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	**NS-26-21**
Fiscal Year	2026
Watershed	Quabbin
Town(s)	New Salem
Forester	Helen Johnson
Estimated Acres by Treatment Type	10 to 14 total acres of regeneration openings and 27 to 30 acres of thinning. Regeneration openings will range from 1/5 to 2 acres each, with an average size of around 3/4 acre.
Total Proposal Acres	40.9 acres
Block	New Salem
Compartment and/or Working Unit	21
Location and Boundary Description	The proposal is just south of **Bassett Pond** in New Salem, MA. It's bordered to the north and east by Bassett Pond and associated wetlands, to the west by the DCR access road that goes to Gate 33 (Blackington Road), and to the south by a high tension power line and the DCR access road that goes to Gate 35 (Old North Dana Road). On the north side of the proposal a narrow strip of about 1.5 acres between Bassett Pond and Blackington Road has been included for the purpose of roadside maintenance, should it be needed.
Previous Proposal?	no
Project Goals and Summary Description	This area was selected due to the dominance of white pine with poor form and/or vigor (weevil damage, thinning crowns, etc.), and the presence of oak, including a notable contingent of vigorous white oaks, that can serve as seed trees for the next generation. The primary goals of this project are: 1. Maintain and enhance watershed forest resilience by increasing age class diversity while maintaining or increasing species diversity. 2. Increase oak seed production. 3. Improve overall stand health and vigor. This will be accomplished by creating openings of up to two acres where there are clusters of trees that are diseased, declining, or have poor stem structure, and by thinning between openings, with particular attention to improving the vigor and seed bearing potential of oaks.

Forest Cover Types and Acreages

Overstory Forest Types	Acres
White pine	17.45
White pine-oak	17.21

Overstory Forest Types	Acres
White pine-hardwood	2.05
White pine-hemlock	4.20

Understory Cover Types and Relative Importance

Understory Cover Type	**Relative area covered** (Dominant, Secondary, Minor, None)
Tree seedlings and saplings	Secondary
Mountain laurel	Minor except along the east edge near the wetland, where mountain laurel is dominant.
Mesic site - witch hazel, highbush blueberry	Minor
Dry site -Huckleberry, blueberry	Secondary
Mesic site - cinnamon fern, mixed hardwood	Minor
Hayscented fern	Minor
Invasive shrubs/vines	None
Other	Little to no understory vegetation: secondary

Forest Vegetation Description

Vegetation Topic	Description
General Description, Forest Composition, Stand History, and Harvest History	The overstory is dominated by white pine with primary associates of white oak, red oak, red maple and hemlock. Some of the white oak is notable for its good health and vigor. Low vigor white pine poles are present at low density throughout the area except near Bassett Pond, and white oak, red oak, red maple and hemlock poles are present everywhere except the southwest corner. Species present but less common in the pole size class include black birch, white ash, poplar, black oak and black cherry. The northeast quadrant of the proposal has a multi-layered canopy, with pole stock making up between ¼ and ½ of total basal area. Live basal area ranges from 130 to 180 ft^2/ac with a mean of 155 ft^2/ac, except for a small area near Basset Pond where BA is around 70 ft^2/ac. Forest health concerns at this site include white pine weevil damage (sweep, forks and multiple stems); thinning crowns due to white pine needle drop fungi; reduced vigor and mortality due to competition, particularly of white pine; and a small amount of spongy moth mortality. Past harvests include 30.0 acres of shelterwood prep completed in 1980 (Lot 0182), and 31.5 acres of single tree selection completed in 1992 (Lot 0626).
Advance Regeneration description	55% of the proposal area has marginal regeneration, 28% has no regeneration, and 17% has regeneration present but limited to hemlock and/or white pine. Black birch and red maple regeneration are present but much less common. Mountain laurel is present but sparse, except near the wetland along the east edge of the proposal area where it dominates the understory, obstructing regeneration. Notably, although oaks comprise 14% and 29% of sawlog and pole stocking, respectively, oak seedlings and saplings are uncommon, present on only 11% of the proposal and at very low density.

Vegetation Topic	Description
Terrestrial Invasive Plants description	None observed.

Description of Wetland Resources Present

Resource Type	Description of resources present
Wetlands	Bassett Pond and associated wetlands border the proposal to the north and east.
Streams	None.
Vernal pools	None known; an unconfirmed but possible vernal pool is located near the east boundary of the proposal.
Seeps	None known.

Description of Soils by Hydric Class

Soil Hydric Classes	% of area	Soil series and any further comments
Excessively Drained	1	Windsor loamy sand, 3 to 8 percent slopes
Well-drained Thin	0	
Well-drained thick	93	Canton fine sandy loam, 3 to 8 percent slopes, very stony
Moderately well-drained	6	Sudbury sandy loam, 0 to 8 percent slopes
Poorly to very poorly drained	0	

Proposed Silvicultural Activities

Topic	Description
Site Selection and Silvicultural Objectives	This area was selected due to the dominance of white pine with poor form and/or vigor (weevil damage, thinning crowns, etc.), and the presence of oak, including a notable contingent of white oaks, that can serve as seed trees for the next generation. The primary goals of the project are: 1. Maintain and enhance watershed forest resilience by increasing age class diversity while maintaining or increasing species diversity. 2. Increase oak seed production. 3. Improve overall stand health and vigor. The narrow strip between Bassett Pond and Blackington Road in the northern portion of the proposal is included for the purpose of roadside maintenance, should it be needed.

Topic	Description
Silviculture Prescription	Regeneration openings 1/5 to 2 acres in size, totaling 10 to 14 acres and averaging around ¾ acre, will be located where there are clusters of trees that are diseased, declining, or have poor stem structure. Trees on the perimeter of openings will be healthy and vigorous with stable stem structure, and will be either vertical or leaning away from the adjacent opening in order to minimize damage to regeneration if they fall or are cut in the future. All mountain laurel and trees ≥5 feet tall in openings will be cut, except for healthy oaks, which will be flagged for retention. In 90% of openings over 1/2 acre, 5-10 ft^2/acre of basal area will be retained, with healthy oaks and regionally uncommon native species being favored for retention. Areas between and around openings will be thinned, with particular attention to improving the vigor and seed bearing potential of oaks, and making perimeter trees around openings more windfirm. Declining white pine will be particularly targeted for removal in order to reduce shade, improve forest health and increase biodiversity.

Climate Change Considerations: DWSP 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
Regeneration patch cuts (full overstory removal, partial stand)	Patch cutting is a regeneration technique that straddles the boundary between classic even-aged and uneven-aged forest management systems. Foresters select appropriate areas ('patches' or 'groups') covering a portion of the stand to harvest rather than removing the entire stand and then return periodically to repeat the process in other portions of the stand. In using patch cutting there is no final regeneration cut. Patch size and shape are determined by many different factors including overstory condition, desired species composition in the regeneration layer, other desirable herbaceous and woody vegetation, location, stand re-entry period, etc. Harvesting in patches aligns with many **climate-smart forestry practices**: • Increasing **structural diversity** improves resiliency by reducing the impact of age/size related disturbances. • Extending regeneration periods minimizes short term impacts to groundwater and nutrient cycling. • Partial stand overstory removals more closely align with **natural disturbance patterns**. • More **carbon is left on the landscape** for longer periods, and within-patch live tree, snag, and coarse debris retention allow for development of old forest characteristics. Can also be used as opportunities to increase the stocking of **future climate adapted species, current climate imperiled species**, or other types of desirable vegetation.
Thinning (diffuse overstory removal, partial cut, regeneration related)	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: • 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.

Proposed Activity	Alignment of Activity with Climate Oriented Strategies and Recommendations
Thinning (diffuse overstory removal, partial cut, regeneration related), continued	As part of a regeneration system this method can be used to help guide species diversity towards more **future-adapted mixes**.
Protection of dead and dying trees	Dead and dying trees will be protected whenever possible to contribute to long-term carbon storage, promote structural diversity, and support wildlife habitat.
Protection of soil carbon a. Careful routing of skid trails to avoid steep areas and sensitive soils, and reinforcement of soft ground with slash. b. Installation of water bars in accordance with Massachusetts Best Management Practices. Stabilize the soil at the landing with conservation mix or equivalent seed source.	Routing skid trails to avoid steep slopes and sensitive soils and reinforcement of soft ground with slash (tops and branches from cut trees) prevent soil erosion and compaction. 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: • **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. **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.
General/other Climate Change Considerations	This silvicultural approach is designed to enhance forest resilience in the face of climate change by diversifying structure, improving species composition, and reducing vulnerability to pests and pathogens—particularly in a white pine-dominated stand with widespread signs of decline due to weevil, fungal needle drop, and competition stress.

Equipment and Access Constraints and Considerations

Constraint Topic	Description and Considerations
Proposed Equipment requirements	none
Proposed wetland or stream crossings	none
Further wetland comments	n/a
Vernal Pools	If verified, the vernal pool will be protected in accordance with the requirements on page 171 of the 2017 DWSP Land Management Plan, which requires a 15 foot no cut buffer, a 100 foot shade zone, and a 200 foot low ground disturbance zone.
Access improvements needed	none
Other EQ issues	none
In-kind Services	Roadside tree removal for road maintenance will be required if needed.

Constraint Topic	Description and Considerations
Other Access Concerns (parking, trails, etc.)	none

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
Area 2 Shore (a.k.a. Northeast Shoreline)	251	0	63	26
Off Watershed				15

Additional comments on Subwatershed analysis: 15 acres are not on the Quabbin Reservoir watershed.

Wildlife and Habitat Observations and Considerations

Wildlife/Habitat	Observations and Considerations
Natural Heritage Priority Habitats?	Almost the entire proposal area is NHESP Priority Habitat.
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.
General Wildlife Comments	Occasional moose and deer scat were observed, indicating their presence but probably not at high densities. Browsing of regeneration was not observed except on occasional hemlock seedlings near the wetland along the west border, where beaver chews were also observed. Dead and dying trees (snags) will be retained and protected whenever possible for wildlife habitat. Large diameter snags and logs, which provide habitat for broad suites of species and are relatively uncommon in the general landscape, will be prioritized for protection.

Cultural Resources Description and proposed protection measures

Cultural Resource	Description and proposed protection measures
Historical features present; comments regarding protection	There are three short (~35-180 feet long) stone walls in the interior of the proposal, two of which follow the northern border of a raised area near Old North Dana Road. There are stone piles at each of the southern corners of the raised area, and a possible but less distinct stone pile ~ 850 feet north of the southeast corner of the raised area. The raised area appears to have been some kind of construction, but there are no visible features other than those described. LiDAR shows some additional linear features nearby, but no more walls or other above ground structures were found. Stone walls border the proposal along Old North Dana Road and parts of Blackington Road, with sufficient breaks to allow access. The proposal boundary has been drawn to avoid and protect the following nearby features: - Golden Lake Cemetery (based on Quabbin taking sheets – there are no grave markers), with impressive stonework on the east side and partially surrounded by stone walls, located on the east side of Blackington Road. - Harry Hackett's former 2 cabins and 3 sheds by Bassett Pond, located east of the northern strip of the proposal along Blackington Road, which are labelled in the QWR Cultural Resource Inventory layer as being for commercial purposes. - Arthur Davis' former home, barn, shed, and 2 hen houses, in the powerline to the south of the proposal. There will be no harvesting and no skid roads within 10 meters (33 feet) outside the walls surrounding Golden Lake Cemetery. Any additional cultural features that are located before or during the harvest will be mapped, photographed, flagged, avoided and protected, consistent with the guidelines in the 2017 DWSP Land Management Plan.
Description of site characteristics in relation to Ancient sites modeling or other verified evidence	The microtopography of the raised area described above is pronounced. A hill with two summits extends north-south through the proposal area, with gentle slopes never exceeding 10%. If applicable, DWSP will follow the recommendations of DCR's Archeologist regarding protection of sensitive sites.

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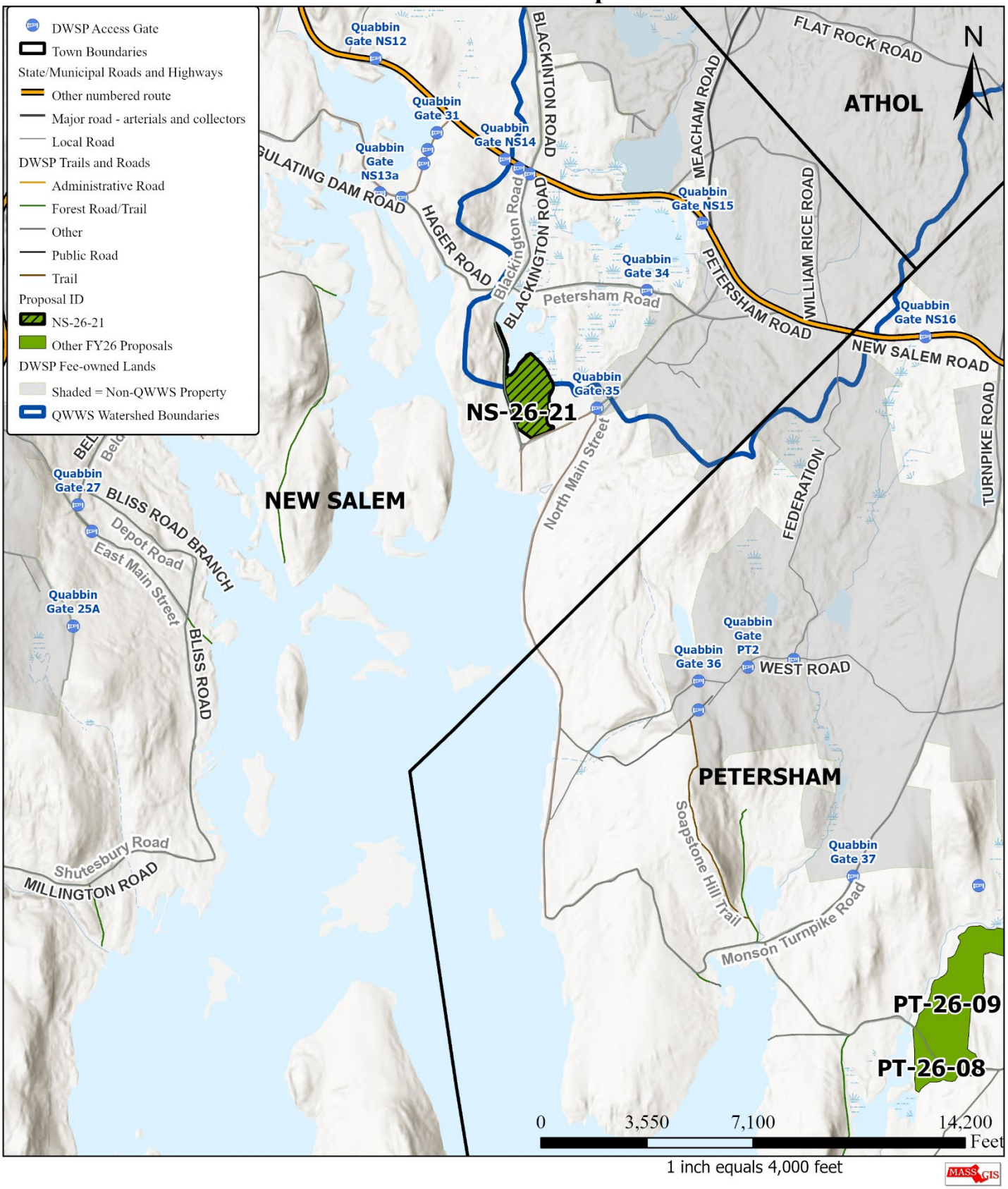
NS-26-21 -- Locus Map



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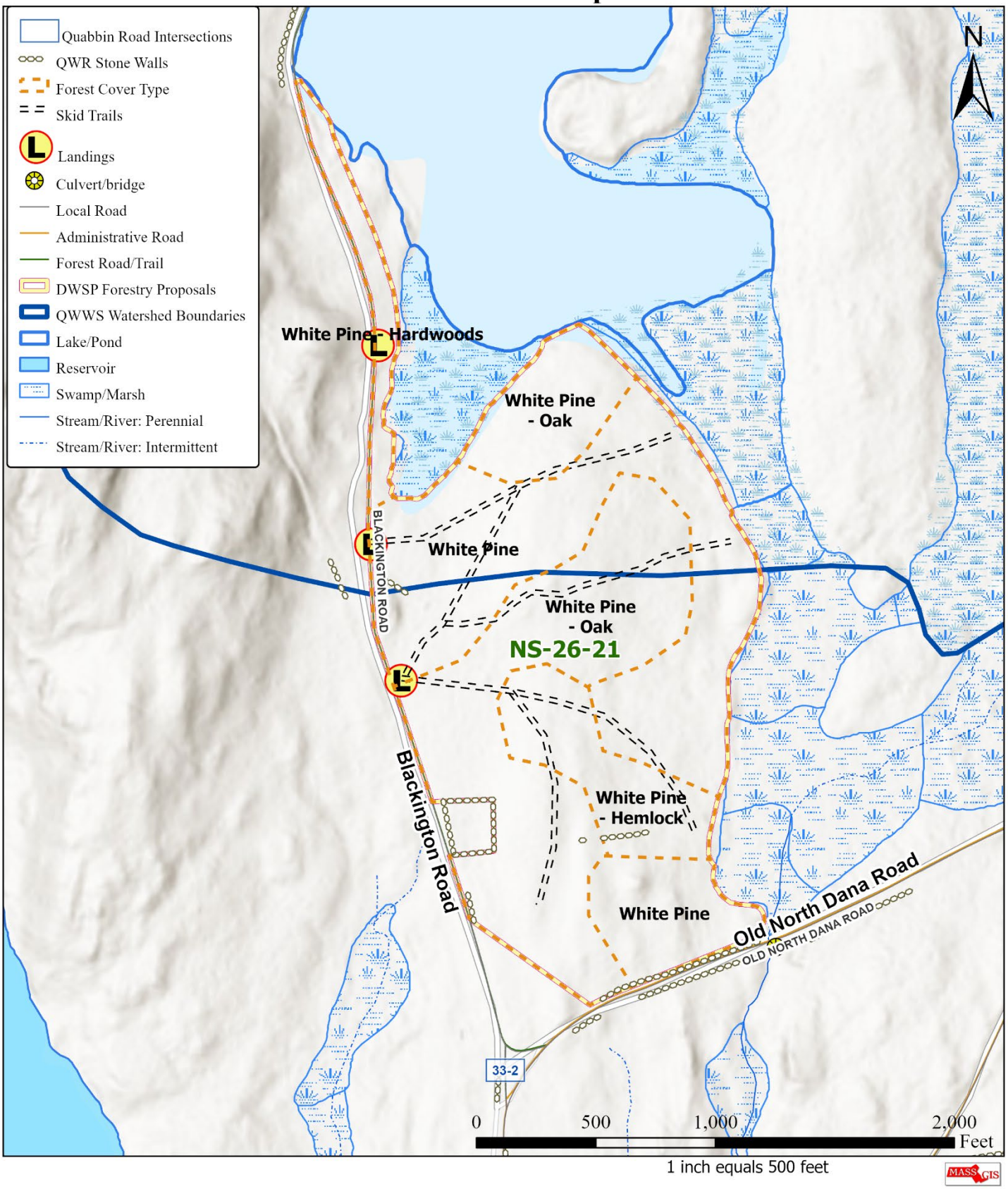
NS-26-21 -- Stand Map



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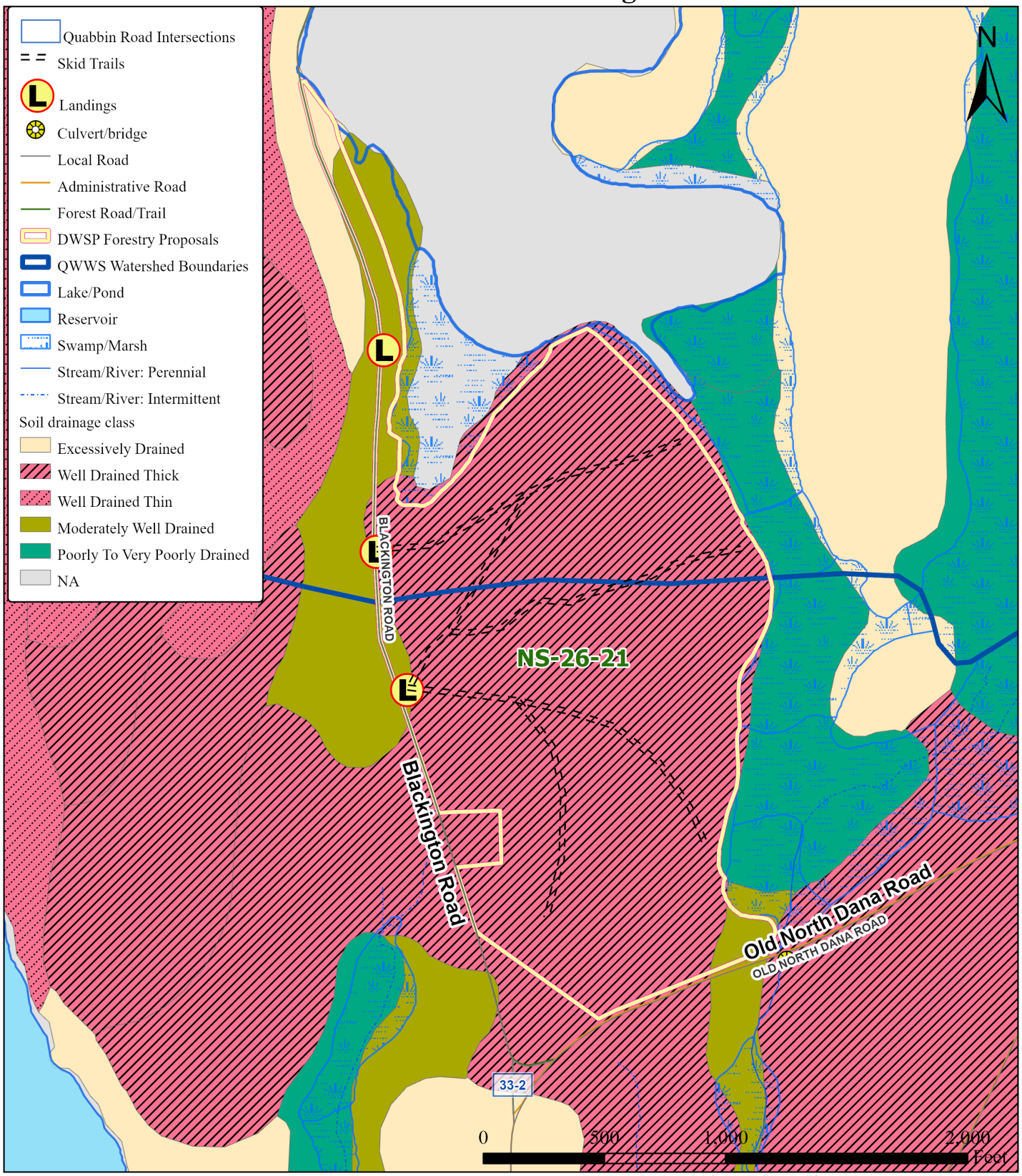
NS-26-21 -- Soil Drainage Classes



1 inch equals 500 feet

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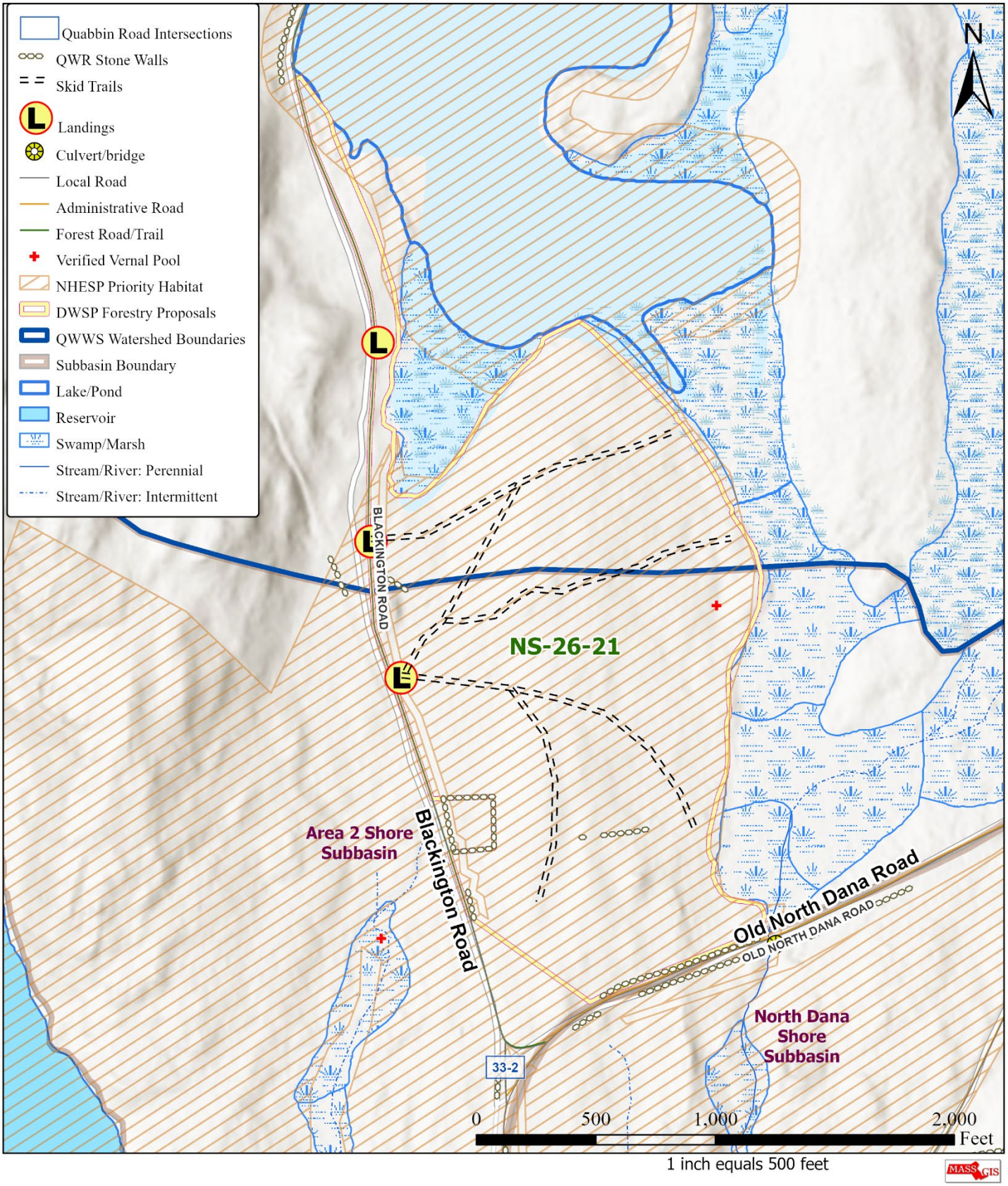
NS-26-21 -- Wetlands and Wildlife Resources



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NS-26-21 -- Cultural Resources and Landscape Characteristics