

**Massachusetts Department of Conservation and Recreation**  
**Division of Water Supply Protection, Office of Watershed Management**  
*Forest Management Project Summary*

**Project Title: Lot 5298**

**DWSP Harvest Permit Number: 5298**

**DWSP Proposal ID: WA-21-141/248**

**DCR Forest Cutting Plan File Number: 282-32500-22**

**Site Information**

**Watershed:** Wachusett

**Town(s):** Sterling

**Acres:** 75

**Nearest Road:** Justice Hill Road

**Natural Heritage Atlas overlap?:** No

**Public Drinking Water Supply Watershed?:** Yes

**Forest Types:** White pine/oak, Mixed hardwoods

**ACEC?:** No

**Soils:** Paxton fine sandy loam, Woodbridge fine sandy loam

**Wetland Resources:** Wetlands and an intermittent stream

**Vernal Pools:** There's one potential vernal pool.

**Harvest Information**

Harvest Start Date: 08/27/2021

Harvest End Date: 08/27/2023

Number of Wetland Crossings: 4

Number of Stream Crossings: 2

**Best Management Practices Applied**

Stream Crossings: SC-1 was not used. SC-2 was poled when it was appropriately dry.

Filter Strips: There is no harvesting in the filter strip.

Wetland Crossings: WC-1 and WC-2 were not used. WC3 and WC-4 were primarily crossed when dry and corduroy was employed.

Harvesting in Wetlands: There was no harvesting in wetlands.

**DWSP Forester supervising this harvest**

Name: Greg Buzzell

Forester License #: 025

Phone #: 774-281-1841

Email: greg.buzzell@mass.gov

## **NARRATIVES**

### **General Description/Forest Composition/History:**

This proposed lot is the remnants of two previously reviewed proposed lots...WA-10-141 and WA-17-248. WA-10-141 was marked and sold as Lot #5248 in 2014 and was operated from June to November of 2016. Work only occurred in the portion of the lot south of the stone wall that divides this area in half. No cutting occurred in the 22 acres north of the wall.

WA-17-248 was marked and sold as Lot 5264 in 2016 and was operated in May and June of 2017. Work primarily occurred in the north and north-central part of this area. Within the 51 acres in the south and southeast side of the lot, 3 of 9 overstory removal areas were completed. Since the remaining portions of these two lots directly abut each other, it seemed reasonable to combine them into one new operation.

Here's the description for WA-17-248:

This working unit is part of the large Davis Farm property that was acquired in 1996. This specific piece of the Davis Farm is known as the Stuart Pasture and as is typical for abandoned pastures as it is dominated by low quality white pine. A timber sale in the early 1990s seems to have removed the best quality pines and left the trees with multi-stemmed crowns. Along with white pine, the overstory is dominated by black birch, red oak, red maple and black cherry. Paper birch and bigtooth aspen are found as well and are especially prevalent in the western part of the area. The logging in the early 1990s has led to a well developed midstory of black birch, red maple, red oak and paper birch poles. There is good advance regeneration present as well and is comprised of red oak, red maple, white pine, white oak, hickory, black cherry and white ash. Sampling found adequate regeneration in 66% of the plots with marginal regeneration in 17% of the plots. Oak regeneration was present in 75% of the plots.

The description for WA-10-141 is similar as it has a similar history as a former pasture and was logged prior to MDC acquisition leading to good advance regeneration. In general, the quality of the white pine is better than in the other area and there is some very good quality red oak on the northeast facing slope.

### **Site Selection:**

The ideal watershed protection forest is one which best serves the function of the land as a producer of high quality drinking water in both short- and long-term. This forest must be vigorous and diverse in tree species and ages, be actively accumulating biomass and actively regenerating. Such a forest will be ideally suited to be resilient to and quickly recover from small- and large-scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

### **Silvicultural Objectives:**

The plan for the remainder of Lot 5264 (WA-17-248) is to complete the harvesting of the overstory openings that remain. There are 9 openings ranging in size from 1/3rd to 1.5 acres that total 8.6 acres. Three openings totaling 4.7 acres were cut in 2017. Following this operation there will be 13.3 acres (8.6+4.7) of young forest in these 51 acres which is 26% of the area.

Lot 5248 was proposed for FY 2010 and the intent was to create overstory openings in the typical size range from about 1/5th to 2 acres in size in order to release advance regeneration resulting in a new young age cohort on up to 1/3rd of the area. When this lot was finally marked and sold in 2014 we were under silvicultural restrictions coming out of the moratorium that resulted in the STAC report and our response in the "From Here Forward" document. This temporary restriction limited all overstory openings to less than 1/2 acre. This restriction was lifted in time for the FY 2015 round of lot proposals. Given how faded

the marking paint is in this area is, the prudent course is to mark all-new openings in these 22 acres. As was the original intent for this area, the advance regeneration will be released by removing the overstory in patches that range from 0.5 to 2 acres in size totaling 7.6 acres resulting in young forest present on 33% of the area.

**Cultural Resources:**

This area has been assessed by the DCR Archeologist for both known sites of cultural or archeological importance as well as for potential use by pre-Contact Native Americans.

**Wildlife/Rare or Endangered Species:**

Moose sign is routinely found on this hill.

**FIGURES**

**Figure 1. Forest Cutting Plan**

**Figure 2. Map of harvest area showing approximate boundary, proposed openings and other features**

**Figure 3. General locus map showing the location of the proposed timber harvest**

**Figure 4. Pre-Harvest Photographs, A-D**

**Figure 5. Post-Harvest Photographs, A-C**

Figure 1. Forest Cutting Plan

# Forest Cutting Plan

and Notice of Intent under M.G.L.  
Chapter 132 – The Forest Cutting  
Practices Act, 304 CMR 11.00  
(Effective Date: 1/1/04)

## For DCR Use Only:

|                |       |                 |               |
|----------------|-------|-----------------|---------------|
| File Number    | _____ | Case No.        | _____         |
| Date Rec'd     | _____ | Nat. Hert.      | _____ / _____ |
| Earliest Start | _____ | Nat. Hert. Imp. | _____         |
| River Basin    | _____ | Pub. Dr. Wat.   | _____         |
| Gen. Obj.      | _____ | ACEC            | _____         |

Site Information

## Location

Town Sterling Lot 5298  
Road Justice Hill Road  
Acres 75 Proposed Start Date 9/01/21  
Vol. MBF 95.5 Vol. Cds. 138 Vol. Tons 242

## Plan Preparer

Name Russell Wilmot  
Address 180 Beaman St.  
  
Town, State, Zip West Boylston, MA, 01583  
Phone 508-792-7806 Ext 318  
Type of Preparer Mass. Licensed Forester  
\*Mass. Forester License # 426  
\*Required for land under Ch61, Ch61A or Forest Stewardship

## Landowner

Name DCR/DWSP/OWM Wachusett/Sudbury  
Mailing Address 180 Beaman St.  
  
Town, State, Zip West Boylston, MA 01583  
Phone 608-792-7806  
Ch61 ☐ Ch61A ☐ Stew ☐ \*Case # \_\_\_\_\_  
Est. Stumpage Value \_\_\_\_\_

## Licensed Timber Harvester\*\*

Name Will be provided when known  
Address \_\_\_\_\_  
Town, State, Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Mass. Lic. Harvester # \_\_\_\_\_

\*\*This information may be supplied after the plan is approved, but before work begins.

Best Management Practices

## Stream Crossings

| Indicate location on map | SC-1 | SC-2 | SC-3 | SC-4 |
|--------------------------|------|------|------|------|
| Type of Crossing         | BR   | PO   |      |      |
| Existing Structure       | No   | No   |      |      |
| Type of Bottom           | ST   | MU   |      |      |
| Bank Height (ft)         | 1'>  | 1'>  |      |      |
| Stabilization            | CO   | CO   |      |      |

## Wetland Crossings

| Indicate location on map | WC-1  | WC-2  | WC-3  | WC-4  |
|--------------------------|-------|-------|-------|-------|
| Length of Crossing       | 20'   | 100'  | 30'   | 100'  |
| Mitigation               | OT    | OT    | FR/DR | FR/DR |
| Stabilization            | ST/CO | ST/CO | CO    | CO    |

## Filter Strips

| Indicate location on map | FS-1 | FS-2 | FS-3 | FS-4 |
|--------------------------|------|------|------|------|
| Width (50', 100', or VA) | VA   |      |      |      |

## Harvesting in Wetlands

| Indicate location on map | HW-1 | HW-2 | HW-3 | HW-4 |
|--------------------------|------|------|------|------|
| Forest Type (see pg 2)   |      |      |      |      |
| Acres to be Harvested    |      |      |      |      |
| Resid. Basal Area (>50%) |      |      |      |      |

## Service Forester Comments

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Codes

| Type of Preparer   | Type of Crossing | Stabilization | Mitigation | Type of Bottom | Note:  |
|--------------------|------------------|---------------|------------|----------------|--|
| LF Mass. Lic. For. | CU Culvert       | SE Seed       | FR Frozen  | LE Ledge       | Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin. Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information. |
| TH Lic. Tim. Har   | BR Bridge        | MU Mulch      | DR Dry     | ST Stony       |  |
| TB Timber Buyer    | FO Ford          | CO Corduroy   | OT Other   | MU Mud         |  |
| LO Landowner       | PO Poled         | ST Stone      |            | GR Gravel      |  |
| OT Other           | OT Other         | HB Hay Bales  |            | OT Other       |  |
|                    |                  | OT Other      |            |                |  |

If Other (OT) is used in any category an explanation must be given on an attached narrative page

**Products to be Harvested\***

| Species      | Mbf/Cds |                       | Mbf/Cds |
|--------------|---------|-----------------------|---------|
| White Pine   | 68      | Red Maple             |         |
| Red Pine     |         | Sugar Maple           |         |
| Pitch Pine   |         | Red Oak               | 21      |
| Hemlock      |         | Black Oak             | 6       |
| Spruce       |         | White Oak             | .5      |
| Other Sftwd. |         | Other Hdwd.           |         |
| White Ash    |         | <b>Total Mbf</b>      | 95.5    |
| Beech        |         | <b>Cordwood (Cds)</b> | 138     |
| White Birch  |         | <b>SW Pulp (Tons)</b> | 242     |
| B & Y Birch  |         | <b>HW Pulp (Tons)</b> |         |
| Black Cherry |         | <b>Chips (Tons)</b>   |         |

\*Note: Volumes and values indicated in the Plan are as reported by the plan preparer and have not been independently verified by the service forester upon approval. **Mbf** = thousand board feet.

**Cutting Standards**

| Indicate location on map | ST-1  | ST-2  | ST-3 | ST-4 |
|--------------------------|-------|-------|------|------|
| Forest Type              | WO    | MO    |      |      |
| Acres                    | 68    | 7     |      |      |
| Landowner Objective      | LT    | LT    |      |      |
| Designation of Trees     | CT    | CT    |      |      |
| Type of Cut              | SH    | SH    |      |      |
| Source of Regeneration   | AD/SE | AD/SE |      |      |

**Landowner Signature**

The most important information on a cutting plan is the Landowner's objective, as this will determine which trees will be harvested and which will remain; **this decision will also determine the future condition of the forest for decades to come.** After having read the Massachusetts Forest Cutting Plan Information Sheet on page one, indicate your objective by checking the appropriate box below.

**LT - Long-term Forest Management**

Planned management of the forest to achieve one or more of the following objectives: produce immediate and maximize long-term income, enhance wildlife habitat, improve recreational opportunities, protect soil and water quality, or produce forest specialty products.

**ST - Short-term Harvest**

Harvest of trees with the main intention of producing short-term income with minimal consideration given to improving the future forest condition, which often results in a forest dominated by poor quality and low value species.

I (we) have read the Massachusetts Cutting Plan Information Sheet, and am aware of my (our) management options.

I (we) hereby certify that I (we) have the legal authority to carry out the operation described above.

I (we) certify that I (we) have notified the Conservation Commission in the town in which the operation is to take place and the abutters of record within two hundred feet of the area to be harvested.

I (we) understand that the volumes and values (Ch61 only) in this plan have not been independently verified by the service forester upon approval and will report final values and volumes to the Director or his/her agent if the final figures differ from those reported.

Signature of landowner(s)

Date

**Determination and Status**

Approved ☐ Disapproved ☐ Expires \_\_\_\_\_

Cutting Plan

Signature of Service Forester/Director's Agent

Date

Extension 1 ☐ 2 ☐ Expires / / Ser. For. Ints. / /Amendment App 1 ☐ Dis 1 ☐ App 2 ☐ Dis 2 ☐ / /**Final Report and Comments**

I hereby certify that the afore described Forest Cutting Plan and all relevant statutes have been substantially complied with.

Signature of Service Forester/Director's Agent

Date

| Forest Types  |                 |                |                            | Designation of Trees | Type of Cut                  | Intermediate Harvester: | Source of Regeneration |
|---------------|-----------------|----------------|----------------------------|----------------------|------------------------------|-------------------------|------------------------|
| WP White Pine | HK Hemlock      | OM Mixed Oak   | CT Cut Tree                | SH Shelterwood       | CT Commercial Thin           | AD Advanced             |                        |
| WK WP/Hem     | IH Hem/Hdwd     | RM Red Maple   | LT Leave Tree              | ST Seed Tree         | NT Non Com Thin              | SE Natural Seed         |                        |
| WH WP/Hdwd    | BC Black Cherry | BE Beech       | SB Stand Boundary          | CC Clear Cut         |                              | PL Plant                |                        |
| WO WP/Oak     | BB Bee/Bir/Map  | SF Spruce/Fir  | OT Other                   | SE Selection         | <b>Non-Standard Systems:</b> | CO Coppice              |                        |
| RP Red Pine   | OH Oak/Hdwd     | SM Sugar Maple | <b>Landowner Objective</b> | SA Salvage           | HG Highgrade*                | DS Direct Seed          |                        |
| SR Red Spruce | OR N Red Oak    | PP Pitch Pine  | LT Long-term Mgt.          | SN Sanitation        | DL Diameter Limit*           | OT Other                |                        |
|               |                 |                | ST Short-term Har.         |                      | OT Other*                    |                         |                        |

\*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page pg 4 of 5

# Forest Cutting Plan

## Narrative Page

Use only if further explanation is required of information on pages one or two or if "other" was used in any category.

Landowner: \_\_\_\_\_

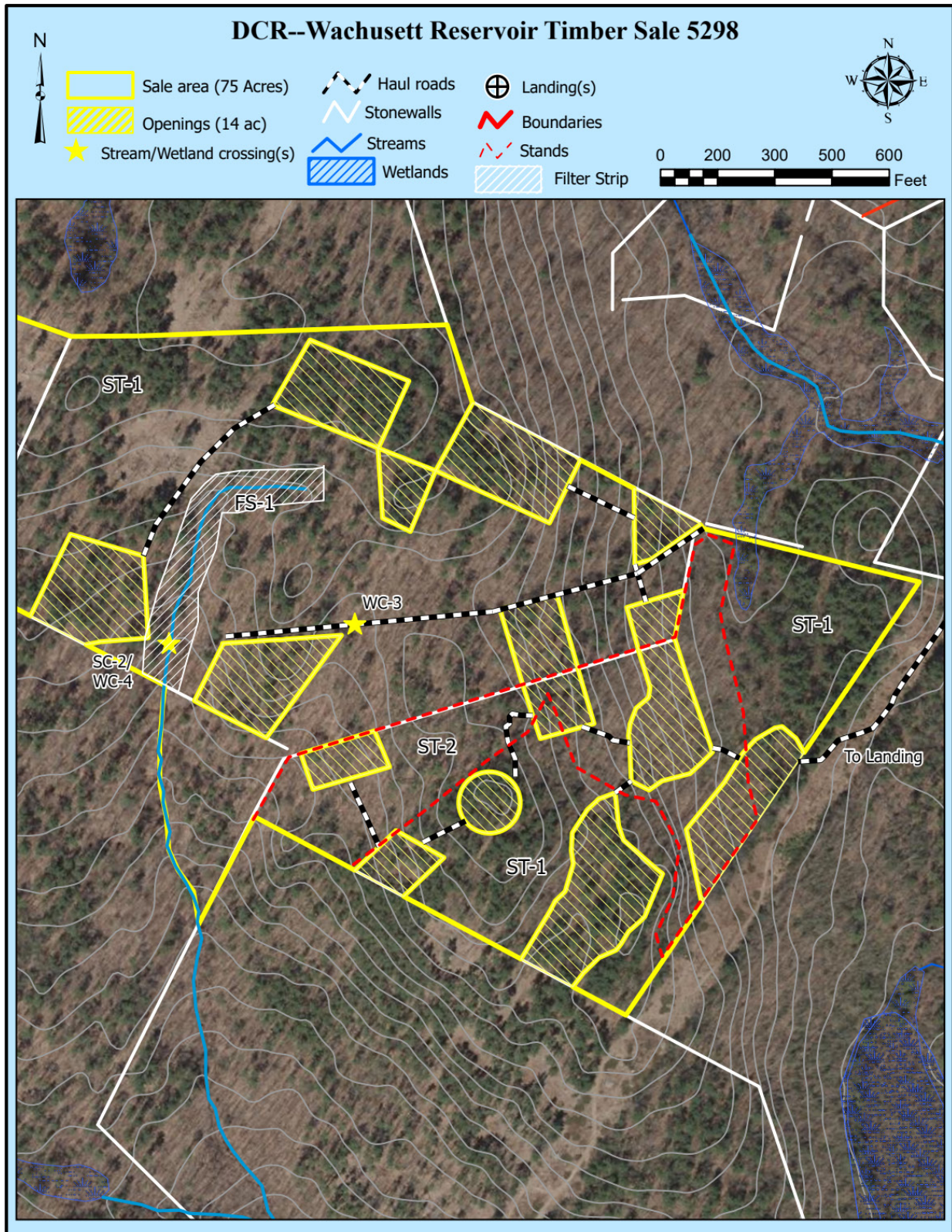
Town: \_\_\_\_\_

File Number: \_\_\_\_\_

|                     |   |
|---------------------|---|
| <b>B M P s</b>      | <p><u>WC-1 is on the powerline access gravel road. Gravel or poles will be placed on this crossing.</u></p> <p><u>SC-1 (Rocky Brook)/WC-2 are on a powerline road that has preexisting gravel and is regularly wet and SC-1 will require bridging. The approaches to the stream will be protected with gravel and/or poles unless the ground is adequately frozen or snow-covered.</u></p> <p><u>WC-3 is an isolated unmapped wetland area at the base of a slope on a preexisting road and will be protected with wood (corduroy and/or tops) as needed if it is not dry or frozen.</u></p> <p><u>SC-2 does not originate from a wetland but will be treated as if it were. This SC-2/WC-4 crossing (on a preexisting road) will only be utilized if the is dry, frozen, or snow packed. Otherwise a haul road North of the stream will be used.</u></p> |
| <b>Silviculture</b> | <p><u>In order to release advance regeneration, 13 openings in the overstory are being created, covering 14 acres. These openings range from .42 acre to 2 acres in size with an average of 1.1 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of white pine, oaks, and other hardwoods. No thinning will occur between any of these patches.</u></p>  |
| <b>Object</b>       | <p><u>The objective of this operation is to diversify the age structure of the forest by removing the overstory in patches thereby releasing the advance regeneration. The current age structure is limited with an insufficient component of young forest.</u></p>   |
| <b>Other</b>        | <p><u>The landing of this site will be right next to timber sale #282-22531-20. An alternate landing is located about 3700' to the west on Justice Hill Road. This site has been used as a landing several times previously.</u></p> <p><u>The powerline has several wet spots in the road that will be graveled, or tops may be place to fill them in. Some water bars may be installed on the powerline as needed.</u></p> <p><u>All haul roads between openings have been flagged along with the crossings. The haul road from the western landing has not been flagged. It follows the path that has been used for previous operations in this area and then follows skid trails through Lot 5264 (CP #282-8469-17) that was cut in 2017.</u></p> <p><u>FS-1 No cutting will take place.</u></p>  |

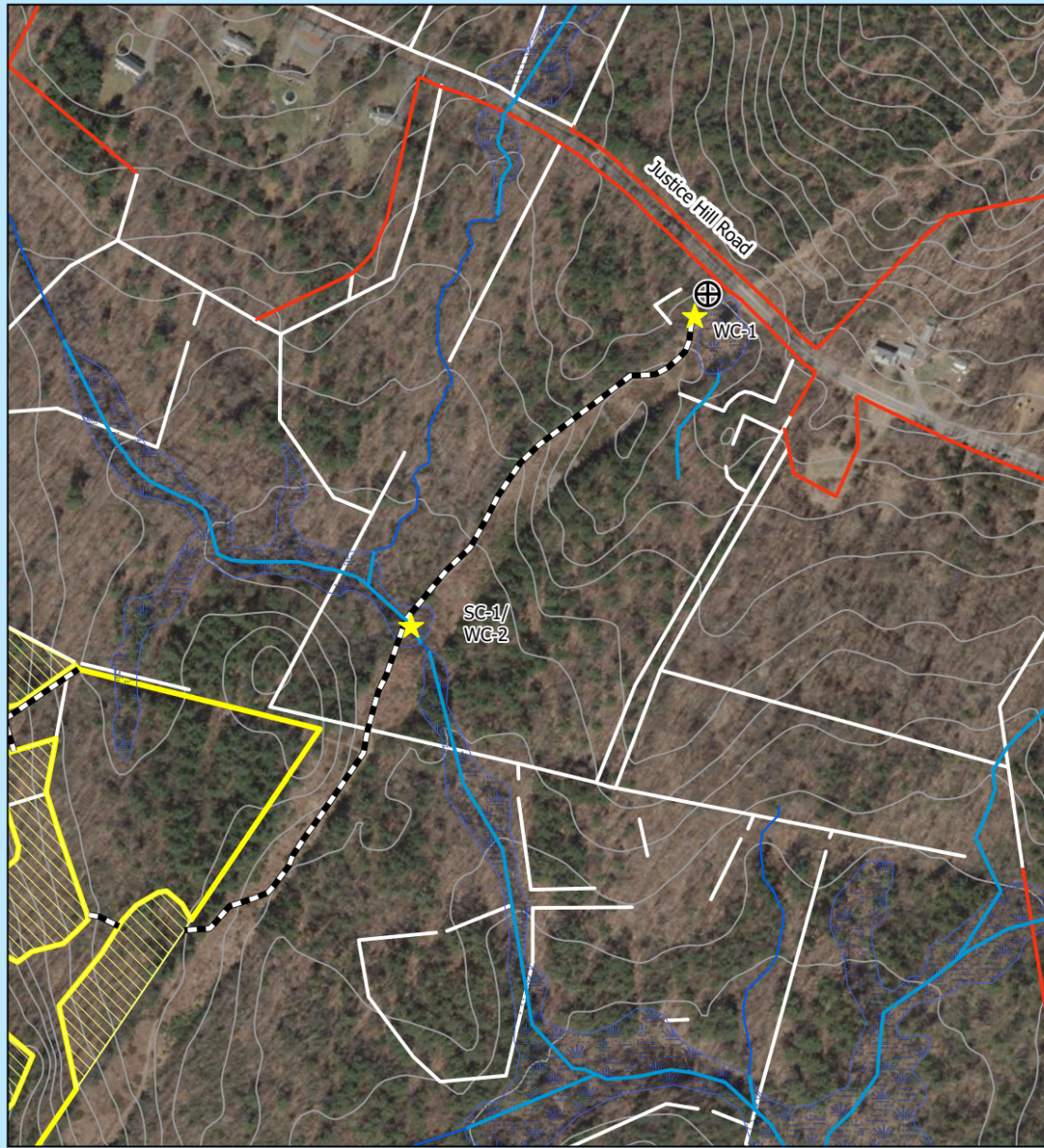


Figure 2. Map of harvest area showing approximate boundary, proposed openings and other features





# DCR--Wachusett Reservoir Timber Sale 5298 (2)





**DCR--Wachusett Reservoir (Alternate landing for)  
Timber Sale 5298 (282-32500-22)**



-  Sale area (75 Acres)
-  Wetlands

-  Haul roads
-  Stonewalls
-  Streams
-  Landing(s)
-  Boundaries

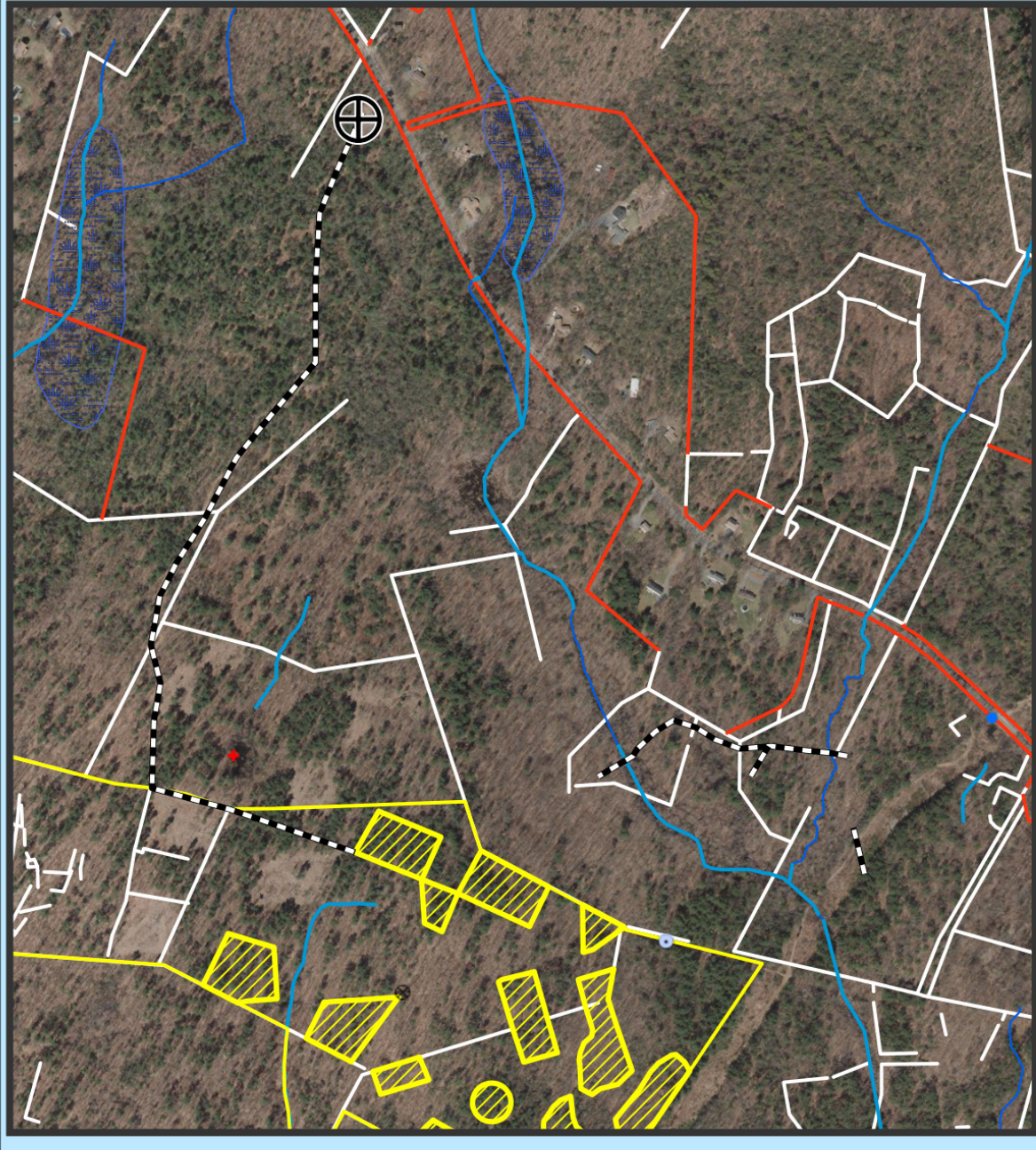
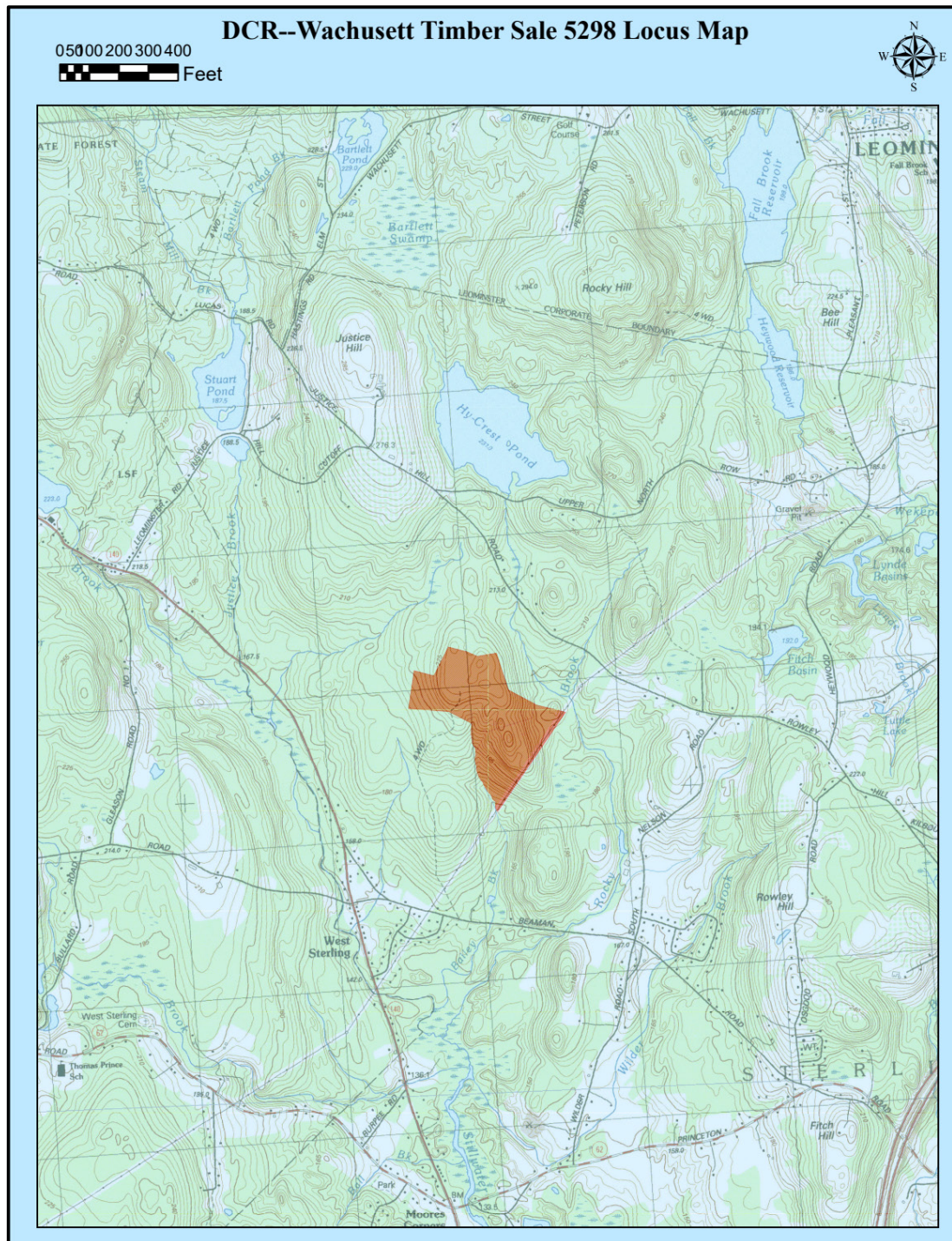




Figure 3. General locus map showing the location of the proposed timber harvest





**Figure 4. Pre-Harvest Photographs, A-D**

**A. Landing.**



**B. White pine marked for removal in an opening with hardwood and white pine regeneration.**





C. White pine marked in an opening with boulders and hardwood regeneration.



D. White pine marked with thick regeneration.





**Figure 5. Post-Harvest Photographs, A-C**

A. Looking into a newly-created patch of young forest from an old cart path along the edge of the opening.



B. One of the larger openings.





C. Both hardwood and white pine are being released in this area.

