





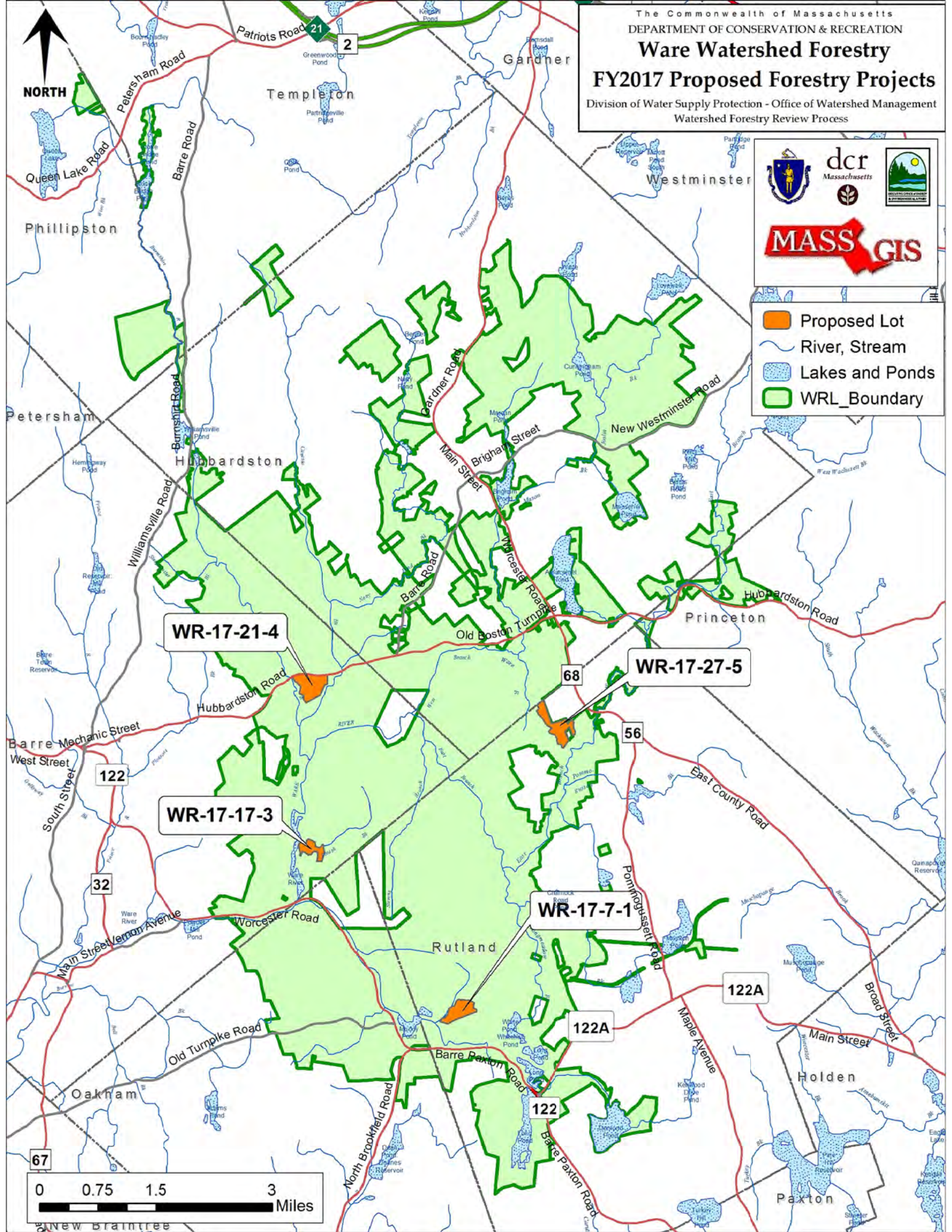
# Ware Watershed Forestry

## FY2017 Proposed Forestry Projects

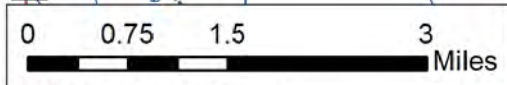
Division of Water Supply Protection - Office of Watershed Management  
Watershed Forestry Review Process



-  Proposed Lot
-  River, Stream
-  Lakes and Ponds
-  WRL\_Boundary



**NORTH**



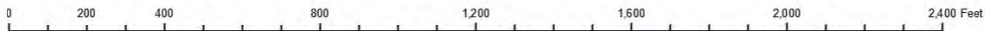
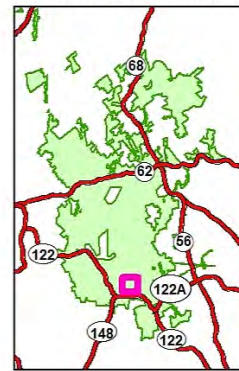


# FY2017 Proposed Forestry Project WR-17-7-1

## Ware River Reservation Proposed Forestry Lot Review

- |  |                      |  |   |  |                                |
|--|----------------------|--|---|--|--------------------------------|
|  | DCR Gate             |  | Protected Bird Site                     |  | Foundation/Cellar Hole         |
|  | DCR Barway           |  | NHESP Priority Habitats of Rare Species |  | Cultural Site: Railroad, Canal |
|  | Landing Site         |  | NHESP Certified Vernal Pools            |  | Stone Wall                     |
|  | WRL_StreamCrossings  |  | Potential Vernal Pool                   |  | Major Road                     |
|  | Proposed Skid Trail  |  | Perennial Stream                        |  | Town Paved & Gravel Road       |
|  | Proposed Lot         |  | Intermittent Stream                     |  | All-Weather Access Road        |
|  | Reservation Boundary |  | Open Water                              |  | Seasonal Access Road           |
|  | CFI Plot             |  | Wetland                                 |  | Cart road; Trail               |
|  | Rare Plant           |  | Watershed Boundary                      |  |                                |
|  | Vegetation Type      |  |   |  |                                |

Locus Map:  
Ware River Reservation



Map Scale - 1:4,000



**Massachusetts Department of Conservation and Recreation  
Division of Water Supply Protection, Office of Watershed Management  
*DCR-DWSP Forestry Lot Proposal***

**Project Title: wr-17-7-1**

Date: 2/4/2016

Forester: Canfield

***Site Information***

Watershed: Ware River

Acres: 48

***Boundary Description***

This lot is bound by Whitehall Rd to the south and east, the Central Ma Rail Trail to the south and west, a stream and wetland to the north and west, Pine Plains Rd to the north, and stone walls adjacent to a wetland to the east.

***General Lot Description***

***Overstory Type(s)***

Dominant: Red Pine, 23 acres

Secondary: White Pine/oak, 20 acres

***Understory Type(s)***

Dominant: Tree seedlings/saplings dominate site

Secondary:

***Description of forest composition/condition***

This lot consists of a 23 acre red pine stand to the west, and a 20 acre white pine/hardwood stand to the east.

Red pine - This is a planted red pine stand that has been harvested in at least twice. The overstory red pine is mature and good quality. This stand was part of harvest lot number 175, a shelterwood cut that removed 60 - 70 square feet basal area/acre of mostly low value red and white pine, and was completed in 6/92. The stand was revisited in 1998 as part of harvest lot #264, a seed tree cut, that removed approximately 60 square feet basal area/acre of sawlog red and white pine, leaving approximately 20 -30 square feet basal are/acre of mostly good quality healthy saw log size red pine. The stand now is two aged, with approximately 30 square feet basal are/acre of overstory good quality red pine. The sub canopy consists of low quality white pine, hemlock, and advanced regeneration hardwoods. Pitch pine is present in the area. Approximately 40 square feet BA/acre of the white pine is 5 - 12 inches dbh.

White pine/oak - This stand transitions from white pine dominated adjacent to the red pine stand to more oak/hardwood dominated uphill towards Pine Plains Rd. It is overstocked with approximately 120 square feet BA/acre, with approximately 40 square feet BA/ acre of acceptable growing stock. The white pine quality is low to fair. Oak quality is fair to good. Low quality red maple and black cherry are also present. Regeneration present is white pine, red maple, and oak.

Highbush and low bush blueberry, juniper, raspberry, blackberry, and hawthorn are present. This site is considered suitable for conversion to pitch pine/white oak barren.

Describe invasives present, assessment techniques used, and concerns Some buckthorn present at landing. Invasives not observed but are most likely present within stands.

### **Soils**

Excessively drained soils: 47%

Well drained soils: 53%

Poorly to Very Poorly drained soils: 0%

Further comments on soil: Soils present include 254B Merrimac fine sandy loam, somewhat excessively well drained, and 927C Montauk-Scituate-Canton association, extremely stony, well drained.

### **Wetlands**

Wetlands present?: Yes

Vernal pools present?: Yes

Streams present?: Yes

Are stream crossings required?: No

Is logging in filter strips planned?: Yes

Is logging in wetlands planned?: No

Further comments on wetlands: Variable width filter strip will be applied to the stream on the west edge of the lot so that some red pine can be harvested where it occurs within the filter strip. There is one known vernal pool and another potential vernal pool within the lot. All vernal pools will be buffered according to state BMP's and DWSP's CLMP.

### **Silviculture**

Acres in Intermediate cuts: 0

Acres in prep/establishment cuts: 0

Acres in Regeneration cuts: 15

Average regen opening size: 1

Maximum regen opening size: 4.5

Description of advance regeneration in proposal area: Beneath the red pine stand is a thick layer of low quality white pine, hemlock, and advanced regeneration hardwoods. The regeneration beneath the pine/oak stand is white pine, red maple, and mixed oak.

### **General comments on silviculture proposed:**

Within the red pine stand, the scattered overstory red pine will be removed while preserving as much of the abundant regeneration as possible. There is enough over 5 inch dbh regeneration currently present that a large opening will not be created as long as the regeneration is carefully protected. All skid trails will be marked and spaced throughout this stand to ensure that harvesting equipment stays on defined trails and regeneration in between trails is protected.

### ***Subwatershed Analysis***

<b>Sub- Watershed Number</b>	<b>Total DCR-owned Acres in this Sub-Watershed</b>	<b>Acres Regenerated on DCR Land in the last 10 years in this Sub-Watershed</b>	<b>Total DCR-owned Acres Remaining for Regenerating Up to the 25%/10 Year Limit for this Sub- Watershed</b>	<b>Acres in this Sub- Watershed that are part of this proposed lot</b>
8061	2654	76.5	587	45.5
8021	1147	60	227	2.5

### ***Additional comments on Subwatershed analysis***

Parker Subshed 8061 - 76.5 acres regenerated in last 10 years, 153.7 acres worked, lot 4385 currently sold, not harvested will add another 5.1 acres regenerated on 34 acres worked. Proposal wr-17-7-2, 137 acres proposed, is also within subshed. Portions of proposals wr-16-3-1 (5 acres) wr-16-4-2 (54 acres) and wr-16-10-3 (76 acres) are also located within the subshed. Rutland State Park Subshed 8021 - 60 acres regenerated on 234 acres worked in the last 10 years.

### ***Cultural Resources***

Foundations?: None known  
Cellar holes?: None known  
Stone Walls?: Yes  
Wells?: None known Dams?: None known  
Subwatershed Analysis  
Quarries?: Unknown  
Dams?: Unknown

### ***Comments on Cultural Resources:***

Stone walls are present. Stone walls may have to be crossed to access some areas. Barways are present and will be used where possible. DCR's Archeologist has identified this lot as Not Sensitive, with recommendations to flag, map and avoid any cultural resources that may be located.

### ***Wildlife Resources***

Nests?: None known  
Comments on any Unique or Unusual Sites or Habitats on the Lot: Site suitable for pine/oak barrens restoration per NHESP

### ***Rare/Endangered Species***

At the time of posting all available NHESP maps and data had been consulted and there were no Estimated or Priority Habitats for listed species found in the lot proposal area. Should new information become available DWSP will follow recommendations as needed

***Environmental Quality Engineering***

Comments on EQ Issues: No expected water/environmental quality issues for the proposed activity. Specific requirements and BMPs for reducing the potential threats from erosion or pollution will be included in the harvesting permit.

***Forest Access Engineering***

Gravel needed: No

Culverts needed: No

Work needed on permanent bridges: No

Landing work needed: Beaver Issue: No

Further comment on access needs: Existing infrastructure is expected to accommodate all access needs for this activity.

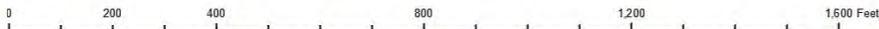
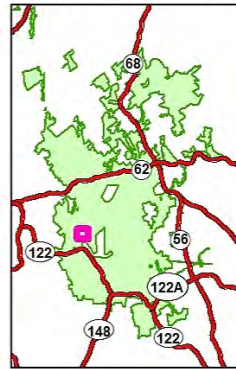


# FY2017 Proposed Forestry Project WR-17-17-3

## Ware River Reservation Proposed Forestry Lot Review

- DCR Gate
- DCR Barway
- Landing Site
- WRL\_StreamCrossings
- Proposed Skid Trail
- Proposed Lot
- Reservation Boundary
- CFI Plot
- Rare Plant
- Vegetation Type
- Protected Bird Site
- NHESP Priority Habitats of Rare Species
- NHESP Certified Vernal Pools
- Potential Vernal Pool
- Perennial Stream
- Intermittent Stream
- Open Water
- Wetland
- Watershed Boundary
- Foundation/Cellar Hole
- Cultural Site: Railroad, Canal
- Stone Wall
- Major Road
- Town Paved & Gravel Road
- All-Weather Access Road
- Seasonal Access Road
- Cart road; Trail

Locus Map:  
Ware River Reservation



Map Scale - 1:3,000



**Project Title: wr-17-7-3**

Date: 2/4/2016

Forester: Canfield

***Site Information***

Watershed: Ware River

Acres: 31

***Boundary Description***

This lot is bound by the Ware River and associated wetlands to the west, Potash Brook to the north, Coldbrook Rd to the east, and a stone wall and wetlands to the south.

***General Lot Description***

***Overstory Type(s)***

Dominant: White pine/hemlock, 27 acres

Secondary: White Pine, 4 acres

***Understory Type(s)***

Dominant: Tree seedlings/saplings dominate site

Secondary:

***Description of forest composition/condition***

This lot is mostly dominated by mature low quality white pine. The 4 acre stand adjacent to Coldbrook Rd to the south of the lot is overstocked low quality mature white pine with approximately 180 square feet BA/acre. There is approximately 20 square feet BA/acre of low quality co dominant hardwood, mostly black cherry and red maple, and approximately 10 square feet BA/acre of low quality co dominant European larch. Regeneration present includes red maple, white pine, and hemlock. Glossy buckthorn is present throughout, but particularly abundant close to Coldbrook rd.

The rest of the lot is more of a white pine/hemlock stand. Though still dominated by low quality mature white pine, there is a higher component of co dominant hemlock and mixed oak. Red maple, black cherry, paper birch, and muscledwood are also present. There is approximately an average of 170 square feet BA/acre. Approximately 20 square feet BA/acre is acceptable growing stock, most of which is red oak. There is also a component of large 36"+ dbh white pine throughout the stand, some of which appears to have relatively good form. The stand has been cut in as evidenced by old skid roads and stumps, but not any time recently. There is no harvest on record captured by the harvest database. Regeneration, consisting of white pine, mixed oak, hemlock, red maple, and red spruce is present in adequate abundance throughout most of the stand.

Shrubs and herbs present include high bush blueberry, ground pine, hay scented fern, hawthorn, and possible some native honeysuckle.

There is an old road that leaves Coldbrook Rd and parallels Potash Brook downhill to Sibley Cove Rd to the west. Some drainage ditches associated with the old road are present. There is

also an old drainage ditch from Coldbrook Rd headed the same direction near the proposed landing. It does not appear to be running any water.

***Describe invasives present, assessment techniques used, and concerns***

Glossy buckthorn is present throughout the lot, but most abundant close to Coldbrook Rd. A small amount Japanese barberry was also observed on the lot.

**Soils**

Excessively drained soils: 87%

Well drained soils: 0%

Poorly to Very Poorly drained soils: 13%

Further comments on soil: Soils present include 253B & C Hinckley loamy sand (approx. 70% of the lot) excessively well drained, and 254B Merrimac fine sandy loam (approx. 17% of the lot) somewhat excessively drained. Some muck soils are mapped adjacent to Potash Brook and the wetland to the north of the lot. Harvesting on these soils will be avoided where they occur.

***Wetlands***

Wetlands present?: Yes

Streams present?: Yes

Vernal pools present?: Yes

Seeps Present? None known

Are stream crossings required?: Yes

Are wetlands crossings required?: No

Is logging in filter strips planned?: Yes

Is logging in wetlands planned?: No

***Further comments on wetlands:***

A stream crossing will be required to access approximately 4 acres of old field white pine on the south end of the lot adjacent to Coldbrook Rd. It could be possible to build a second landing within that area to avoid crossing the stream, but the low volume and value of wood to be harvested within the stand makes that option economically difficult.

Two potential vernal pools were found in the northwest section of the lot. Vernal pools where they exist will be buffered according to state law and DWSP's CLMP. There is an old road that leaves Coldbrook Rd and parallels Potash Brook downhill to Sibley Cove Rd to the west. Some drainage ditches associated with the old road are present.

There is also an old drainage ditch from Coldbrook Rd headed the same direction near the proposed landing. It does not appear to be running any water.

***Silviculture***

Acres in Intermediate cuts: 0

Acres in prep/establishment cuts: 0

Acres in Regeneration cuts: 8

Average regen opening size: 1.5

Maximum regen opening size: 3

**Description of advance regeneration in proposal area:**

Regeneration consisting of white pine, mixed oak, hemlock, red maple, and red spruce is present in adequate abundance throughout most of the proposal area.

Shrubs and herbs present include high bush blueberry, ground pine, hay scented fern, hawthorn, and some native honeysuckle.

**General comments on silviculture proposed:**

The low quality white pine stand adjacent to Coldbrook Rd to the south of the lot will be a 2 to 3 acre opening. The size will be limited by filter strips from streams and the pond that are present. Some partial harvesting will be done in accordance to variable width filter strip standards where soils are well drained. At least 5 ft^2 basal area/acre will be retained for aesthetic purposes. Retained trees will be comprised of well-formed healthy crowned white pine where possible, as well as healthy crowned hardwood, particularly black cherry.

Several 0.5 to 2 acre groups will be established within the white pine/hemlock stand. At least two groups will be over an acre, with 4 to 6 groups between 0.5 and 1 acre. Groups will be targeted in areas where overstory white pine quality is the poorest. Many of the larger, good quality white pine stems will be retained in small groups to help meet our late-seral structure goals. Within groups, at least 5 ft^2 basal area/acre will be retained for aesthetic purposes. Retained trees will consist of healthy crowned oaks where possible.

**Subwatershed Analysis**

Sub- Watershed Number	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%/10 Year Limit for this Sub- Watershed	Acres in this Sub- Watershed that are part of this proposed lot
8063	2816	121	583	31

**Additional comments on Subwatershed analysis**

Ware Subshed 8063 - 121 acres regenerated in last 10 years on 186 acres worked. Lot # 4386 sold but not yet cut will add 4.5 acres regenerated on 21 acres worked. Proposed lot wr-16-3-1 (36 acres) is also within subshed.

**Cultural Resources**

- Foundations?: None known
- Cellar holes?: None known
- Stone Walls?: Yes
- Wells?: None known
- Quarries: Unknown
- Dams?: None known
- Dams?: Unknown

***Comments on Cultural Resources:***

A low wall along Coldbrook Rd will have to be breached to establish a landing on Coldbrook Rd. DCR's Archeologist has identified this lot as Not Sensitive, with recommendations to flag, map and avoid any cultural resources that may be located

***Wildlife Resources***

Nests?: Stick nests

Comments on any Unique or Unusual Sites or Habitats on the Lot: None

General Wildlife comments: Recent beaver activity noticed within the stand. Sapling oaks being harvested. Coyote, deer, and moose sign throughout the lot.

***Rare/Endangered Species***

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.

***Environmental Quality Engineering***

Comments on EQ Issues: No expected water/environmental quality issues for the proposed activity. Stream will be crossed in accordance with Land Management Plan requirements. Specific requirements and BMPs for reducing the potential threats from erosion or pollution will be included in the harvesting permit.

***Forest Access Engineering***

Gravel needed: No

Culverts needed: No

Work needed on permanent bridges: No

Landing work needed: Yes

Beaver Issue: No

Further comment on access needs: None.



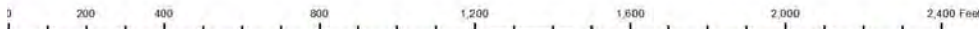
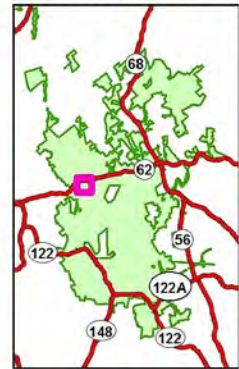
# FY2017 Proposed Forestry Project

## WR-17-21-4

### Ware River Reservation Proposed Forestry Lot Review

- |  |                      |  |   |  |                                |
|--|----------------------|--|---|--|--------------------------------|
|  | DCR Gate             |  | Protected Bird Site                     |  | Foundation/Cellar Hole         |
|  | DCR Barway           |  | NHESP Priority Habitats of Rare Species |  | Cultural Site: Railroad, Canal |
|  | Landing Site         |  | NHESP Certified Vernal Pools            |  | Stone Wall                     |
|  | WRL_StreamCrossings  |  | Potential Vernal Pool                   |  | Major Road                     |
|  | Proposed Skid Trail  |  | Perennial Stream                        |  | Town Paved & Gravel Road       |
|  | Proposed Lot         |  | Intermittent Stream                     |  | All-Weather Access Road        |
|  | Reservation Boundary |  | Open Water                              |  | Seasonal Access Road           |
|  | CFI Plot             |  | Wetland                                 |  | Cart road; Trail               |
|  | Rare Plant           |  | Watershed Boundary                      |  |                                |
|  | Vegetation Type      |  |   |  |                                |

Locus Map:  
Ware River Reservation



Map Scale - 1:4,000



**Project Title: wr-17-21-4**

Date: 3/2/2016

Forester: Canfield

**Site Information**

Watershed: Ware River

Acres: 67

**Boundary Description**

This is the area south of Rt 62 in Barre known as the Barre Heath. The northern boundary is rt 62, the western boundary is the Burnshirt River, the eastern boundary is Canesto Brook, and the southern boundary is a wetland.

**General Lot Description****Overstory Type(s)**

Dominant: White pine/pitch pine, 40 acres

Secondary: Oak, mixed, dry site, 7 acres

**Understory Type(s)**

Dominant: Dry site - blueberry/huckleberry

Secondary:

**Description of forest composition/condition**

Approximately 20 acres of this area is heath or young forest/brush. Another approximately 20 acres has been proposed as wr-16-21-5 and hopefully sold at this point. What is left is low quality white pine, with pockets of pitch pine, and 5 to 20 square feet BA/acre of mixed oak, mostly white oak. Red maple, grey birch, and aspen are also present.

**Describe invasives present, assessment techniques used, and concerns**

There is a heavy buckthorn presence throughout the lot, with barberry, bittersweet, burning bush, and autumn olive present near Rt 62.

**Soils**

Excessively drained soils: 97%

Well drained soils: 3%

Poorly to Very Poorly drained soils: 0%

Further comments on soil: Most of area appears to have been stripped of top soil years ago.

Whole are is situated on excellent quality gravel (where exposed is 3" minus). There is also evidence of past fires over much of site. 58 acres of the proposal 253 Hinckley loamy sand associations which are excessively drained. There are muck soils that are mapped adjacent to wetlands which will be avoided, including an old landing on the road adjacent to the stream to the west of the lot. That road and landing are not proposed to be used for the timber harvest, but may be needed for a prescribed burn.

**Wetlands**

Wetlands present?: Yes

Streams present?: Yes

Vernal pools present?: Yes  
 Seeps Present? None known  
 Are stream crossings required?: No  
 Are wetlands crossings required?: No  
 Is logging in filter strips planned?: Yes  
 Is logging in wetlands planned?: No

**Further comments on wetlands:**

Multiple vernal pools are present. Pools were confirmed by NR last year during review on lot wr-16-21-5.

**Silviculture**

Acres in Intermediate cuts: 0  
 Acres in prep/establishment cuts: 0  
 Acres in Regeneration cuts: 25  
 Average regen opening size: 25  
 Maximum regen opening size: 3

**Description of advance regeneration in proposal area:**

Information not applicable for this habitat restoration project. Goal will be to suppress regeneration and encourage heath habitat through burning

**General comments on silviculture proposed:**

This is a heath restoration project to remove current forest where it exists and encourage heath habitat using mowing and prescribed burning.

Ideally all white pine, red maple, and black cherry on the site would be harvested. Oak, particularly white, will be retained where present to at least 5 ft<sup>2</sup> BA/acre. Where oak stocking is higher, lower quality oak may be harvested until canopy closure is 40% or less. Aspen will be retained to avoid root sprouting.

With existing heath and young forest, and lot 4389 (wr-16-21-5), an exemption from DWSP's current policy of not creating openings larger than 5 acres may be required. Draft CLMP may allow for this type of habitat management without an exemption.

**Subwatershed Analysis**

Sub- Watershed Number	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%/10 Year Limit for this Sub- Watershed	Acres in this Sub- Watershed that are part of this proposed lot
8058	2158	65.7	473.8	27

***Additional comments on Subwatershed analysis***

Sub-Watershed # 8058 - See also proposed lot wr-16-31-6 (74 acres in subshed) and wr-16-21-5 (20 acres in subshed)

***Harvesting Limitations***

Forwarder required: No

Feller/processor required: No

Steep slopes present: No

Comments on harvesting limitations: Due to the habitat objectives, whole tree harvesting with utilization down to at least 3" is preferred.

***Cultural Resources***

Foundations?: None known

Cellar holes?: None known

Stone Walls?: Yes

Wells?: None known

Quarries: Unknown

Dams?: None known

***Comments on Cultural Resources:***

Stonewalls are present and will be protected. Existing barways will be used where necessary to access lot. DCR's Archeologist has identified this lot as Not Sensitive, with recommendations to flag, map and avoid any cultural resources that may be located.

***Wildlife Resources***

Nests?:None known

Comments on any Unique or Unusual Sites or Habitats on the Lot: Heath of "global significance" is present on the lot. Object of the harvest will be to maintain and expand heath characteristics of the area.

General Wildlife comments: Heavy moose and deer activity.

***Rare/Endangered Species***

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.

***Environmental Quality Engineering***

Comments on EQ Issues: No expected water/environmental quality issues for the proposed activity. Specific requirements and BMPs for reducing the potential threats from erosion or pollution will be included in the harvesting permit.

***Forest Access Engineering***

Gravel needed: No

Culverts needed: No

Work needed on permanent bridges: No

Landing work needed: Yes

Beaver Issue: No

Further comment on access needs: Existing infrastructure is expected to accommodate all access needs for this activity.



**Project Title: wr-17-27-5**

Date: 2/4/2016

Forester: Canfield

***Site Information***

Watershed: Ware River

Acres: 62

***Boundary Description***

This lot is bound by Intervale Rd to the south, around a house lot, along an abutting property to the north, and a brook to the west. No boundary evidence was seen in the field around the house lot. That line will need to be located, hopefully with the help of the home owner, and buffered off of sufficiently if exact location of boundary is unclear.

***General Lot Description***

***Overstory Type(s)***

Dominant: White pine/hardwood, 38 acres

Secondary: White pine/hemlock, 24 acres

***Understory Type(s)***

Dominant: Tree seedlings/saplings dominate site

Secondary:

***Description of forest composition/condition***

No past harvests are recorded on this lot, though old skid trails and stumps are present.

The white pine/hardwood stand adjacent to Intervale Rd is mostly mature old field pine, white red and white oak, red maple, aspen, and pitch pine are also present. The quality is low to fair. The stand is over stocked, with an average BA/acre of 160 square feet. Pitch Pine was present throughout the pine stand, especially near Intervale Rd. Much of the PP has been outcompeted by white pine and is dead or severely declining. Several large PP are still alive and fairly healthy.

The white pine/hemlock stand is fully stocked. The overall quality is low. The average BA/acre is approximately 120 square feet, with the majority of BA being hemlock. The hemlock looks healthy

with no HWA observed. White pine, red and white oak, and red maple are also present.

Mountain Laurel, low bush blueberry, ground pine are present.

***Describe invasives present, assessment techniques used, and concerns***

No invasive shrubs observed on the lot but may be present. Small groups of Mountain Laurel present.

***Soils***

Excessively drained soils: 1%

Well drained soils: 80%

Poorly to Very Poorly drained soils: 18%

Further comments on soil: Soils present include 927 C Montauk-Scituate-Canton association extremely stony (roughly 64% of lot) moderately well drained, 915E Mauntauk-Canton association extremely stony (roughly 13% of lot) well drained, 902E Charlton-Paxton association extremely stony (roughly 3% of lot) well drained, and 253B Hinckley loamy sand (roughly 1% of lot) excessively drained.

918B Ridgebury-Whitman association extremely stony (roughly 12% of lot) poorly drained soil and some muck soils are mapped adjacent to the brook to the west of lot and adjacent to interval road to the east of the house lot. Harvesting on these soils will be avoided as much as possible where they exist.

### ***Wetlands***

Wetlands present?: Yes

Streams present?: Yes

Vernal pools present?: Yes

Seeps Present? Yes

Are stream crossings required?: Yes

Are wetlands crossings required?: Yes

Is logging in filter strips planned?: Yes

Is logging in wetlands planned?: No

### ***Further comments on wetlands:***

A small seasonally wet area exists directly behind the landing. The area was crossed in previous logging operations. It will be avoided as much as possible during this operation but equipment may have to cross a narrow piece (20-50') of it to access the lot. Bridges and/or brush will be used to armor any crossing. A variable width filter strip will be applied to the stream on the western edge of the lot. Some harvesting and a skid trail may be located on the outside edge of the filter strip, especially where the boundary line gets close to the filter strip. There is at least one potential vernal pool within the lot. All vernal pools will be buffered according to state BMP's and DWSP's CLMP. A seep was found just south of the boundary line of the abutter to the north and will be buffered appropriately.

### ***Silviculture***

Acres in Intermediate cuts: 0

Acres in prep/establishment cuts: 0

Acres in Regeneration cuts: 10

Average regen opening size: 1

Maximum regen opening size: 2

### ***Description of advance regeneration in proposal area:***

Regeneration in the white pine/hardwood stand is adequate and consists of white pine, hemlock, oak, and red maple. Regeneration is sparser under the white pine/hemlock stand, and consists mainly of hemlock, though pockets of white pine and oak regeneration are present.

### ***General comments on silviculture proposed:***

Half to 2 acre group openings will be established. Larger groups will be targeted where low quality white pine dominates. One or two up to 2 acre groups will be located in the white pine

hardwood stand, along with several openings of about an acre. Surviving pitch pine will be released as much as possible. All groups will retain 5 - 10 ft<sup>2</sup> of healthy, large crown trees, especially oak where possible. The smaller openings will be established mostly in the white pine/hemlock stand and will target patches of low quality white pine, hemlock, and red maple, while retaining as much oak and well-formed white pine as possible.

***Subwatershed Analysis***

<b>Sub- Watershed Number</b>	<b>Total DCR-owned Acres in this Sub-Watershed</b>	<b>Acres Regenerated on DCR Land in the last 10 years in this Sub-Watershed</b>	<b>Total DCR-owned Acres Remaining for Regenerating Up to the 25%/10 Year Limit for this Sub- Watershed</b>	<b>Acres in this Sub- Watershed that are part of this proposed lot</b>
8039	2159	81	458	16

***Additional comments on Subwatershed analysis***

East Branch Ware Subshed 8006 - 16 acres regenerated on 43 acres worked in last 10 years.  
 West Branch Ware Subshed 8039 - 81 acres regenerated on 86 acres worked in last 10 years.

***Harvesting Limitations***

Forwarder required: No  
 Feller/processor required: No  
 Steep slopes present: No  
 Comments on harvesting limitations: None

***Cultural Resources***

Foundations?: None known  
 Cellar holes?: Yes  
 Stone Walls?: Yes  
 Wells?: None known  
 Quarries: Unknown  
 Dams?: None known

***Comments on Cultural Resources:***

DCR’s Archeologist has identified this lot as Not Sensitive, with recommendations to flag, map and avoid any cultural resources that may be located.

***Wildlife Resources***

Nests?: Stick nests  
 Comments on any Unique or Unusual Sites or Habitats on the Lot: None.  
 General Wildlife comments: None.

***Rare/Endangered Species***

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.

***Environmental Quality Engineering***

Comments on EQ Issues: None.

***Forest Access Engineering***

Gravel needed: No

Culverts needed: No

Work needed on permanent bridges: No

Landing work needed: No

Beaver Issue: No

Further comment on access needs: Existing infrastructure is expected to accommodate all access needs for this activity.