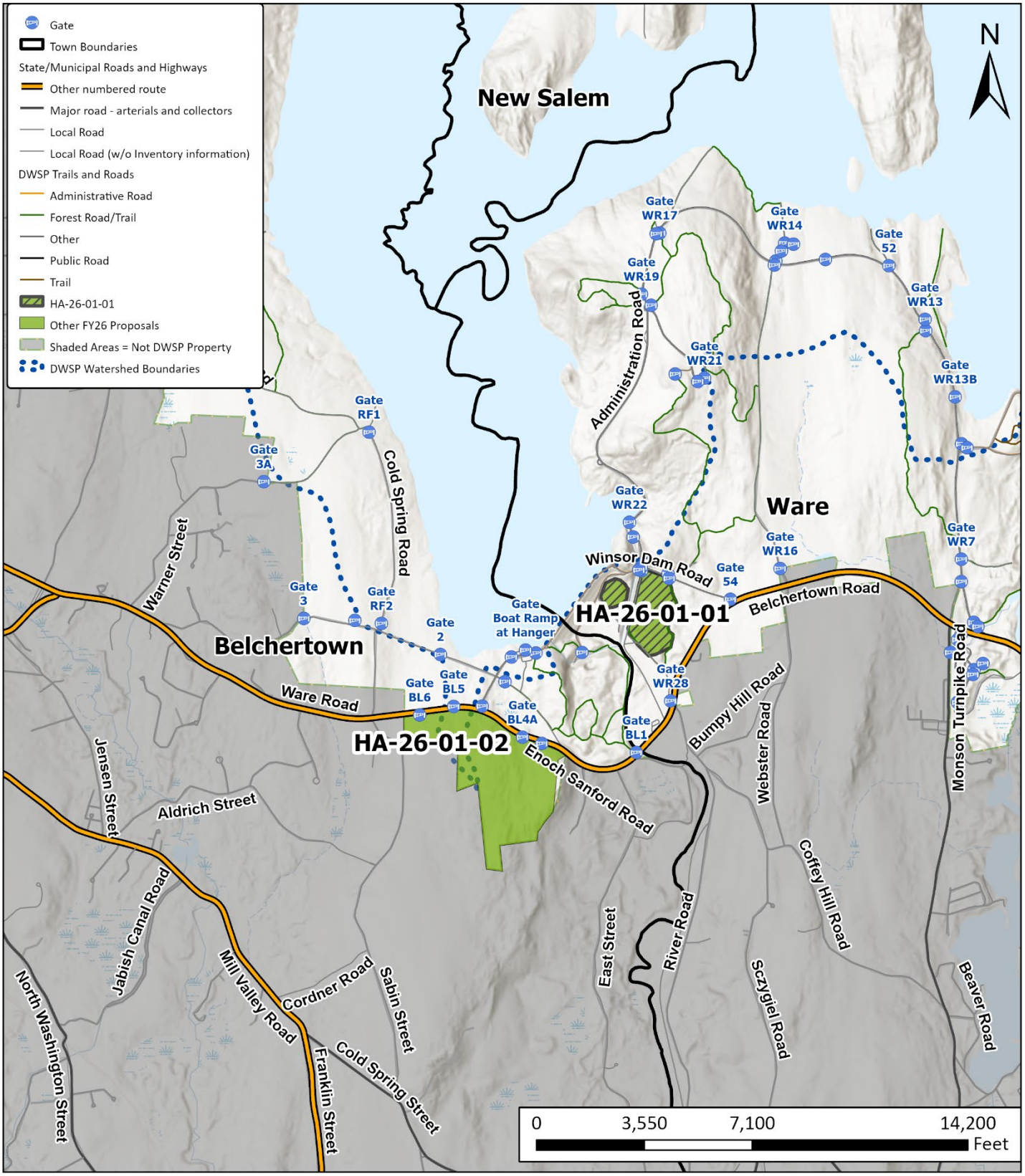
Cultural Resource	Description and proposed protection measures
Historical features present; comments regarding protection	The stonewalls present will be protected during the harvest by directional felling and proper skid road layout. Existing bar ways will be utilized where appropriate.

Cultural Resource	Description and proposed protection measures
Description of site characteristics in relation to Ancient sites modeling or other verified evidence	Stony soils throughout. This area was subject to intensive landscape modifications during the construction of the Winsor Dam and Quabbin Reservoir.

Massachusetts Department of Conservation & Recreation

Division of Water Supply Protection
Office of Watershed Management

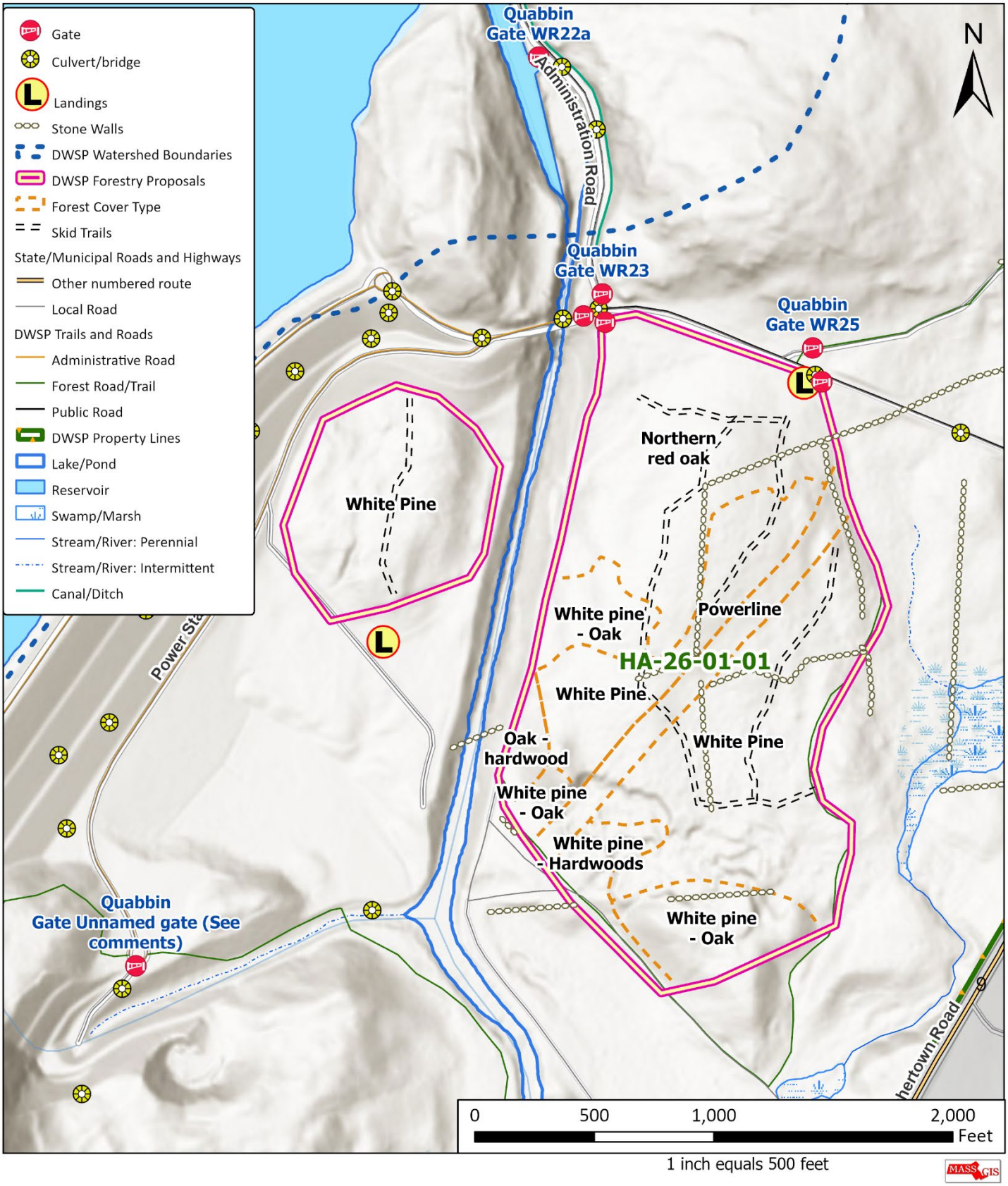
HA-26-01-01 -- Locus Map



1 inch equals 4,000 feet

Massachusetts Department of Conservation & Recreation
Division of Water Supply Protection
Office of Watershed Management

HA-26-01-01 -- Stand Map

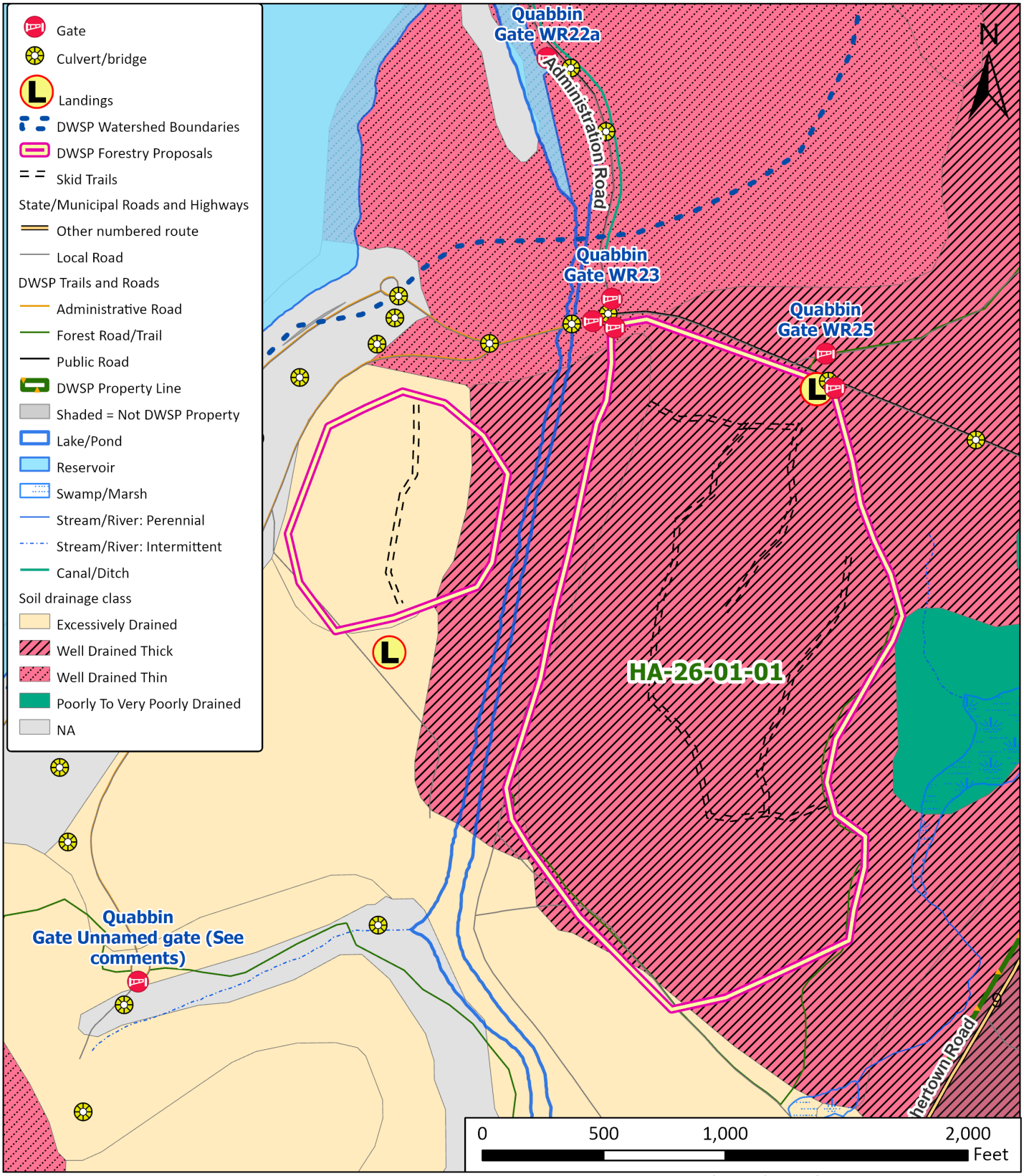


Massachusetts Department of Conservation & Recreation

Division of Water Supply Protection

Office of Watershed Management

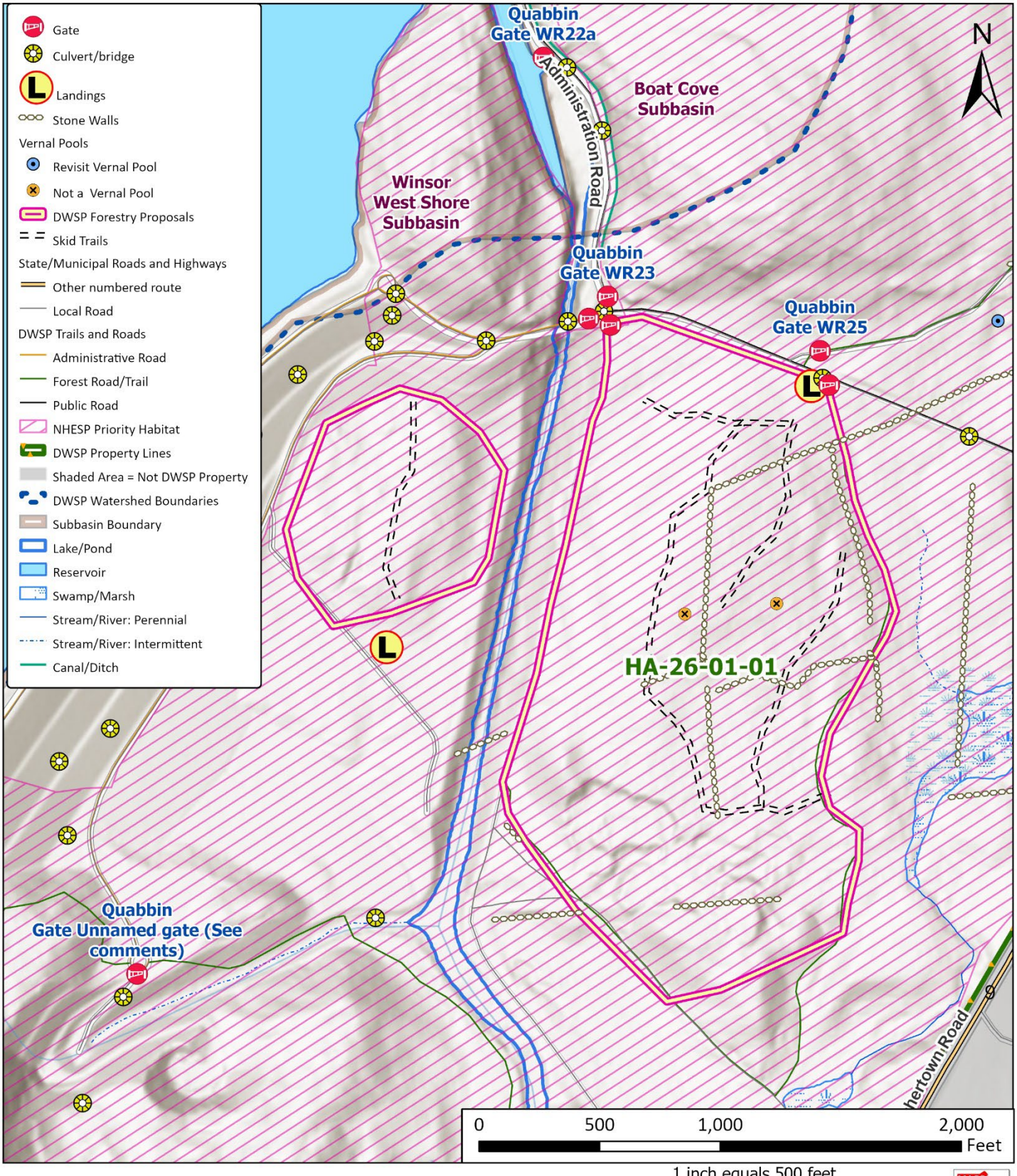
HA-26-01-01 -- Soil Drainage Classes



1 inch equals 500 feet

Massachusetts Department of Conservation & Recreation
Division of Water Supply Protection
Office of Watershed Management

HA-26-01-01 -- Wetlands and Wildlife Resources



Massachusetts Department of Conservation & Recreation

Division of Water Supply Protection

Office of Watershed Management

HA-26-01-01 -- Cultural Resources and Landscape Characteristics