

Conservation Restriction
Baseline Documentation Report



Restriction ID Number: S-000242, S-000243, & S-000275
(DCR-P2010-05)

Restriction Name: Sandri

Restriction Closing Date: 7/9/2009

Prepared for: Department of Conservation and Recreation
251 Causeway St., 7th Floor
Boston, MA 02114-2104

Prepared by: Lisa Trotto

Date of Report: 11/17/2017

Property Location: Hoe Shop Road, Gill & Bernardston, MA

Acreage: 162.519 +/-

Copy Designation: Agency Archive Copy/Landowner Copy/ /Agency File
Copy/ Field Office Copy

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Section I: Restriction Information

Restriction Information Summary

Agency-Designated Restriction ID Number(s): S-000242, S-000243, & S-000275
(DCR-P2010-05)

Agency-Designated Restriction Name: Sandri

Other names for property, if applicable: Gill Town Forest

Restriction Type: Conservation Restriction

Instrument Type: Deed

Property location/address: Hoe Shop Road, Gill and Bernardston

Restriction acreage by Restriction Legal Description: 162.519 +/- acres

Contact Information

Restriction grantor: Franklin Land Trust, Inc.

Mailing address: 5 Mechanic Street, Shelburne Falls, MA 01370

Telephone number: (413) 625-9151

Email address: rkhubbard@franklinlandtrust.org

Current fee owner: Town of Gill

Mailing address: 325 Main Road, Gill, MA 01354-9758

Telephone number: 413-863-9347

Email address: administrator@gillmass.org

Primary contact name: Ray Purington

Relationship to landowner: Administrative Assistant

Mailing address: 325 Main Road, Gill, MA 01354-9758

Telephone number: 413-863-9347

Email address: administrator@gillmass.org

Secondary contact name: Amy Gordon

Relationship to landowner: Conservation Commission Member

Mailing address: Town of Gill, 325 Main Road, Gill, MA 01354-9758

Telephone number: 413-863-4706

Email address: Agordon49@gmail.com

Assessor and Registry Information

Assessor's map and parcel numbers: Map 208, Parcels 1, 7 (Gill)
Parcel 3-4-1 (Bernardston)

Restriction Registry Information

Date Recorded: 7/9/2009
Registry: Franklin County Registry of Deeds
Book: 5709
Page: 39

Underlying Fee Interest Registry Information

From: Franklin Land Trust
To: Inhabitants of the Town of Gill
Date Recorded: 9/17/2009
Registry: Franklin County Registry of Deeds
Book: 5750
Page: 129

From: Ronald Weiss and Greenfield Savings Bank
To: Franklin Land Trust
Date Recorded: 5/8/2009
Registry: Franklin County Registry of Deeds
Book: 5668
Page: 193

Property Description Registry Information: Found in Restriction

Survey Registry Information

Date Recorded: 6/12/2009
Prepared for: Franklin Land Trust
Registry: Franklin County Registry of Deeds
Plan Book: 128
Plan: 35
Parcel 1 and Remaining Land

Date Recorded: 5/28/2009
Prepared for: Franklin Land Trust
Registry: Franklin County Registry of Deeds
Plan Book: 128
Plan: 21
Lots 1-4 and Remaining Land

Date Recorded: 5/8/2009
Prepared for: Sandri Trust
Registry: Franklin County Registry of Deeds

Plan Book: 128

Plan: 13

East Tract, West Tract and Parcel A

Are there any easements or rights of way on or over the property? None known.

Copy of Recorded Restriction

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CONSERVATION RESTRICTION

KNOW ALL PERSONS BY THESE PRESENTS that the Franklin Land Trust, Inc., its successors and assigns (hereinafter collectively referred to as "Grantor" which term shall in each instance include Grantor's successors and assigns), for consideration paid of Four Hundred and Fifty Thousand One-Hundred and Fifty Dollars and 00/100 (\$450,150.00), the receipt and sufficiency of which is hereby acknowledged, hereby grants, with QUITCLAIM COVENANTS, in perpetuity, for conservation purposes as set forth in Article 97 of the Amendments to the Massachusetts Constitution, to The Commonwealth of Massachusetts acting by and through its Department of Conservation and Recreation (hereinafter referred to as "DCR" or "Department" which term shall in each instance include the Department's successor and assigns), acting pursuant to Massachusetts General Laws (hereinafter "G.L.") Chapter 132A, Section 3, a Conservation Restriction (hereinafter "CR") as defined in G.L. Chapter 184, Section 31, upon a parcel of land on both sides of Hoe Shop Road in Gill and Bernardston, Massachusetts, containing one hundred and sixty-two and five hundred and nineteen thousandths (162.519 ±) acres more or less, which parcel is more particularly described in Exhibit A attached hereto and incorporated herein (hereinafter referred to as the "Premises").

I. PURPOSE:

- A. The purpose of this CR is to retain the Premises in perpetuity for the purposes and protections set forth in Article 97 of the Amendments to the Massachusetts Constitution, to retain the Premises predominantly in its natural, scenic and open condition; to protect and promote the conservation of natural watercourses and wetlands, including Otter Pond and the Fall River, a free flowing coldwater stream identified by the United States Fish and Wildlife Service as habitat for Atlantic Salmon populations; to protect glacial features such as eskers and kettle hole ponds; to protect wildlife habitat and biological diversity; to protect Distinctive and Noteworthy Scenic Areas as identified by the Department's Scenic Landscape Inventory; to protect "BioMap Supporting Natural Landscape" and "Living Waters Critical Supporting Watershed" as designated by the Massachusetts Natural Heritage and Endangered Species Program on the majority of the Premises and the western half of the premises, respectively; to protect the silvicultural and natural resources of the Premises; to protect and enhance the value of abutting and nearby conservation areas; to allow passive recreational use for the general public; to allow for sustainable and sound management of the forest resources, and to encourage the long-term professional stewardship of these resources in a manner consistent with Best Management Practices (BMPs), applicable state and federal law, and in conformance with an approved Forest Stewardship Plan, all consistent with the provisions of this CR.

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- B. The Grantor and the Department agree that all man-made structures, boundaries, and natural features existing on the Premises at the time of the execution of this CR, as well as the conservation values of the Premises protected through this CR, shall be documented in a report to be on file in the offices of the Grantor and the Department (hereinafter "Baseline Documentation Report"). This Baseline Documentation Report shall consist of documentation that the Grantor and the Department collectively agree provides an accurate representation of the condition and the conservation values of the Premises at the time this CR is recorded and which is intended to serve as an objective information baseline for monitoring compliance with the terms of this CR.

II. PROHIBITED USES: In order to carry out the purposes set forth in Article I above, the Grantor shall refrain from and will not permit any activity which shall be inconsistent with the aforesaid purposes of this CR. Except as set forth in "RESERVED RIGHTS", Article III, below, Grantor covenants for itself and its legal representatives, mortgagees, successors and assigns that the Premises will at all times be held, used and conveyed subject to and not in violation of the following prohibitions:

- A. Constructing, placing, or allowing any building, residential dwelling, tennis court, ball field, well, septic or sewerage disposal system or leach fields, artificial water impoundment, roadway, asphalt or concrete pavement, landing strip or pad, mobile home, swimming pool, billboard or other advertising display, antenna, utility pole, tower, conduit, line, telecommunication or any other tower, windmill, wind turbines, satellite dish, above or underground storage tanks, or any other temporary or permanent structure or facility on, below, or above the Premises;
- B. Mining, excavating, dredging, or removing from the Premises of soil, loam, peat, gravel, sand, rock, or other mineral resource or natural deposit, or alteration of any natural contours or features whatsoever, including the excavation of holes, the damming of Fall River, the dislocation of stone walls, cellar holes, or other features on the landscape;
- C. Archeological surveys or investigations; except under an Archeological Field Investigation Permit issued by the State Archeologist authorized pursuant to G.L. Chapter 9, Section 26A, as may be amended;
- D. Placing, filling, storing or dumping on the Premises of soil, sand, snow from off-site, rock or other mineral resource or deposit, refuse, trash, equipment, mobile home, trailer, automotive vehicle or parts, vehicle bodies or parts, rubbish, debris, junk, waste, tree stumps, slash or leaf matter, tillage, or any other substance or material;
- E. Storage, stockpiling, or use of hazardous materials, petroleum products, pesticides and herbicides, manure and fertilizers;
- F. Cutting, removing or otherwise destroying native trees, grasses, shrubs or other natural vegetation, except for vegetation management as permitted under Articles III and IV, below;

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- G. Planting or broadcasting any genetically modified or replicated organisms or species, or any invasive exotic species, defined as species that are not native to Franklin County by current published lists of native species, including The Vascular Plants of Massachusetts: A County Checklist, by Bruce A. Sorrie and Paul Somers, published by the Massachusetts Division of Fisheries and Wildlife Natural Heritage & Endangered Species Program (1999) or as amended or contained in a similar professionally acceptable publication available in the future, without prior written approval of DCR in accordance with Article V, below; and the purposeful introduction of species prohibited by Federal and State laws and regulations, such as species identified in "Massachusetts Prohibited Plant Species List" published by the Massachusetts Department of Agricultural Resources, Division of Regulatory Services, as amended or contained in a similar professionally acceptable publication available in the future;
- H. Commercial or industrial use of any kind, including but not limited to commercial fishing, commercial hunting, commercial trapping, commercial camping and other commercial recreational activities; except as expressly permitted by Article IV Paragraph C below;
- I. Activities detrimental to drainage, flood control, water quality, erosion control or soil conservation, or archaeological conservation;
- J. The use of motorcycles, motorized trail bikes, snowmobiles, and all other motor vehicles (except motorized wheelchairs for facilitating access for persons with disabilities), except as reasonably necessary in exercising any of the reserved rights in Articles III and IV, below, or as required by the police, firefighters, or other governmental agents in carrying out their lawful duties;
- K. Conveyance of a part or portion of the Premises alone, or division of the Premises (as compared to conveyance of the Premises in its entirety, which is allowed);
- L. The subdivision of the Premises under G.L. Chapter 41, Sections 81K *et seq.*, as may be amended, or otherwise; or the use of the Premises or any portion thereof to satisfy zoning requirements, or to calculate permissible building density, lot yield or transfer of development rights, for purposes of subdivision or development of the Premises or any other property, whether or not such property is owned by the Grantor or is adjacent to the Premises;
- M. The installation and maintenance of groundwater extraction wells and associated equipment and pipelines and similar equipment for use in extracting groundwater, collecting surface water and transporting said water for sale or use on or off the Premises; and
- N. Any other use of the Premises or activity that would materially impair the conservation interests protected by this CR or which are prohibited by federal, state or local law or regulation, or which are inconsistent with the intent that the Premises remain, in the reasonable opinion of the Department, predominantly in their natural condition or otherwise inconsistent with the Purposes of this CR.

III. RESERVED RIGHTS: Notwithstanding the provisions of Article II, above, and subject to and in accordance with applicable laws, regulations and bylaws, Grantor reserves to themselves and to their heirs, devisees, legal representatives, successors and assigns the following rights, uses and activities on the Premises, but only to the extent that such acts and uses do not materially impair the purposes of this CR:

- A. The non-commercial use of the Premises by the Grantor and Grantor's invitees for passive, low-impact recreational and educational activities such as hiking, running, nature study, bird-watching, picnicking, snowshoeing, cross-country skiing, fishing, and other like non-motorized recreational and educational activities (but reserving the right to use motorized wheelchairs necessary to facilitate access by persons with physical disabilities) that do not materially alter the landscape and are carried out in a reasonable manner that does not impair the conservation and recreation values protected by this CR; and
 - 1. Hunting may be permitted by Grantor in accordance with all federal, state, and local laws, regulations, and bylaws;
 - 2. Bicycling and horseback-riding may be permitted by Grantor on designated trails only in accordance with the Recreation Plan required by Paragraph B below.
- B. In accordance with a Recreation Plan, approved in advance by the Department according to Article V below (hereinafter "Recreation Plan"), the right to improve the property for recreational purposes to facilitate the uses permitted herein in Paragraph A above (collectively "Recreational Improvements") so long as any such Recreational Improvements do not materially impair the conservation, recreation, and scenic values of the Premises protected by this CR. Such Recreational Improvements include the following:
 - 1. Constructing, reconstructing, maintaining, repairing, and marking unpaved trails for non-motorized trail uses, including the installation of minor trail structures such as non-illuminated directional, trailhead, and educational signage, to install barriers to prevent illegal motorized use, and to install minor bridges, culverts, and stone steps, provided that such trails shall be no wider than ten (10) feet in width, and are designed, located, and constructed in accordance with DCR Trail Guidelines and Best Practices Manual as amended or contained in a similar professionally-acceptable publication approved by the Department, and provided that all such construction is conducted in a manner that will minimize negative impacts to the conservation and recreation values protected by this CR; and
 - 2. The installation of trailside benches and picnic tables; and
 - 3. Constructing, maintaining, and replacing one (1) parking and trailhead area to serve the Premises in support of the recreation activities Permitted herein, including the installation of trailhead gates and like structures, signs, and an informational kiosk. Said parking area shall be no larger than necessary to accommodate ten (10) vehicles, shall not be paved with impervious materials, and shall be located, designed, and constructed in a manner that minimizes the impact on the scenic and conservation values of the Premises.
 - 4. Grantor may post the property against trespassing, and install a gate or other barrier along Hoe Shop Road, Bascom Road, or Old Road to Scott Place at

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- access points into the Premises from said roads in order to prevent trespassing by motorized vehicles without a Recreation Plan, so long as prior notice is given to DCR pursuant to Article V.
5. Grantor may remove existing telephone poles and associated wires on the Property without a Recreation Plan so long as prior notice is given to DCR pursuant to Article V.
- C. The maintenance and use of existing unpaved forest roads and ways, trails, fences, bridges, gates, and stone walls on the Premises substantially in their present condition, or as reasonably necessary for the uses permitted herein, so long as such use is not significantly detrimental to water quality, soil conservation, wildlife conservation or forestry management practices or which is otherwise wasteful of the natural resources of the Premises.
 - D. The cutting, pruning, removal and planting of trees, shrubs and other vegetation for ordinary improvement and maintenance of the Premises; to improve wildlife habitat; to restore native species, to prevent threat of injury or damage to persons or property; to prevent or mitigate pest infestation, blight or disease; to control or eliminate exotic or invasive species not native to Franklin County.
 - E. The use and application of pesticides, herbicides, insecticides, fungicides, and other chemicals or substances in accordance with applicable law, manufacturer specifications and to the minimum extent necessary to prevent, mitigate or control pest infestation, blight or disease, or to control or eliminate exotic or invasive species. Such substances are to be used in a way that minimizes impacts to Fall River, Otter Pond, and any other streams, vernal pools, and wetlands on the Premises.
 - F. Conducting archaeological investigations and activities, including without limitation surveys, excavation, and artifact retrieval, under the direction of a qualified organization or person, following submission of an archaeological field investigation plan and its approval by State Archaeologist of the Massachusetts Historical Commission, and in accordance with Massachusetts G.L. Chapter 9, Section 27C, as may be amended. Such activities shall be approved by the Department in accordance with Article V, below.
 - G. The maintenance of the open fields in existence as of the date of this CR and as identified in the Baseline Documentation Report for the purposes of enhancing wildlife habitat, in accordance with an approved Forest Stewardship Plan as referenced in Article IV Paragraph A below.
 - H. Use of motorized vehicles by Grantor or by permission of the Grantor as reasonably necessary (1) to conduct the permitted activities on the Premises, including but not limited to site inspection, forestry and habitat management activities, and provided such use is not detrimental to water quality, wetland integrity, fragile habitat, and soil, wildlife, and plant conservation; (2) to allow the Department to carry out enforcement of the CR as provided in Article VIII, below, and (3) for police, fire, ambulance or other emergency personnel or governmental agents to perform their official duties.
 - I. Any activity or use not permitted herein is prohibited without the express written consent of the Department stating that such activity or use is not inconsistent with the

conservation purposes of this CR. Any request by Grantor for approval of such activity or use shall contain a detailed description of why such activity or use is consistent with the conservation purposes of this CR. In the event the Department disapproves the requested activity or use, the Department shall provide a detailed written explanation of why said activity or use is inconsistent with the conservation purposes of this CR. Any request for approval under this paragraph shall be made in accordance with Article V, below.

IV. ADDITIONAL RESERVED RIGHTS: In addition to the reserved rights set forth in Article III, above, and subject to and in accordance with applicable laws, regulations and bylaws, the Grantor reserves the right to conduct forest management and timber harvesting activities on the Premises, provided that:

- A. Forest Stewardship Plan:** The Grantor shall have an approved Massachusetts Forest Stewardship Plan (hereinafter "Stewardship Plan") for the Premises that is consistent with the provisions of section 5(f) of the Cooperative Forestry Assistance Act of 1978, 16 U.S.C. § 2103a(f), and that has been prepared by a Forester licensed under G.L. Chapter 132, Section 50, as may be amended, in conformance with the "Directions for the Preparation of the [G.L.] Chapter 61 Forest Management Plans and Forest Stewardship Plans" and such statutes, regulations and directions in effect at the time of the approval of said Stewardship Plan. The Stewardship Plan shall reference this CR and shall set management goals that protect the conservation values of the Premises, including, without limitation, water quality, water features including but not limited to streams, seeps, and vernal pools and other wetlands, scenic views, wildlife habitat, endangered or threatened species, and forest health. The Stewardship Plan shall describe in detail plans for carrying out forest management activities permitted under this CR, including but not limited to tree harvesting activities; use or construction of woods roads, and recreational activities on the Premises. A copy of this CR shall accompany the Grantor's application and proposed Stewardship Plan to the State Forester for approval, together with a statement in writing from the Grantor that the proposed Stewardship Plan conforms to the purposes of this CR.

The Stewardship Plan shall be effective for a ten (10) year period and shall be resubmitted once every ten (10) years, together with a copy of this CR, to the State Forester for approval. Each subsequent submittal or any amendment to the Stewardship Plan shall be prepared and submitted by the Grantor for approval by the State Forester as provided above. By mutual agreement of the Grantor and the Department, and subject to the provisions of this Article IV, the (ten) 10 year Stewardship Plan may be revised at any time by written amendment. If the amendment is approved by the State Forester, the Grantor shall submit a copy of the amended Plan to the Department for its records and use in monitoring compliance with this Article IV.

- B. Forest Cutting Plan:** If any proposed timber or tree harvesting activity exceeds ten thousand board feet ("MBF") or ten (10) cords of wood during any consecutive twelve (12) month period, notwithstanding the thresholds described in G.L. Chapter 132, Section 44, as may be amended, Grantor shall submit a Forest Cutting Plan (hereinafter "Cutting Plan") prepared by a Forester licensed in accordance with said G.L. Chapter 132, Section 50, for the written approval of the State Forester. The Cutting Plan shall be prepared in compliance with the Massachusetts Forest Cutting

Practices Act, G.L. Chapter 132, Sections 40 - 46, inclusive, as may be amended; shall be in conformance with related DCR policies, and shall be consistent with the approved Stewardship Plan and the purposes of this CR. The Cutting Plan shall be submitted to the State Forester for approval together with a copy of this CR, a copy of the approved Stewardship Plan, and a statement in writing from the Department that the Cutting Plan conforms to the purposes of this CR. The restrictions on placement or storage of slash or stumps on the Premises as provided in Article II, Paragraph D, above, shall not limit the authority of the State Forester to approve a Cutting Plan or other forestry activity conducted by the Grantor that results in proper handling of slash, brush and residual forest products pursuant to G.L. Chapter 48, Sections 16, *et seq.*, as may be amended, and the recommended guidelines in the Massachusetts Forestry Best Management Practices Manual (Kittredge and Parker, 1996) and subsequent versions as may be approved by the Department (hereinafter "Forestry BMPs").

- C. Commercial Harvesting: Commercial timber or tree harvesting is permitted, provided it is conducted in compliance with (a) the purposes of this CR, (b) the approved Stewardship Plan, (c) the approved Cutting Plan, if required, and (d) prudent and sound forest management practices, using all required or applicable Forestry BMPs.
- D. Woods Roads: Grantor may construct, maintain, use, improve, repair and discontinue unpaved woods roads on the Premises for forestry purposes with a travel surface not to exceed twelve (12) feet in width, so long as such roads are located, designed and constructed in a manner that will minimize negative impacts on the conservation and recreational purposes of this CR, and are included in the approved Stewardship Plan and any Cutting Plan required, and are consistent with Forestry BMPs. The Stewardship Plan must demonstrate (1) that the road is necessary to provide reasonable forest management access to the Premises, (2) that, to construct a new road, the system of existing woods roads is not reasonably adequate, and (3) that the construction of a new road or improvement to an existing road does not materially impair the purposes of this CR. Notice to and approval of the Department shall be deemed granted for the construction of new woods roads if such roads are contained in the approved Forest Stewardship Plan, and any approved Cutting Plan required. Upon the discontinuance of woods roads, Grantor shall restore the roadbed, and any bridges, culverts and disturbed abutting areas shall be returned to a natural state with even contour and in such a manner so as not to cause erosion, in order that re-forestation and vegetation may naturally occur. Such reclamation of wood roads shall be in accordance with Forestry BMPs and the Stewardship Plan.
- E. Harvesting for Grantor Use: The cutting of trees, not to exceed ten (10) MBF or ten (10) cords of wood in any consecutive twelve (12) month period, to provide forest products for use of the Grantor is permitted, provided that the cutting is not inconsistent with the approved Forest Stewardship Plan.
- F. No provisions in or revisions to the Forest Stewardship Plan or to the Forest Cutting Plan shall change the meaning or terms of this CR, and in the case of any conflict between this CR and the Plan, the CR shall govern.

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- V. NOTICE BY GRANTOR:** Unless otherwise provided herein or by law, the Grantor shall notify the Department in writing, sent certified mail, return receipt requested, sixty (60) days before allowing or undertaking any uses or activities on the Premises which require the approval of the Department. The Grantor shall also in the same manner notify the Department before allowing or undertaking any uses or activities which may significantly impair the conservation interests found within the Premises or are contrary to the purposes of this CR. The Grantor shall submit to the Department such plans and other information as the Department shall reasonably require to determine whether the use or activity is consistent with the purposes of this CR. All communications in this regard should be mailed to:

Commissioner
Massachusetts Department of Conservation and Recreation
251 Causeway Street
Boston, MA 02114-2104

With a copy to:

Office of the General Counsel
Massachusetts Department of Conservation and Recreation
251 Causeway Street
Boston, MA 02114-2104

With respect to those activities or uses which require the Department's approval, the Department shall grant or withhold its approval in writing within sixty (60) days of receipt of the Grantor's written request therefor. The Department's approval may be withheld only upon a reasonable determination by the Department that the action as proposed would be inconsistent with the purposes of this CR, would materially impair the conservation interests to be protected by this CR, or would violate any statute, ordinance, bylaw, rule or regulation. The Department's failure to respond within sixty (60) days of receipt of written request from the Grantor shall be deemed to constitute approval of the matters described in the notice, so long as the notice references the provisions of this Article relating to constructive approval after the passage of time. In the event the activity proposed is necessary to address an emergency situation, either to avert environmental degradation, ecological damage or risk to public health and safety, the Department shall respond forthwith and with all deliberate speed.

- VI. REMEDIES; WAIVER:** The rights hereby granted shall include the right to enforce this CR by appropriate legal proceedings and to obtain injunctive and other equitable relief against any violations, including, without limitation, relief requiring restoration of the Premises to its condition prior to the time of the injury complained of (it being agreed that the Department may have no adequate remedy at law), and shall be in addition to and not in limitation of any other rights and remedies available to the Department.

This CR shall be enforced by the Department in its sole discretion. Nothing herein shall impose upon the Department any affirmative obligation or liability relating to the condition of the Premises. Failure by the Department to enforce any provision or condition set forth herein, or to exercise any rights hereby conveyed, shall not constitute a release or waiver of any such right or condition.

- VII. RIGHTS OF ACCESS:** The CR hereby conveyed includes the grant of the right to the Department, its successors and assigns, to enter upon the Premises and to permit the public

to enter upon and use the Premises and existing and future ways and marked trails for the purposes set forth in Article III, Paragraph A, above, subject, however, to conditions specified in this CR, all in accordance with the rules and regulations of the Department and any restrictions imposed by the Grantor or the Department to preserve and promote wildlife habitat and the unique natural resource values of the Premises. The right of public access hereby conveyed does not include the right of overnight camping; the right to operate all-terrain motorized vehicles, including but not limited to motorcycles and off-road vehicles; the right to use amplified music or public address systems; the right to create or maintain open fires; the right to consume alcoholic beverages; the right to collect firewood, native plants or animals; the right to use animals, birds or other living creatures for target shooting; the right to damage or degrade real or personal property; the right to impair the quiet and peaceful enjoyment of the Grantor; the right to engage in any unlawful, destructive or reckless behavior of any kind, including without limitation hunting in an unsportsmanlike manner (as defined by the Massachusetts Department of Fish and Game), or the right to conduct any commercial use, including but not limited to guided hunting trips. The Grantor reserves the right to restrict access to areas of the Premises during timber harvesting or other permitted management activities that may pose a safety hazard. The Department and the Grantor may agree in writing to restrict access for other reasons, but only to the extent and for the duration necessary to preserve important scenic, ecological, and other conservation values of the Premises, to permit necessary maintenance, or to assure safety.

- VIII. INSPECTION; ENFORCEMENT:** The CR hereby conveyed includes the grant of the right to the Department and its agents to enter upon the Premises in a reasonable manner and at reasonable times, with or without prior notice, for the purpose of inspecting the Premises to determine compliance with the terms of this CR. In the event of any violation, the Department must notify Grantor thereof and request Grantor to remedy such violation. If the violation is not remedied within a reasonable time, the Department may enter upon the Premises, with or without Order of Court, in order to remedy or abate such violation, in which event, the Grantor, its successors and assigns, covenants and agrees to reimburse the Department for all reasonable costs and expenses incurred by the Department in remedying or abating any violation of this CR by Grantor or Grantor's invitees. Grantor shall be required to reimburse the Department solely for violations that occur during their respective period of ownership. The provisions of this Article VIII shall not preclude any other remedies available at law or in equity.
- IX. COSTS AND TAXES; LIABILITY:** The Grantor agrees to pay and discharge when and if due any and all real property taxes and other assessments levied on the Premises by competent authority.
- X. ACTS BEYOND GRANTOR'S CONTROL:** Nothing contained in this Conservation Restriction shall be construed to entitle DCR to bring any action against Grantor for any injury to or change in the Premises resulting from causes beyond Grantor's control, including, but not limited to fire, flood, storm and earth movement, or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Premises resulting from such causes. Notwithstanding this provision, Grantor and DCR agree that it is desirable that they shall cooperate in efforts to develop and implement a reasonable and feasible plan to mitigate any such damages, including remediation and restoration of the Premises.

- XI. BINDING EFFECT; RELEASE; RECORDATION:** The burden of this CR shall run with the Premises in perpetuity or such time as is provided by law, and shall be enforceable against the Grantor and the Grantor's successors and assigns holding any interest in the Premises. This Restriction may only be released, in whole or in part, by the Department pursuant to the procedures established by G.L. Chapter 184, §32, as may be amended, and in accordance with Article 97 of the Amendments to the Massachusetts Constitution. The Department may, with the Grantor's prior written approval, which approval shall not be unreasonably delayed or withheld, record or file any notices or instruments appropriate to assuring the perpetual enforceability of this CR. The Grantor shall execute any such instruments if reasonably necessary to assure perpetual enforceability.
- XII. SUBSEQUENT TRANSFERS:** The Grantor agrees to incorporate by reference the terms of this CR in any deed or other legal instrument by which it divests itself of any interest in the Premises, including, without limitation, a leasehold interest. Grantor further agrees to give written notice to Department of such transfer at least thirty (30) days prior to the date of such transfer. The Grantor shall also provide the State Forester or his designated representative a copy of all such notices.
- XIII. EXTINGUISHMENT; EMINENT DOMAIN:** The Grantor and the Department agree that the grant of this CR gives rise to a property right that vests immediately in the Department and which has a fair market value that is equal to the value by which the CR reduces, at the time of the grant, the value of the property as a whole as determined by a professional real estate appraisal obtained by the Department. Such proportionate value of DCR's property interest is eighty-four (84%) at the time of the grant, which proportionate value shall remain constant.
- Should this CR be extinguished over all or any portion of the Premises by judicial decree or by act of public authority, the Department shall be entitled to a portion of the proceeds equal to the proportionate value of the CR designated above, subject, however, to any applicable law which expressly provides for a different disposition of the proceeds. If the conservation interests protected by this CR are unaffected by the taking, and the only interest taken by public authority is the Grantor's interest, and recovered proceeds are awarded on the basis of the value of the Premises as restricted by this CR, then the proceeds from such taking shall be payable in their entirety to the Grantor.
- Whenever all or any part of the Premises or any interest therein is taken by a public authority (other than The Commonwealth) under power of eminent domain, or if all or any part of this CR is extinguished by act of public authority (other than The Commonwealth), then Grantor and the Department shall cooperate in recovering the full value of all direct and consequential damages resulting from such action. If the public authority is The Commonwealth, the Grantor and the Department shall pursue their remedies separately.
- XIV. AMENDMENT:** If circumstances arise under which amendment to or modification of this CR would be appropriate, the Grantor and the Department may by mutual written agreement jointly amend this CR, provided that such amendment does not adversely affect any of the significant conservation values of the Premises and does not violate Article 97 of the Amendments to the Massachusetts Constitution. Any such amendment shall be recorded with the Franklin Registry of Deeds.

Bk: 05709 Pg: 49

XV. SEVERABILITY: If any section or provision of this CR shall be held to be unenforceable by any court of competent jurisdiction, the CR shall be construed as though such section had not been included in it. If any section or provision of the CR shall be susceptible of two constructions, one of which would render such section or provision invalid, then such section or provision shall be given the construction that would render it valid. If any section or provision of this instrument is ambiguous, it shall be interpreted in accordance with the policies and provisions expressed in G.L. Chapter 184, Sections 31 and 32, and G.L. Chapter 132A.

XVI. MISCELLANEOUS:

- A. This instrument does not purport to transfer a fee interest.
- B. This CR is conveyed subject to and with the benefit of matters of record at the Franklin Registry of Deeds.

Executed under seal this 19th day of June, 2009.

Franklin Land Trust, by

Richard K. Hubbard
its Executive Director

COMMONWEALTH OF MASSACHUSETTS

County, ss:

On this 19th day of June, 2009, before me, the undersigned notary public, personally appeared Richard K. Hubbard, who proved to me through satisfactory evidence of identification, which was MA Drivers License to be the person/persons whose name is signed on the preceding document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Brandon W. Vickery

Brandon W. Vickery, Notary Public

My Commission Expires: 9/24/2015

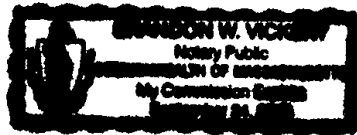
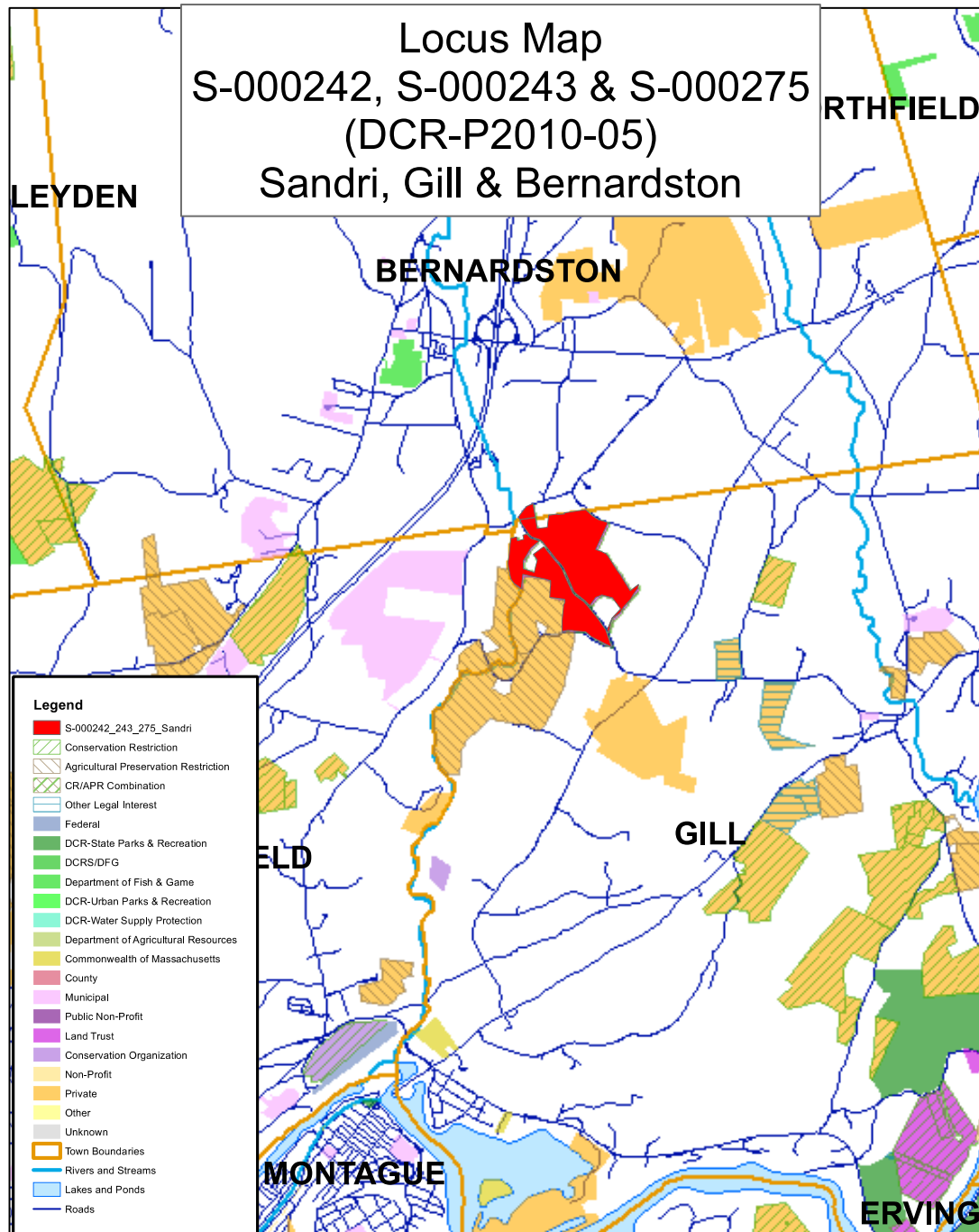


Exhibit A

The premises are bounded and described in a plan titled "Plan of Land in Gill & Bernardston, Mass. (Franklin County) Surveyed for Sandri Trust" dated April 29, 2009, Roberge Associates Land Surveying, 21 Mohawk Trail #283, Greenfield, Mass. and are shown as "East Tract 112.628 \pm Acres" and "West Tract 61 \pm Acres," recorded in said Registry of Deeds in Plan Book 128, Page 13; EXCLUDING therefrom, Lots 1, 2, 3 and 4 as shown on a plan titled "Plan of 4 Lots in Gill (Franklin Co.) Mass surveyed for Franklin Land Trust" dated May 12 2009, Roberge Associates Land Surveying, 21 Mohawk Trail #283, Greenfield, Mass., recorded in said Registry of Deeds in Plan Book 128, Page 21 and Parcel 1, AND 0.500 Acres shown on a plan of land titled "Plan of Barn Lot in Gill (Franklin Co.) MASS. surveyed for Franklin Land Trust" dated May 29, 2009, Roberge Associates Land Surveying, 21 Mohawk Trail #283, Greenfield, Mass. and recorded in said Registry of Deeds in Plan Book 128, Page 35.

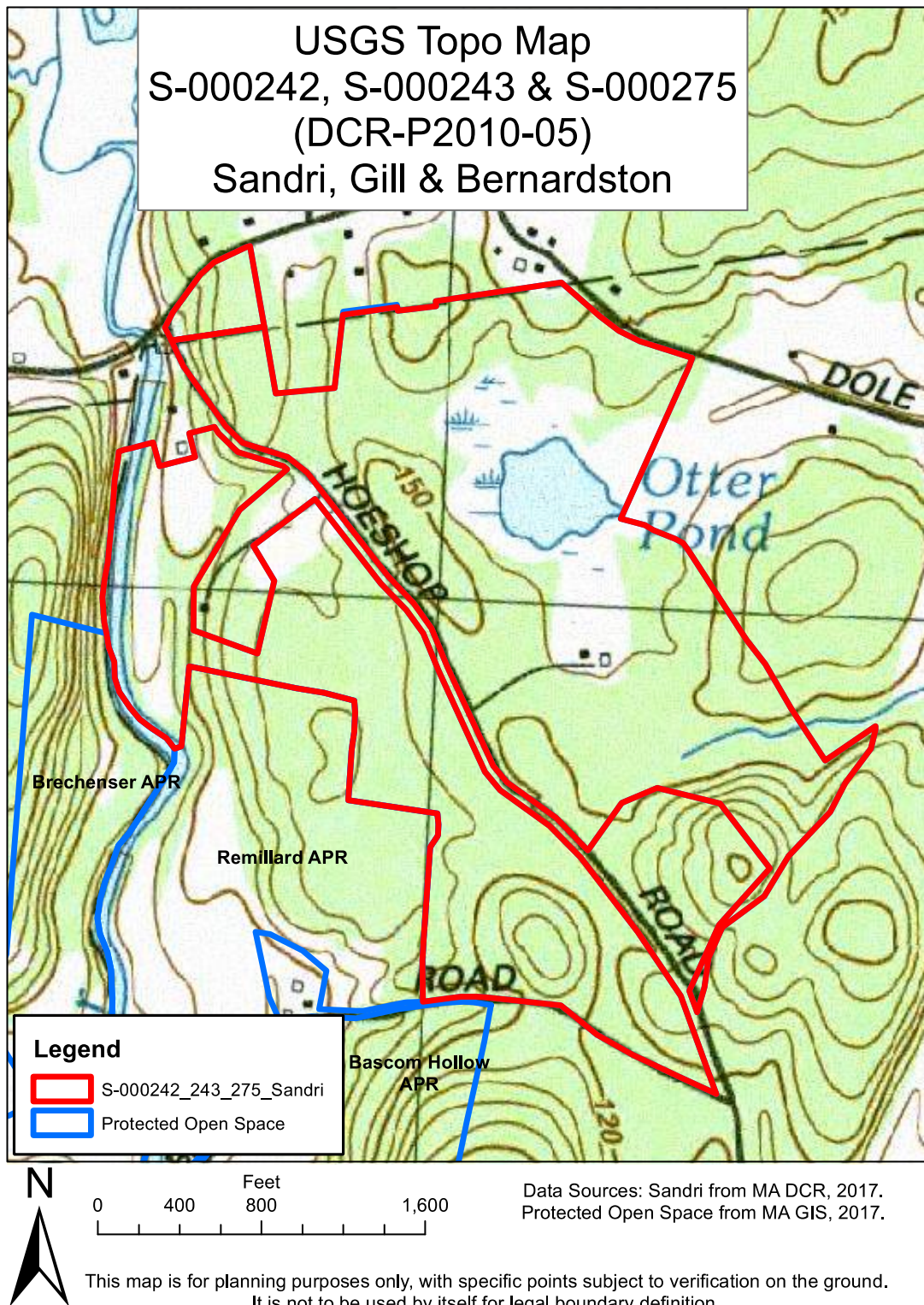
Section II: Maps

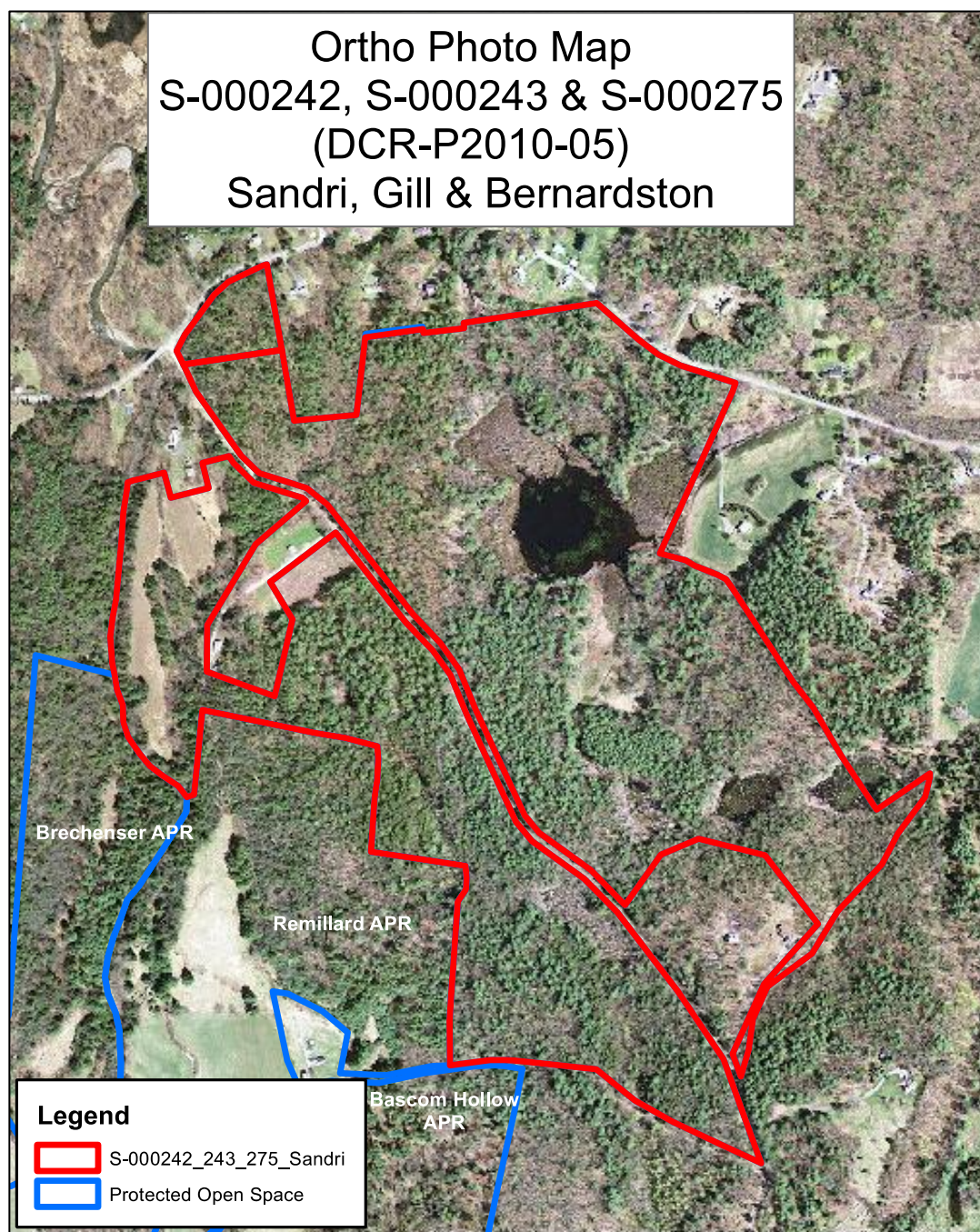
Locus Map

0 2,500 5,000 10,000
 Feet

Source: Sandri from MA DCR, 2017.
 All other data from MA GIS, 2017

This map is for planning purposes only, with specific points subject to verification on the ground. It is not to be used by itself for legal boundary definition.

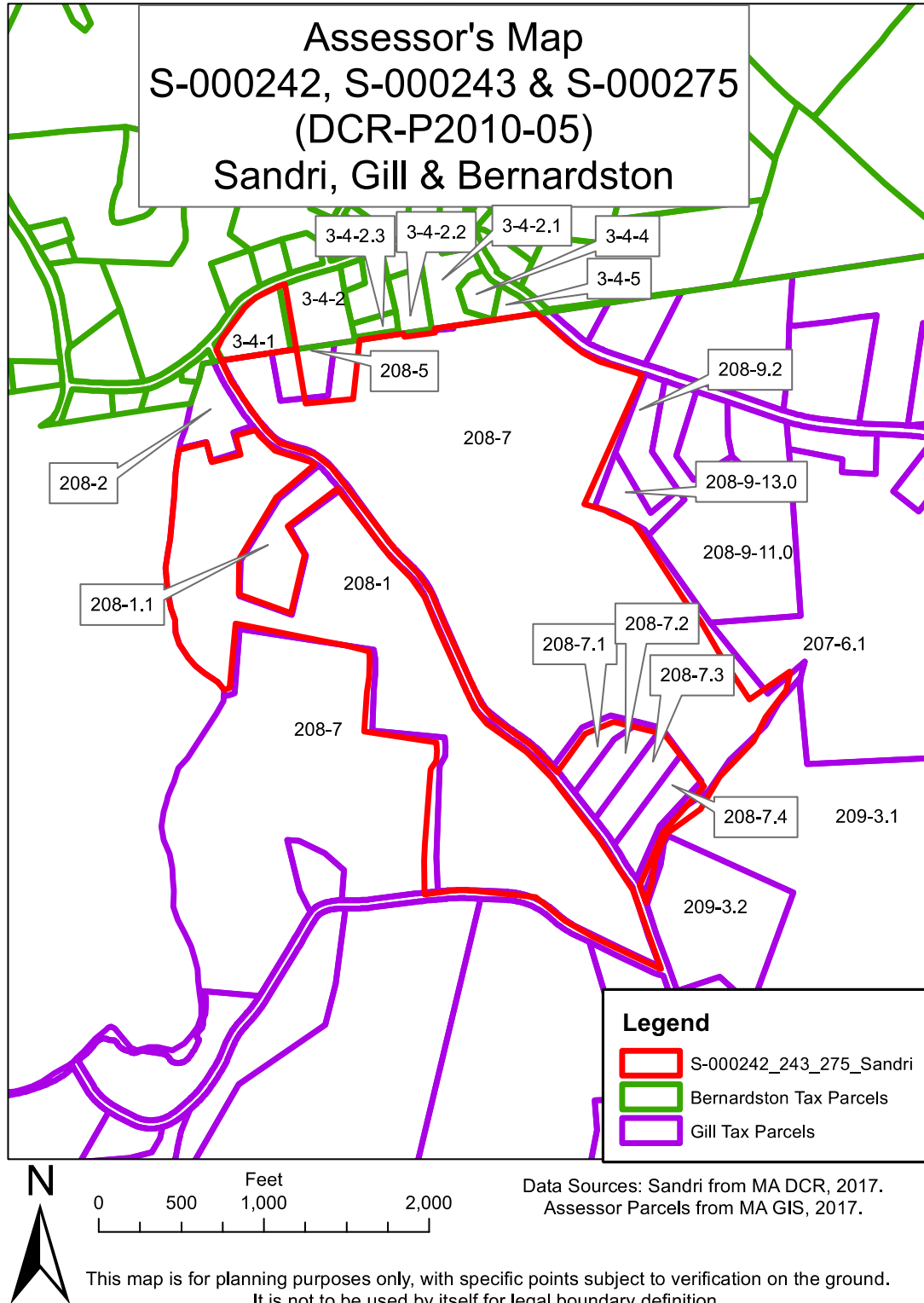
Color USGS Topo Map

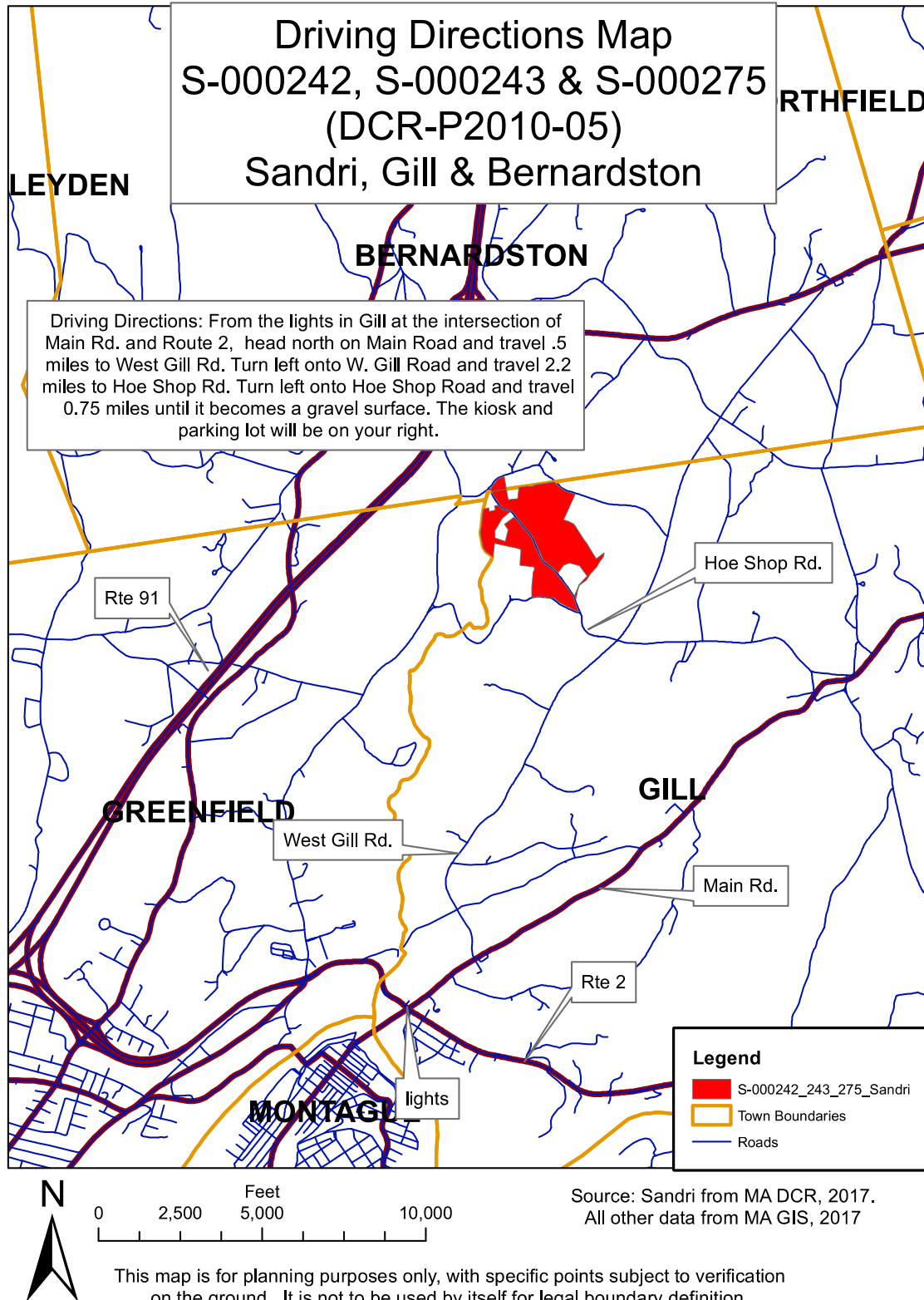
Color Ortho Photo Map

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Feet

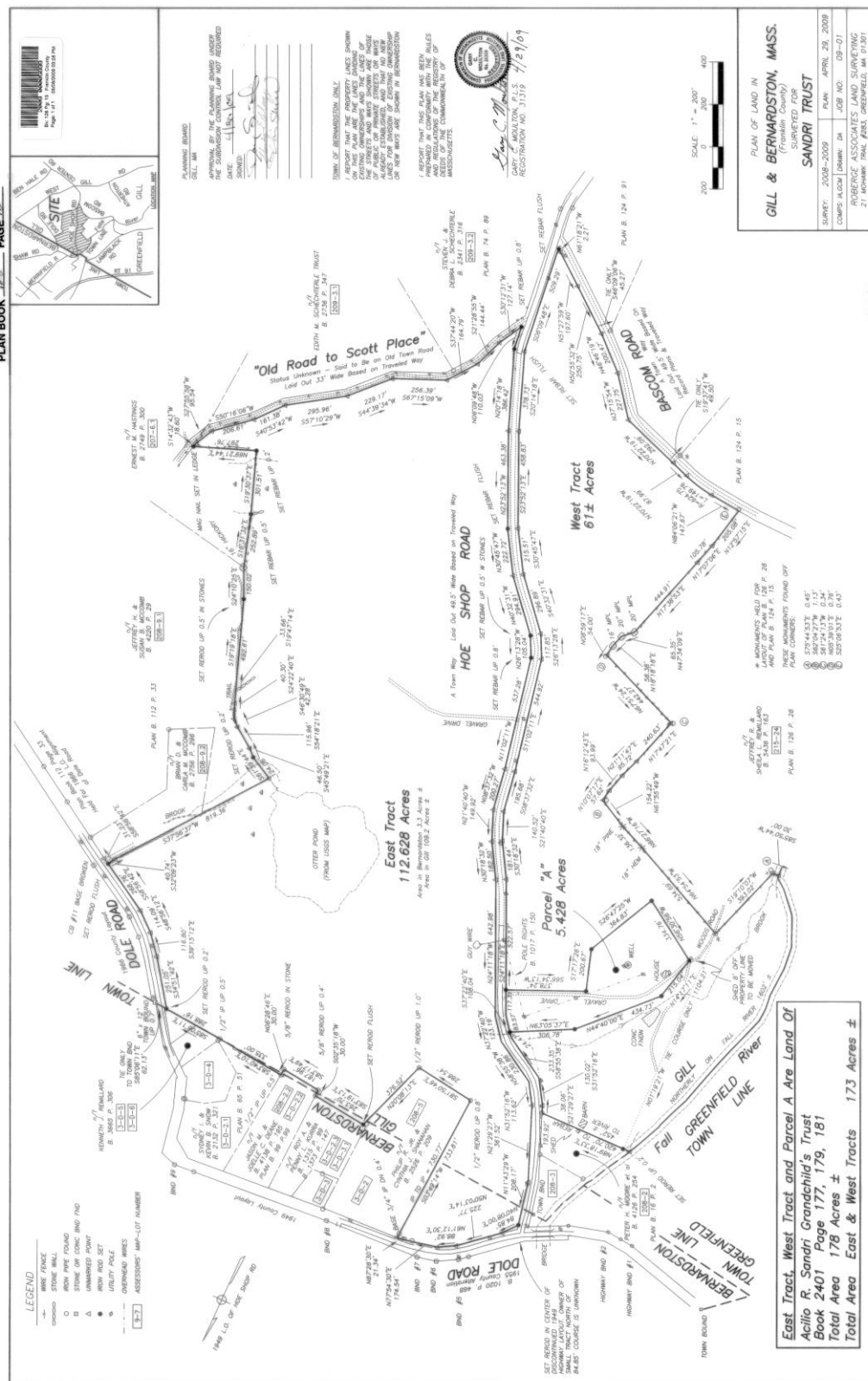
Data Sources: Sandri from MA DCR, 2017.
2013 Ortho Photo and Protected Open Space
from MA GIS, 2017.

This map is for planning purposes only, with specific points subject to verification on the ground.
It is not to be used by itself for legal boundary definition.

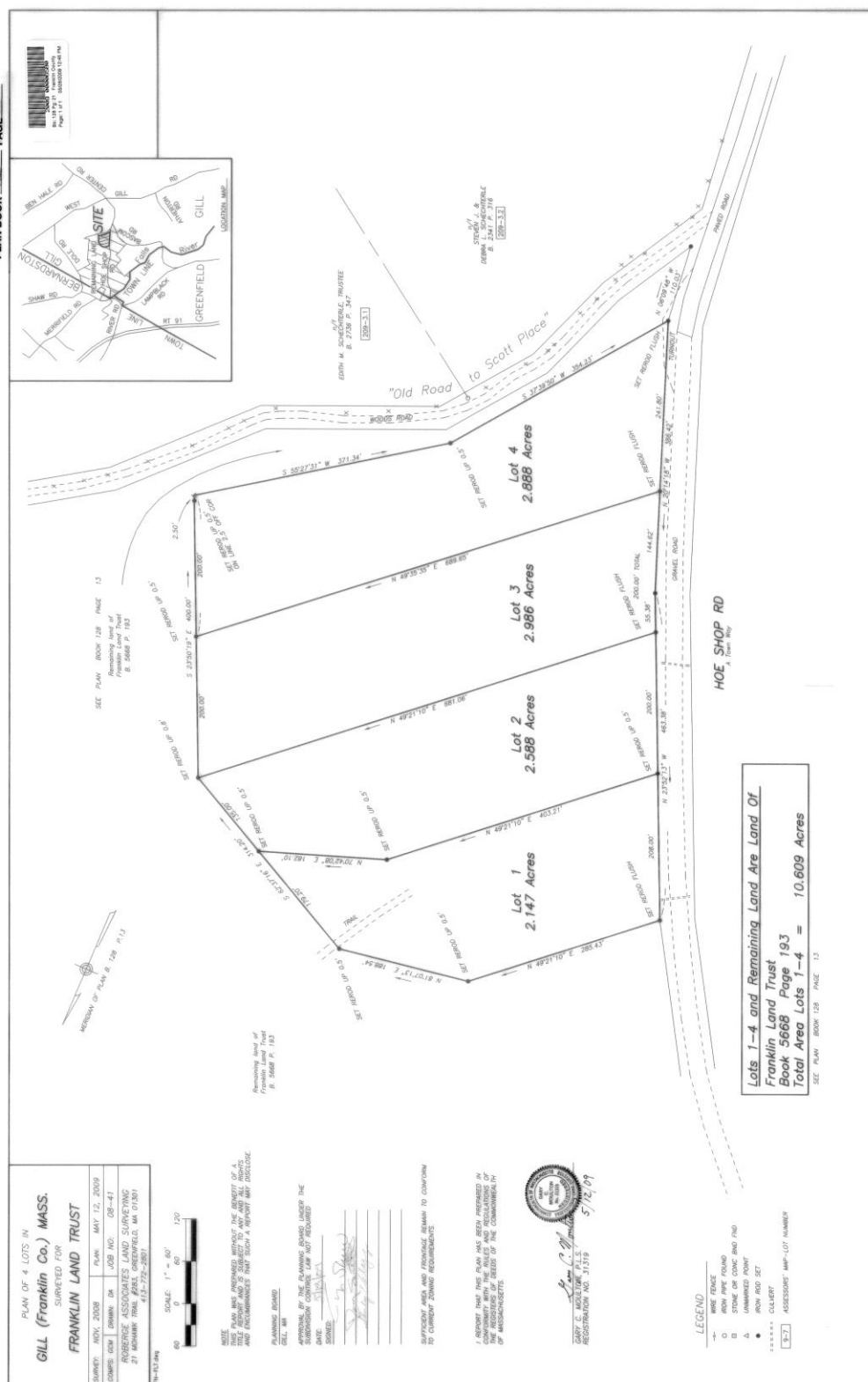
Assessor's Map

Driving Directions Map

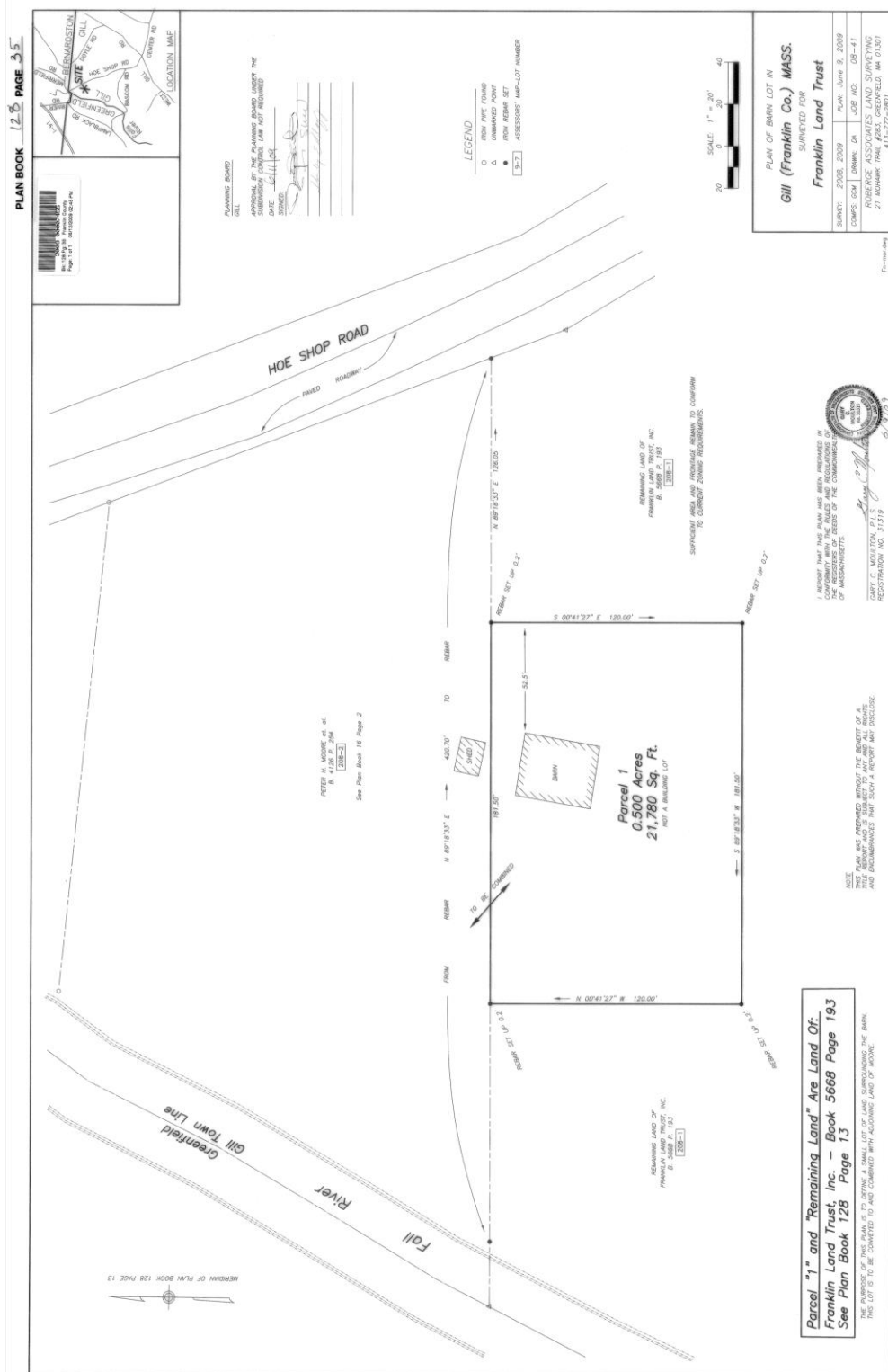
Survey Map (a)

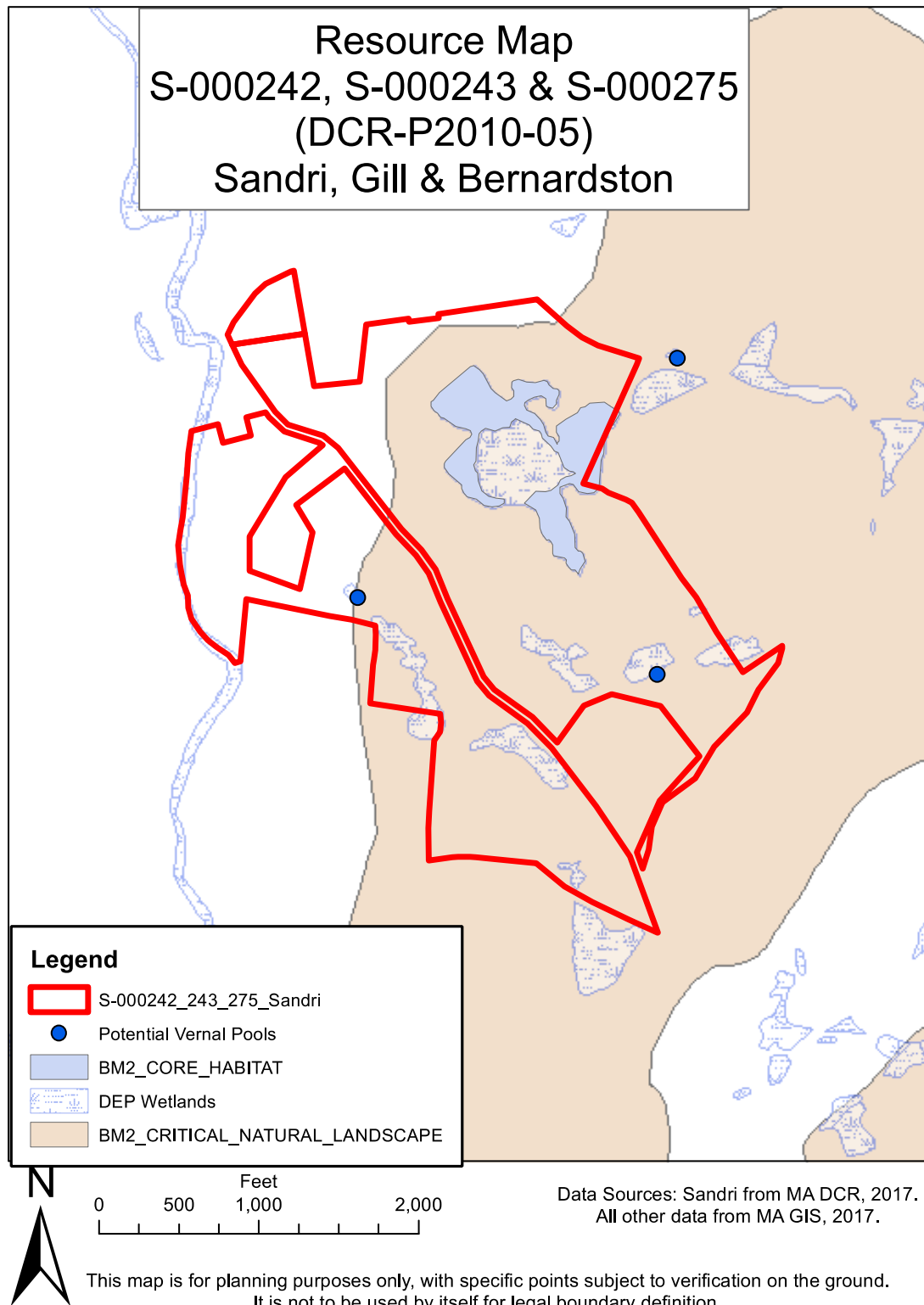


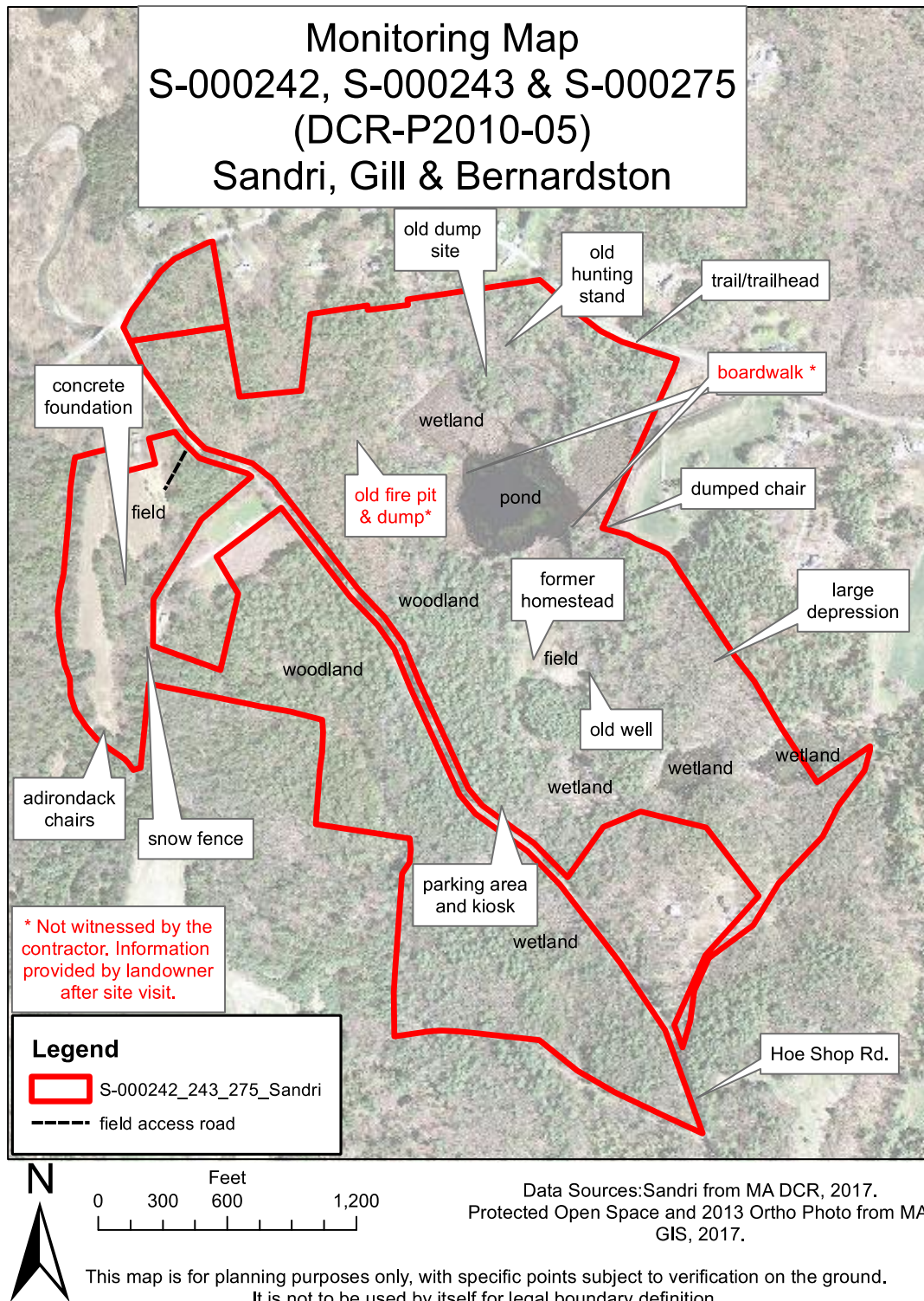
Survey Map (b)



Survey Map (c)



Resource Map

Monitoring Map

Section III: Site Visit Report

Part A: General Information

Date of inspection: November 16 & 17, 2017

Time spent on property: 7 hours

Who was present on the site visit? Amy Gordon, Ray Purington and Lisa Trotto.

What was their association with the property? Amy is a Member of Gill's Conservation Commission and Chair of the Town Forest Task Force, and Ray is the Town's Administrative Assistant. Lisa Trotto is the Baseline Contractor.

Questions for the landowner/representative:	Yes	No	N/A
Have there been any changes on the property since the Restriction was recorded?	X		
Do you plan to make any changes on the property in the near future?	X		
Are you aware of any encroachments on your property?		X	
Do you have any questions regarding the Restriction on your land?	X		
If public access is allowed under terms of the Restriction, have you encountered any difficulties?		X	

Describe when the landowner questions were asked:

Questions were asked of Amy Gordon in person on November 16th and Ray Purington in person on November 17th

Changes on the property since the Restriction include:

- New posts, blazing, flagging and boundary markers were installed (waypoints 7, 8, 12-16, 21, 26, 29-35, 43, 44, 46, 47, & 49; photos 7, 8, 16, 19-22, 29, 36, 39-48, 56, 58, 59, 60 & 64).
- Cleared trails and trail markers (waypoints 6, 23 & 40; photos 6, 33 & 54).
- Fields have been mowed and regularly maintained by clearing brush and branches. (waypoints 18, 37 & 41; photos 26, 51 & 55).
- Trash has been cleaned up.
- A parking area, kiosk and gate were installed (waypoints 4 & 5, photos 4 & 5).
- One bridge was improved (waypoint 10, photo 12) and one bridge was replaced (waypoint 40, photo 54).

Planned changes on the property in the near future include:

- Continued cleaning up of minor dumping, an old dumpsite and hunting stand (waypoints 11, 17, 27, & 28; photos 13, 25, 37, & 38).
- Continued trail development and related work on the Green Trail (waypoints 11, photos 14 & 15).

Comments on any of the landowner's answers to the above questions or any other questions or concerns the landowner had:

Amy Gordon asked permission to replace two old Adirondack Chairs located at waypoint 41 (photo 55).

Ray Purington's comments:

- The old fire pit, dumpsite, hunting stand, and wood pallet "boardwalks" (see monitoring map for locations) pre-exist the Conservation Restriction and the Town's acquisition of the property, both in 2009. Prior to the Conservation Restriction, Franklin Land Trust volunteers made an effort to clean up the fire pit by removing everything to ground level. At this point the series of wooden pallets, which form two "boardwalks" into the pond, are nearly impossible to remove, as they are rotten, waterlogged and seasonally submerged. Although the location of the dumpsite and hunting stand presents a challenge, the Town hopes to be able to get a team of volunteers together to clean up these areas during the next Source to Sea cleanup, which is usually held in September.
- There are remnants of an old trail/access road going from Hoe Shop Road to the fields on the West side of the property. The Town hopes to one day re-establish this access point, as there presently is no safe way to get mowing equipment to the fields except by permission to cross an abutter's property.
- The southeast boundary of the east tract parallels an old logging road labeled on some maps and surveys as "Old Road to Scott Place," and is believed to be a Town road dating to the 1790's that has not been discontinued.
- There is a utility line (electric, maybe telephone) cutting across Town Forest land to service 101 Hoe Shop Road. The utility line pre-dates the CR. Rough GPS coordinates from 42.654994, -72.538954 to 42.654425, -72.538082.
- An off the road parking area located off Hoe Shop Road indicated by the landowner's representative as a right of way shown in The Fall River Trails map (see in Section VI: appendices).

- Part B: Current Property Conditions

1. Conditions of the property relevant to the Restriction Purposes:

The restriction purposes are stated in Section I of the restriction, Purposes:

A. The purpose of this CR is to retain the Premises in perpetuity for the purposes and protections set forth in Article 97 of the Amendments to the Massachusetts Constitution, to retain the Premises predominantly in its natural, scenic and open condition; to protect and promote the conservation of natural watercourses and wetlands, including Otter Pond and the Fall River, a free flowing coldwater stream^[SEP] identified by the United States Fish and Wildlife Service as habitat for Atlantic^[SEP] Salmon populations; to protect glacial features such as eskers and kettle hole ponds; to protect wildlife habitat and biological diversity; to protect Distinctive and Noteworthy Scenic Areas as identified by the Department's Scenic Landscape Inventory; to protect "BioMap Supporting Natural Landscape" and "Living Waters Critical Supporting Watershed" as designated by the Massachusetts Natural Heritage and Endangered Species Program on the majority of the Premises and the western half of the premises. Respectively; to protect the silvicultural and natural resources of the Premises; to protect and enhance the value of abutting and nearby conservation areas; to allow passive recreational use for the general public; to allow for sustainable and sound management of the forest resources, and to encourage the long-term professional stewardship of these resources in a manner consistent with Best Management Practices (BMPs), applicable state and federal law, and in conformance with an approved Forest Stewardship Plan, all consistent with the provisions of this CR.

The property is divided into two sections west and east of Hoe Shop Road in Gill with a small portion (3.3 acres) located in the town of Bernardston (See USGS Topo Map). This largely forested property also contains open fields (waypoints 18, 37 & 41, photos 26, 51 & 55), Otter Pond and its adjacent wetlands and streams (waypoints 9, 10, 11, 12, 17 & 18, photos 9, 12, 13, 16, 23 & 26), with Fall River, and a scenic area (waypoint 41, photo 55). There are developed marked trails throughout both tracts (waypoints 6, 23 & 40, photos 6, 33, & 54), and trails in development on the east tract (waypoints 11, photos 14 & 15). There is a meadow containing an old house site and old hand dug shallow well on the east tract (waypoint 18, photo 26) and an informational kiosk and parking area (waypoints 4 & 5, photos 4 & 5). An Esker can be walked via the Esker Trail on the west tract (waypoints 27 & 28, photos 37 & 38).

Three APR properties abut the west tract further enhancing protection of open space and agricultural aspects of the area (See Locus Map). Abutting parcels on the east side are presently in Chapter 61, while this is only temporary protection, it does create a large, contiguous area for wildlife. A Forest Management Plan was written in 2014, which specifies actions and goals that promote ecologically responsible resource management in the next ten years (See Forest Management Plan in the Appendix). There are two potential vernal pools, one located on the east tract and one on the west tract. The property is within an area designated as BioMap2 Core Habitat for a Wetland Core, and BioMap2 Critical Natural Landscape for a Wetland Buffer and a Landscape Block (See Resource Map and Natural Heritage Rare Species Information in the Appendix).

2. Conditions of the property relevant to the Restriction's Permitted and Prohibited Uses:

Prohibited uses are listed in Section II of the CR, Prohibited Uses. The letter in parentheses refers to the paragraph letters from that section.

(A) A large foundation is located on the west tract (waypoint 39, photo 53) was said to be the remains of a rudimentary fish hatchery system (Forest Management Plan, page 5). It's also believed the foundation was used as a swimming pool at one time. There is gravel parking area, kiosk and gate on the east tract (waypoints 4 & 5, photos 4 & 5); and Trail signs have been installed throughout the trail system and posts have been installed (waypoints 6, 23, & 40, photos 6, 33 & 54). There is an old hand-dug shallow well, once part of a former homestead on the east tract (waypoint 19, photo 27). There are two bridges on the east tract, one bridge that was improved (waypoint 10, photo 12), and one bridge was replaced (waypoint 40, photo 54). The landowner's representative additionally indicates the following information below which is unconfirmed by the contractor:

- A second parking as being a roadside parking area, located in a right-of-way off Hoe Shop Road shown in The Fall River Trails map (see in Section VI: appendices).
- A utility line which predates the CR, electric or telephone, cutting across Town Forest land to service 101 Hoe Shop Road. Rough GPS coordinates from 42.654994, -72.538954 to 42.654425, -72.538082.
- A series of wooden pallets, which form two "boardwalks" into the pond, which are nearly impossible to remove, as they are rotten, waterlogged and seasonally submerged (See Monitoring Map).
- There are remnants of an old trail/access road going from Hoe Shop Road to the fields on the West side of the property. The Town hopes to one day re-establish this access point, as there presently is no safe way to get mowing equipment to the fields except by permission to cross an abutter's property (See Monitoring Map).

(D) There is an old dumpsite on the west tract (waypoint 27, photo 37) and an old hunting site close by (waypoint 28, photo 38). There is minor dumping (not active), a chair and a barrel, on the east tract along the neighbor's boundary (waypoint 17, photo 25). The neighbor along the northern bound of the west tract has a brush pile (waypoint 25, photo 35), on their land, which does not encroach onto the CR at this time. The landowner's representative additionally indicates an old fire pit and dumpsite (See Monitoring Map for locations as unconfirmed by the contractor) Although the location of the dumpsite and hunting stand presents a challenge, the Town hopes to be able to get a team of volunteers together to clean up these areas during the next Source to Sea cleanup, which is usually held in September.

(F) I observed a small brush/wood pile from clean up on the trail in development, which is centrally located on the east tract (waypoint 11, photo 13).

(G) One area of Multiflora Rose was observed on the west tract near Fall River (waypoint 38, photo 52).

(H) A large foundation is located on the west tract (waypoint 39, photo 53) and was said to be the remains of a rudimentary fish hatchery system (Forest Management Plan, page 5). The landowner's representative also indicated it was once used as a swimming pool.

(M) There is an old hand-dug shallow well, once part of a former homestead on the east tract (waypoint 19, photo 27).

Permitted uses are listed in Section III of the CR, Reserved Rights. The letter in parentheses refers to the paragraph letters from that section.

(A) There are four developed hiking trails- The Wetland Trail, which is adjacent the main parking area and kiosk (waypoint 6, photo 6) runs in a loop connecting to the Otter Pond Trail. The Otter Pond Trail runs north to a second parking area (unconfirmed by the contractor) A second parking area as shown in The Fall River Trails map is located off Hoe Shop Road and indicated by the landowner's representative as being a roadside parking area (see in Section VI: appendices). The Fields-River Trail is accessed on the west side of Hoe Shop Road and follows the edge of field and forest (waypoints 37, photo 51) to the Fall River scenic area (waypoint 41, photo 55). The Esker Trail begins at the edge of the field and forest (waypoint 40, photo 54) and can be accessed from Hoe Shop Road across from the main parking area. Other trails are in development.

(A1.) There is an old tree stand in the forest of the east tract (waypoint 20, photo 28) and remains of an old hunting site of significant size, on the east tract (waypoints 27 & 28, photos 37 & 38).

(B1.) There is a kiosk and gate on the east tract (waypoints 4 & 5, photos 4 & 5). Trail signs and posts have been installed throughout the CR (waypoints 6, 23, & 41, photos 6, 33 & 54). I observed one trail in the process of being developed which is located on the east tract (waypoint 11, photos 13, 14 & 15). North of this, as indicated by The Fall River Trails Map (See Section VI: Appendices) a Green trail is also in development. This access is by the Otter Pond Trail east and a new trailhead west, off Dole Road (waypoint 23 (photo 33). There are two bridges, one bridge that was improved at waypoint 10 (photo 12), and one bridge was replaced at waypoint 40 (photo 54), both on the east tract. The landowner' representative indicates a series of wooden pallets, which form two "boardwalks" into the pond, are nearly impossible to remove, as they are rotten, waterlogged and seasonally submerged (See Monitoring Map as unconfirmed by the Contractor).

(B2.) There are two old Adirondack chairs located on Fall River scenic area (waypoint 41, photo 55).

(B3.) The main parking area has a gravel surface and is located on the east tract, along with a kiosk and gate (waypoints 4 & 5, photos 4 & 5). The Fall River Trails map (see in Section VI: appendices) indicates a second parking area, (unconfirmed by the contractor) which the landowner's representative indicated as being a roadside parking area located in a right-of-way, off Hoe Shop Road at the entrance of Otter Pond Trail. There is also a new trailhead off Dole Road (waypoint 23, photo 33).

(B4.) A gate is located at the entrance of the Wetland Trail, adjacent the main parking area on the east tract (waypoint 5, photo 5).

(B5.) The landowner's representative indicated there is a utility line (unconfirmed by the contractor), which predates the CR, electric or telephone, cutting across Town Forest land to service 101 Hoe Shop Road. Rough GPS coordinates from 42.654994, -72.538954 to 42.654425, -72.538082.

(C.) The old access road is utilized to access the Wetland trail behind the gate of the main parking area (waypoint 6, photo 6). Otter Pond Trail joins up with an old logging road, which ends at Hoe Shop Road. I observed a snow fence on the west tract along the excluded boundary, recently installed through work with DCR as indicated by the landowner's representative (waypoint 43, photo 57). Unconfirmed by the contractor and indicated by the landowner's representative are remnants of an old trail/access road going from Hoe Shop Road to the fields on the West side of the property (see Monitoring Map). The Town hopes to one day re-establish this access point, as there presently is no safe way to get mowing equipment to the fields except by permission to cross an abutter's property.

(D.) There is a small brush/wood pile from clean up on the trail in development, which is centrally located on the east tract (waypoint 11, photo 13). One area of Multiflora Rose was observed on the west tract near Fall River (waypoint 38, photo 52).

(G.) Open fields, their edges, and meadow habitat are being maintained and kept clear of tree limbs and brush. Delayed mowing is practiced to allow birds to nest (waypoints 37 & 41, photos 51 & 55).

Additional Permitted uses are listed in Section IV. of the CR as Additional Reserved Rights. The letter in parentheses refers to the paragraph letters from that section.

Forest Stewardship Plan:

(A.) There is a forest stewardship plan for the property for the years 2015 through 2024. The stewardship plan provides a choice of several different forestry practices during this period, but lists them as "options" and does not provide a schedule for the work. I observed no sign of forestry activity and the landowner stated that none had occurred since the CR was recorded and none is planned for the immediate future. No forest cutting plans exist for the property. The stewardship plan is included in the appendix.

3. Conditions of the Property relevant to public use:

The CR, Section VII. Rights of Access. The first paragraph states:

The CR hereby conveyed includes the grant of the right to the Department, its successors and assigns, to enter upon the Premises and to permit the public to enter upon and use the Premises and existing and future ways and marked trails for the^[1]purposes set forth in Article III, Paragraph A, above, subject, however, to conditions specified in this CR, all in accordance with the rules and regulations of the Department and any restrictions imposed

by the Grantor or the Department to preserve and promote wildlife habitat and the unique natural resource values of the Premises. The right of public access hereby conveyed does not include the right of overnight camping; the right to operate all-terrain motorized vehicles. Including but not limited to motorcycles and off-road vehicles; the right to use amplified music or public address systems; the right to create or maintain open fires; the right to consume alcoholic beverages; the right to collect firewood, native plants or animals; the right to use animals, birds or other living creatures for target shooting; the right to damage or degrade real or personal property; the right to impair the quiet and peaceful enjoyment of the Grantor; the right to engage in any unlawful, destructive or reckless behavior of any kind, including without limitation hunting in an unsportsmanlike manner (as defined by the Massachusetts Department of Fish and Game), or the right to conduct any commercial use, including but not limited to guided hunting trips. The Grantor reserves the right to restrict access to areas of the Premises during timber harvesting or other permitted management activities that may pose a safety hazard. The Department and the Grantor may agree in writing to restrict access for other reasons, but only to the extent and for the duration necessary to preserve important scenic, ecological, and other conservation values of the Premises, to permit necessary maintenance, or to assure safety.

The CR, Section III. Reserved Rights. The first paragraph states:

The non-commercial use of the Premises by the Grantor and Grantor's invitees for passive, low-impact recreational and educational activities such as hiking, running, nature study, bird-watching, picnicking, snowshoeing, cross-country skiing, fishing, and other like non-motorized recreational and educational activities (but reserving the right to use motorized wheelchairs necessary to facilitate access by persons with physical disabilities) that do not materially alter the landscape and are carried out in a reasonable manner that does not impair the conservation and recreation values protected by this CR;

There is an old tree stand in the forest of the east tract (waypoint 20, photo 28). There is an old hunting site of significant size, on the east tract (waypoint 28, photos 38). While hunting is permitted in the CR, Section III, this old hunting site has not been used in years, and is considered a dumpsite. The landowner's representative additionally indicates an old fire pit and dumpsite (See Monitoring Map for locations as unconfirmed by the contractor). Although the location of the dumpsite and hunting stand presents a challenge, the Town hopes to be able to get a team of volunteers together to clean up these areas during the next Source to Sea cleanup, which is usually held in September.

I observed no one walking or hiking on the days of my field visits, however the property should be considered highly conducive to public use. The main parking area is easily found on the east tract. The Wetland Hiking Trail is conveniently located behind the gate at the main parking area, and the Esker Trail is located directly across from the main parking area.

4. Additional remarks regarding the present condition of the property:

I observed a large depression in the earth of unexplained origin, located in the forested portion of the east tract (waypoint 20, photo 28). The size is estimated to be approximately 10' x 20' and is less than 6' in depth. The landowner's representative stated that this could be the remains of a stone quarry, either for landscaping flat stones or fossilized dinosaur tracks, since the first discoveries of dinosaur tracks in the area were made in the mid 1800's. Also observed were rocks placed along the surface of the depression.

5. Recommended areas to note on future monitoring visits:

- The progress of cleaning up dumped materials (waypoint 17, 27 & 28, photos 25, 37 & 38). The progress of cleaning up the old fire pit and dumpsite (see Monitoring Map as unconfirmed by the contractor).
- The status of wood pallets that form "boardwalks" (see Monitoring Map for locations and as unconfirmed by the contractor).
- The abutters brush pile continues to stay on their land and out of the CR (waypoint 25 photo 35).
- The second off the road parking area (unconfirmed by the contractor) indicated by the landowner's representative to be located in a right-of-way off Hoe Shop Road at the entrance of Otter Pond Trail as indicated by The Fall River Trails map (see in Section VI: appendices).
- Future re-establishment of an old trail/access road going from Hoe Shop Road to the fields on the West side of the property as a safe way to get mowing equipment to the fields on the west tract (See Monitoring Map for location as unconfirmed by the contractor).

Part C: Boundary Conditions

1. Did the boundaries on the ground match the property boundary GIS shapefile provided by the Agency? If not, how did you locate the property boundary?

The shapefile matched the boundary evidenced on the ground. Many improvements have been made with additional flagging, blazing and placement of IP's on the east tract.

2. Are portions of the property that are excluded from the Restriction marked or otherwise evident on the ground?

The corner of the southern exclusion located on the east tract along Hoe Shop Road is referenced with a wooden marker in the location of an iron pin set flush (waypoint 3, photo 3); and continues east into forested areas marked with IP's, flagging and blazing (waypoints 7, 8, photos 7 & 8). Recent boundary work includes flagging and blazing along the road and abutter's driveway (Waypoint 50).

3. Describe the condition of the boundary markings at all other points (i.e. stone wall, flagged, signed, unmarked):

Beginning on the East Tract, at the northeastern corner on Hoe Shop Road in Bernardston and following the boundary in a clockwise direction:

A triple blazed tree and IP were found at the corner on Hoe Shop Road in Bernardston (waypoint 34, photo 47). Continuing southeast triple blazing, flagging and IP's were found (waypoints 33 & 32, 31, 30, photos 46, 45, 44, 43, 42, 41, & 40). Continuing along the northeast boundary, a blazed tree and flagging were found (waypoint 29, photo 39), an IP and stone pile were found (waypoint 26, photo 36) and flagging (waypoint 24, photo 34) on the northwest corner on Dole Road. No other markings were found continuing south along Dole Road.

Continuing South along the eastern boundary, a triple blazed tree, flagging and IP were found (waypoints 16, photo 22), Blazing and flagging were found (waypoints 15, 14, 13 & 12, photos 21, 20, 19, 18 & 16), triple blazing, flagging and barbed wire were found at the southeastern corner (waypoint 21, photo 29). A triple blazed tree and sign were found on the southern corner on Hoe Shop Road (Waypoint 49, photo 64)

Beginning on the West tract, at the northwestern corner on Hoe Shop Road and following the boundary in a counter clockwise direction:

A triple blazed tree and wooden marker were found on the northwest corner on Hoe Shop Road (waypoint 35, photo 48). No additional markings were found continuing west and south to where the line crosses the Fall River and back again. Flagging was found on the southern corner that abuts APR land (waypoint 42, no picture). Continuing southeast, IP's triple blazing, flagging and barbed wire fencing follows the line (waypoint 43, 44 & 45, photos 56, & 58) crosses wetlands to find a wooden marker, flagging and remains of barbed wire fence (waypoint 46, photo 59). The barbed wire fence was found continuing

south; flagging, and an IP were also found on the corner bound on Bascom Road. The line continues southeast along Bascom Road to an old cement guardrail post on the corner of Bascom and Hoe Shop Roads.

4. Describe the use of abutting properties, focusing on uses close to the boundary line:

East Tract: The northern boundaries pass through and along the town boundary where a portion (3.3 acres) is in the town of Bernardston. It abuts private residences north and Dole Road east, to a private residence east of Otter Pond. The forest abuts lower eastern portions to a private resident south. The southeast boundary of the east tract parallels an old logging road labeled on some maps and surveys as “Old Road to Scott Place,” and according to the landowner’s representative, is believed to be a Town road dating to the 1790’s that has not been discontinued.

West Tract: Abuts Fall River to the west, and APR land along the southwest boundary (see Locus Map) to the south where it abuts Bascom Road.

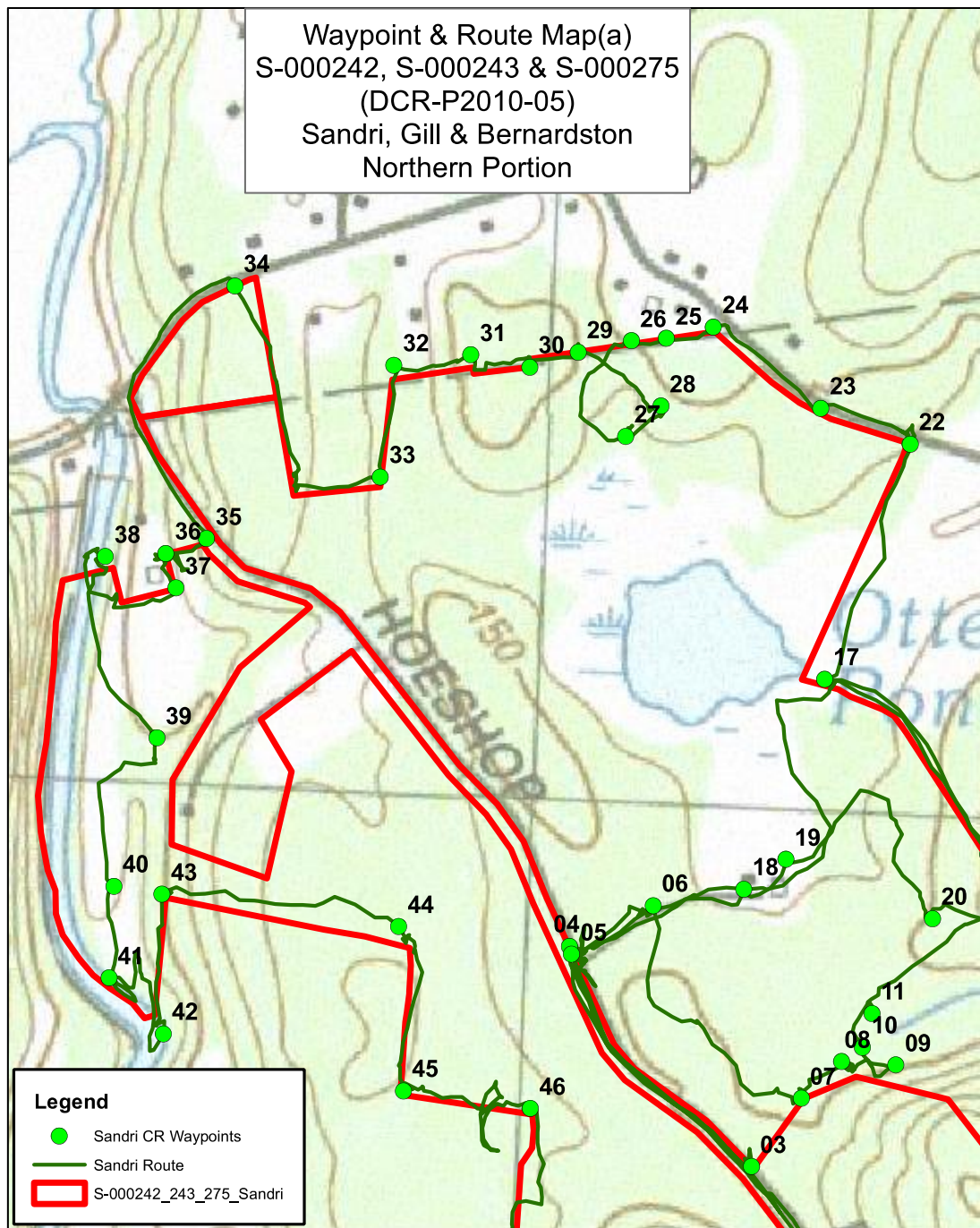
Both Tracts abut Hoe Shop Road.

5. Any other comments on boundaries?

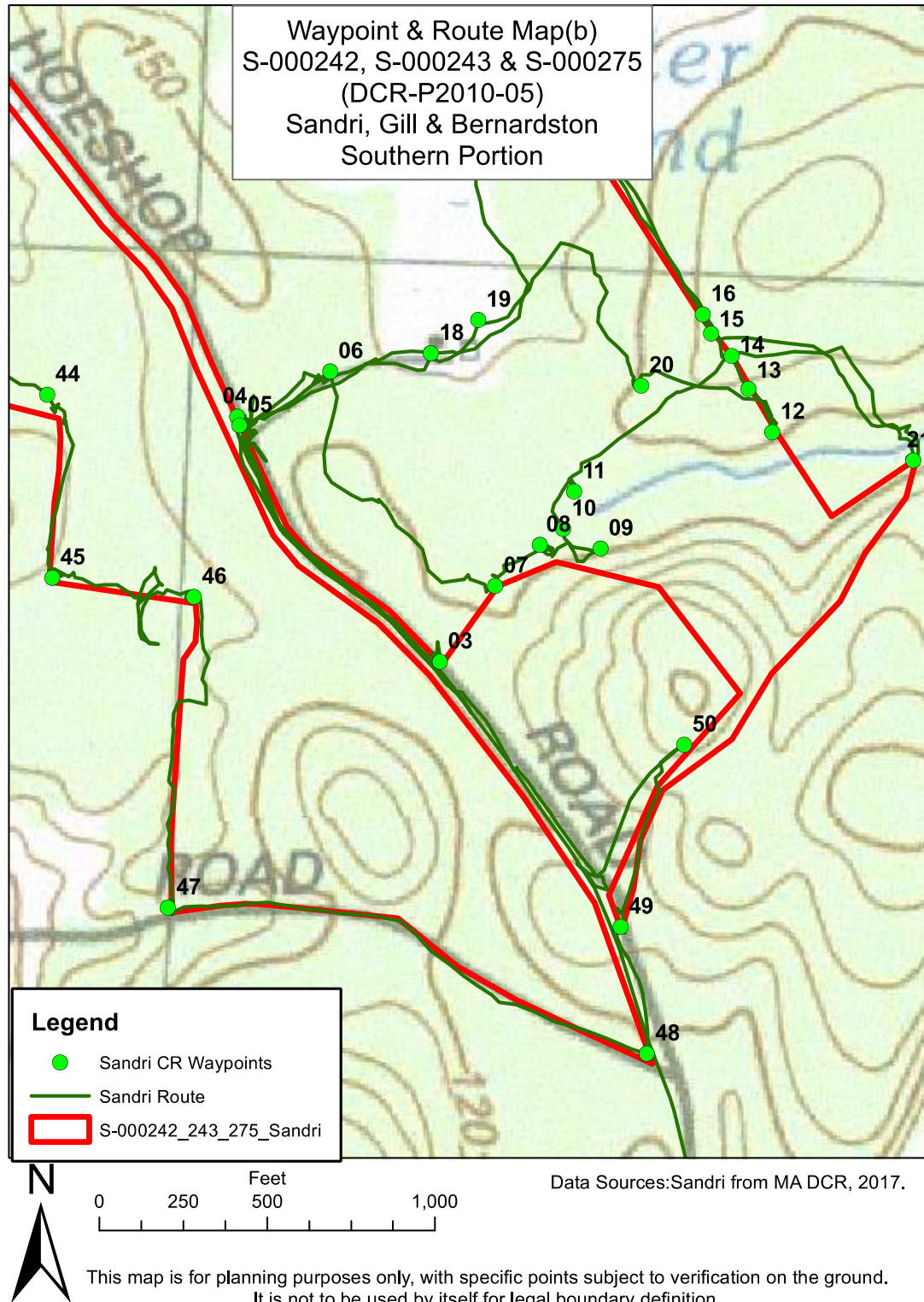
The neighbor on the east tract exclusion (waypoint 50) came outside and backed down his driveway while I was on my field visit. I introduced myself and informed him that I was contracted to complete this baseline report. He stated that he recently purchased the house and voiced concerns that he believed the recent boundary flagging and blazing were set too close to his driveway. I suggested he call the town’s representative Ray Purington to discuss this matter in more detail.

Ray followed up and met with the neighbor on site on 12/2/2017 and confirmed the flagging and blazing is correct. The boundary pin was located. The neighbors primary concern was that his driveway is too close to the boundary, which is not an issue. The driveway is entirely on the neighbor’s property and town bylaws do not require a setback from boundary lines for driveways.

Section IV: Waypoints and Photographs

Waypoint and Route Map (a)

This map is for planning purposes only, with specific points subject to verification on the ground.
It is not to be used by itself for legal boundary definition.

Waypoint and Route Map (b)

List of Waypoints and Documentary Photographs

Camera Make and Model: Sony Cyber Shot
 Photo Resolution (Pixels): 14.1 Mega Pixels
 Photographer: Lisa Trotto

GPS Make and Model: Garmin GPS Map 64st
 GPS Operator: Lisa Trotto

Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	1	-	-	SW corner of Main Road & West Gill Road		control waypoint
11/16/17	2	-	-	SE corner of West Gill Road & Hoe Shop Road		control waypoint
11/16/17	3	1	DSC02157	on road at corner bound	NE	wooden marker on road into CR
11/16/17	3	2	DSC02158	on road at corner bound	SE	wooden marker on road, CR to left
11/16/17	3	3	DSC02159	on road at corner bound	NW	wooden marker on road, CR to right
11/16/17	4	4	DSC02160	at parking area	NW	kiosk and maps
11/16/17	5	5	DSC02161	on road	E	parking area, kiosk and gate
11/16/17	6	6	DSC02162	on wetland loop trail	E	entrance to hiking trails, signage on posts
11/16/17	7	7	DSC02163	at pin on boundary	N	iron pin, CR to left
11/16/17	8	8	DSC02164	at pin on boundary	N	iron pin, CR to left
11/16/17	9	9	DSC02165	on boundary of exclusion	N	wetland/pond, CR to left
11/16/17	9	10	DSC02166	on boundary of exclusion	E	ridge along eastern bound, CR to left
11/16/17	9	11	DSC02167	on boundary of exclusion	S	Into excluded area
11/16/17	10	12	DSC02168	on wetland loop trail	NW	improved wooden bridge
11/16/17	11	13	DSC02169	on the trail	SE	wetland, wood debris from ongoing maintenance
11/16/17	11	14	DSC02170	on the trail	SW	flagged/marked trail to be developed
11/16/17	11	15	DSC02171	on the trail	N	flagged/marked trail to be developed
11/16/17	12	16	DSC02172	at corner bound	S	triple blazed tree, flagging, wetlands & remains of an old stone wall
11/16/17	12	17	DSC02173	at corner bound	E	out of CR
11/16/17	12	18	DSC02174	at corner bound	N	Along boundary, CR to left

Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	13	19	DSC02175	on boundary	NW	blazed tree and old barbed wire, CR to left
11/16/17	14	20	DSC02176	on boundary	NWN	blazed tree and flagging, CR to left
11/16/17	15	21	DSC02177	on boundary	NW	blazed tree, CR to left
11/16/17	16	22	DSC02178	at pin on boundary	SWW	iron pin, blazed trees & flagging, CR to right
11/16/17	17	23	DSC02179	on corner boundary	NW	wetlands into CR
11/16/17	17	24	DSC02180	on corner boundary	E	abutting lawn, CR to right
11/16/17	17	25	DSC02181	on corner boundary	SES	Along boundary, dumped chair in CR
11/17/17	18	26	DSC02182	on interior meadow	N	site of former homestead, field and pond in distance
11/17/17	19	27	DSC02183	at woods adjacent meadow	SE	old hand dug shallow well and barberry
11/17/17	20	28	DSC02184	in interior woods	NE	large depression in earth and tree stand to far right
11/17/17	21	29	DSC02185	at corner	W	triple blazed tree, flagging and barbed wire
11/17/17	21	30	DSC02186	at corner	S	trail (potentially out of use but not discontinued town road) along boundary line
11/17/17	22	31	DSC02187	at corner	SW	boundary along Dole Road (pin not found), CR to right
11/17/17	22	32	DSC02188	at corner	NW	boundary along Dole Road (pin not found), CR to left
11/17/17	23	33	DSC02189	on Dole Road	SW	new trail/trailhead, wooden posts
11/17/17	24	34	DSC02190	at corner bound	NW	Corner bound at Dole Rd-flagging, abutting lawn
11/17/17	25	35	DSC02191	on boundary	NW	wood brush pile NOT IN CR
11/17/17	26	36	DSC02192	at pin on boundary	NW	IP, stone pile and wooden post
11/17/17	27	37	DSC02193	on interior on esker	NW	old dump site
11/17/17	28	38	DSC02194	on esker	NE	remains of old hunting site
11/17/17	29	39	DSC02195	on boundary	W	blazed tree and flagging, CR to left
11/17/17	30	40	DSC02196	at pin on corner	E	IP /stone pile/triple blazed tree along boundary
11/17/17	30	41	DSC02197	at pin on corner	N	along boundary
11/17/17	31	42	DSC02198	at pin on corner	N	IP, flagging (wood pile OUT OF CR)
11/17/17	31	43	DSC02199	at pin on corner	W	triple blazed tree and flagging along bound, CR to left

Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	32	44	DSC02200	at pin on corner	S	IP, triple blazed tree, flagging along bound, CR to left
11/17/17	33	45	DSC02201	at pin on corner	NE	Triple blazed tree and flagging along bound, CR to right
11/17/17	33	46	DSC02202	at pin on corner	W	IP, triple blazed tree and flagging along bound, CR to left
11/17/17	34	47	DSC02203	on Dole Road at pin on corner	SES	IP, triple blazed tree, along bound
11/17/17	35	48	DSC02204	on Hoe Shop Road at corner	W	Wooden stake, triple blazed tree along boundary
11/17/17	36	49	DSC02205	at corner	NE	along boundary into CR
11/17/17	36	50	DSC02206	at corner	SW	along boundary, CR to left
11/17/17	37	51	DSC02207	at corner	SW	open field into CR
11/17/17	38	52	DSC02208	at wooded area east of Fall River	SW	Area of multiflora rose
11/17/17	39	53	DSC02209	at wooded area east of Fall River	S	concrete slab/pool/fish hatchery system
11/17/17	40	54	DSC02210	from field on boundary	E	new bridge and hiking trail sign
11/17/17	41	55	DSC02211	at corner boundary	NW	Old Adirondack chairs and field adjacent Fall River
11/17/17	42	--	--	at corner	--	flagging on bound. No IP.
11/17/17	43	56	DSC02212	at pin on corner	S	IP, triple blazed tree and old fence remains along bound, CR to left
11/17/17	43	57	DSC02213	at pin on corner	NNE	snowfence (in background) on CR through work with DCR
11/17/17	44	58	DSC02214	at pin on corner	E	IP, triple blazed tree, old fence remains and signage along boundary
11/17/17	45	--	--	on wetland crossing	--	flagging and old fence remains along bound
11/17/17	46	59	DSC02215	at corner bound	W	wooden stake, barbed wire fencing and flagging along wetland boundary
11/17/17	47	60	DSC02216	at pin on corner	NNE	IP on corner boundary of Bascom Road
11/17/17	47	61	DSC02217	at pin on corner	ESE	Flagging and barbed wire along boundary of Bascom Road, CR to left

Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	48	62	DSC02218	at corner bound	NW	Old cement guardrail post on corner of Bascom Road and Hoe Shop Rds., CR to right
11/17/17	48	63	DSC02219	at corner bound	NNE	Old cement guardrail post on corner of Bascom Road and Hoe Shop Rds., CR to left
11/17/17	49	64	DSC02220	on Hoe Shop Road at corner bound	NE	triple blazed tree and signage along boundary
11/17/17	50	--	--	on boundary		flagging and blazed tree

Documentary Photographs

Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	003	1	DSC02157	On road at corner bound	NE	Wooden marker on road, into CR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	003	2	DSC02158	On road at corner bound	SE	Wooden marker on road, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	003	3	DSC02159	On road at corner bound	NW	Wooden marker on road, CR to right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	004	4	DSC02160	At parking area	NW	Kiosk and maps



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	005	5	DSC02161	On road	E	Parking area, kiosk and gate



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	006	6	DSC02162	On wetland loop trail	E	Entrance to hiking trails, signage and posts



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	007	7	DSC02163	At pin on boundary	N	Iron pin, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	008	8	DSC02164	At pin on boundary	N	Iron pin, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	009	9	DSC02165	On boundary of exclusion	N	Wetland, pond, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	009	10	DSC02166	On boundary of exclusion	E	Ridge along eastern bound, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	009	11	DSC02167	On boundary of exclusion	S	Into excluded area



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	010	12	DSC02168	On wetland loop trail	NW	Improved wooden bridge



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	011	13	DSC02169	On the trail	SE	Wetland, wood debris from ongoing maintenance



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	011	14	DSC02170	On the trail	SW	Flagged/marked trail to be developed



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	011	15	DSC02171	On the trail	N	Flagged/marked trail to be developed



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	012	16	DSC02172	At corner bound	S	Triple blazed tree, flagging, wetlands & remains of an old stone wall



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	012	17	DSC02173	at corner bound	E	Out of CR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	012	18	DSC02174	at corner bound	N	Along boundary, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	013	19	DSC02175	On boundary	NW	Blazed tree and old barbed wire, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	014	20	DSC02176	On boundary	NWN	Blazed tree and flagging, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	015	21	DSC02177	On boundary	NW	Blazed tree, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	016	22	DSC02178	At pin on boundary	SWW	Iron pin, blazed trees & flagging, CR to right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	017	23	DSC02179	On corner boundary	NW	Wetlands into CR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	017	24	DSC02180	On corner boundary	E	Abutting lawn, CR to right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/16/17	017	25	DSC02181	On corner boundary	SES	Along boundary, dumped chair in CR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	018	26	DSC02182	On interior meadow	N	Site of former homestead, field and pond in distance



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	019	27	DSC02183	At woods adjacent meadow	SE	Old hand-dug shallow well and barberry



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	020	28	DSC02184	in interior woods	NE	Large depression in earth and tree stand to far right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	021	29	DSC02185	At corner	W	Triple blazed tree, flagging and barbed wire



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	021	30	DSC02186	At corner	S	Trail (potentially out of use but not discontinued town road) along boundary line



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	022	31	DSC02187	At corner	SW	Boundary along Dole Road (pin not found), CR to right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	022	32	DSC02188	At corner	NW	Boundary along Dole Road (pin not found), CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	023	33	DSC02189	On Dole Rd	SW	New trail/trailhead, wooden posts



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	024	34	DSC02190	At corner bound	NW	Corner bound at Dole Rd-flagging, abutting lawn



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	025	35	DSC02191	On boundary	NW	Wood brush pile- NOT IN CR.



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	026	36	DSC02192	At pin on boundary	NW	IP stone pile and wooden post



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	027	37	DSC02193	On esker	NW	Old dump site



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	028	38	DSC02194	On esker	NE	Remains of old hunting site



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	029	39	DSC02195	On boundary	W	Blazed tree and flagging, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	030	40	DSC02196	At pin on corner	E	IP /stone pile/triple blazed tree along boundary



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	030	41	DSC02197	At pin on corner	N	Along boundary



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	031	42	DSC02198	At pin on corner	N	IP, flagging (wood pile OUT OF CR)



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	031	43	DSC02199	At pin on corner	W	Triple blazed tree and flagging along bound, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	032	44	DSC02200	At pin on corner	S	IP, triple blazed tree, flagging along bound, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	033	45	DSC02201	At corner bound	NE	Triple blazed tree and flagging along bound, CR to right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	033	46	DSC02202	At corner bound	W	IP, triple blazed tree and flagging along bound, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	034	47	DSC02203	On Dole Road at pin on corner	SES	IP, triple blazed tree, along bound



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	035	48	DSC02204	On Hoe Shop Road at corner	W	Wooden stake, triple blazed tree along boundary



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	036	49	DSC02205	At corner	NE	Along boundary, into CR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	036	50	DSC02206	At corner	SW	Along boundary, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	037	51	DSC02207	At corner	SW	Open field, into CR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	038	52	DSC02208	At wooded area east of Fall River	SW	Area of Multiflora rose



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	039	53	DSC02209	At wooded area east of Fall River	S	Concrete slab/pool/fish hatchery system



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	040	54	DSC02210	On boundary	E	New bridge and hiking trail sign



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	041	55	DSC02211	At corner boundary	NW	Old Adirondack chairs and field adjacent Fall River



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	043	56	DSC02212	At pin on corner	S	IP, triple blazed tree and old fence remains, along bound, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	043	57	DSC02213	At pin on corner	NNE	Snow fence (in background) At pin on corner on CR through work with DCR



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	044	58	DSC02214	At pin on corner	E	IP found, triple blazed tree, old fence remains and signage along boundary



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	046	59	DSC02215	At corner bound	W	Wooden stake, barbed wire fencing and flagging along wetland boundary



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	047	60	DSC02216	At pin on corner	NNE	IP on corner boundary of Bascom Road



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	047	61	DSC02217	At pin on corner	ESE	Flagging and barbed wire along boundary of Bascom Road, CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	048	62	DSC02218	At corner bound	NW	Old cement guardrail post on corner of Bascom Road and Hoe Shop Rds., CR to right



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	048	63	DSC02219	At corner bound	NNE	Old cement guardrail post on corner of Bascom Road and Hoe Shop Rds., CR to left



Date	Waypoint Number	Photo Number	Photo File Name	Location Description	Cardinal Direction	Description of Photo Subject
11/17/17	049	64	DSC02220	On Hoe Shop Road at corner bound	NE	Triple blazed tree and signage along boundary



Section V: Affidavits

Baseline Preparer Affidavit

The undersigned hereby certifies 1) that acting in my capacity as contractor of the Department of Conservation and Recreation I prepared the accompanying Baseline Documentation Report dated 11/16 & 11/17/2017, describing the Sandri Property located in Gill & Bernardston; and 2) that the Report describes and documents the natural and other resources of the Property protected under a Conservation Restriction recorded in the Franklin County Registry of Deeds in Book 5709 at Page 39 on 7/9/2009; and 3) that based on all the information cited in said Report and to the best of my knowledge and belief, the Report is an accurate representation of the Property and its condition as of the date of the Report.

Notwithstanding the above, the undersigned agrees that the conditions documented in the Report do not necessarily constitute the entirety of conditions of the Property allowed or required by the Conservation Restriction, and that Department of Conservation and Recreation in no way waives any rights, in law or equity, to enforce any provisions of the Conservation Restriction, whether or not directly addressed in this Report.

Signed and sealed under the pains and penalties of perjury this ____ day of _____, 20__

By: _____
Name

On this _____ day of _____, 20__, before me, the undersigned notary public, personally appeared Lisa M Trotto, proved to me through satisfactory evidence of identification, which were MA Drivers License, to be the person who signed the preceding or attached document in my presence, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his knowledge and belief.

SEAL

Signature of Notary Public

Printed name of Notary Public

My Commission expires: _____

Baseline Photographer Affidavit

The undersigned hereby certifies that acting in my capacity as contractor of the Department of Conservation and Recreation on 11/16 & 11/17/2017, I visited the Sandri Property located in Gill & Bernardston and took documentary ground photographs ("the Photographs"), with photo file names, DSC02157 through DSC02220, and 2) that the Photographs, attached hereto, together with accompanying descriptions, List of Waypoints and Documentary Photographs, and Waypoint and Route Map, fairly and accurately depict the property as it appeared on the date the photographs were taken.

Signed and sealed under the pains and penalties of perjury this ____ day of _____, 20__

By: _____
Name

On this _____ day of _____, 20__, before me, the undersigned notary public, personally appeared Lisa M. Trotto, proved to me through satisfactory evidence of identification, which were MA Drivers License, to be the person who signed the preceding or attached document in my presence, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his knowledge and belief.

SEAL

Signature of Notary Public

Printed name of Notary Public

My Commission expires: _____

Acknowledgement of Baseline Conditions

The undersigned, being the successor owners of the Sandri Property located in Gill & Bernardston, subject to a Conservation Restriction recorded in the Franklin County Registry of Deeds in Book 5709 at Page 39 on 7/9/2009, hereby certify to the Department of Conservation and Recreation that the accompanying Baseline Documentation Report, dated 11/16 & 11/17/2017 is, to the best of our knowledge and belief, an accurate representation of the Property and its condition on this date.

Notwithstanding the above, the undersigned agree that the conditions documented in said Report do not necessarily constitute the entirety of conditions of the Property allowed or required by the Conservation Restriction, and that the Department of Conservation and Recreation in no way waives any rights, in law or equity, to enforce any provisions of the Conservation Restriction, whether or not directly addressed in this Report.

Executed under seal this ____ day of _____, 20__

By: _____
Signature of Successor

Print Name

Acknowledged by:
Department of Conservation and Recreation

By: _____
Signature of Agency Representative

Print Name and Job Title

Section VI: Appendices

Letter of Transmittal

68 Bullard Road
Princeton, MA 01541

Felicia Bakaj
Department of Conservation and Recreation
251 Causeway Street, 7th Floor
Boston, MA 02114-2104
Felicia.bakaj@state.ma.us

RE: Letter of Transmittal

Dear Felicia,

Pursuant to RFR-FWE-Stewardship-2013 and a Notice to Proceed from the department of Conservation and Recreation dated 10/16/2017, enclosed is a Baseline Documentation Report dated 11/16 & 11/17/2017 for the Sandri CR in the Towns of Gill & Bernardston, Restriction ID# S-000242, 243, 275 (DCR-P2010-05).

The report was prepared in compliance with EOEEA Restriction Baseline Documentation Report Specifications dated 5/7/2013. There are no authorized deviations from these specifications.

The report is printed on premium grade, acid free paper manufactured by International Paper with a product number of 166140.

Sincerely,

Lisa Trotto
Baseline Contractor

Contractor's Qualifications

Lisa Trotto was the author of this report as an independent contractor and sub-contractor under the guidance of Joseph Smith, providing APR monitoring and baseline reports for the Department of Agriculture, Department of Fish and Game's Division of Fisheries and Wildlife and Department of Conservation and Recreation. Since 2010, 142 Monitoring Documentation Reports, 7 Conservation Restriction Baselines, and 2 Agricultural Restriction Baselines were completed for protected farmland and wooded lands across Massachusetts.

Additionally, Mrs. Trotto is part time Administrator for the Worcester County Conservation District (WCCD), which involves office management, including grant and contracts, fundraising, workshops and conferences, website, social media, outreach to landowners, and fostering partnerships with like minded conservation organizations. The Administrator's main goal is to assist Supervisors and Board Members with their mission in addressing critical resource concerns in the County, and ensuring continued sustainability of the District.

Restriction History and Chronology**S-000242, S-000243 and S-000275:****The Sandri Trust, aka Gill Town Forest****Baseline Documentation Report****Restriction History and Chronology**

Winter 2007	Land Protection Specialist Terry Blunt was working with the Greenfield Savings Bank in their role as Trustee, the Town of Gill, and local conservationists to protect nearly 200 acres along Hoe Shop Road in Gill. The entire property included 2 existing homes which complicated the protection efforts. Extensive public road frontage made development of many additional ANR lots a distinct, and expensive, possibility. Valley Land Fund (VLF) and the Franklin Land Trust (FLT) were the land trust partners who made this project a success.
May 2008	The Sandri Trust CR project was presented to the DCR Lands Committee. Valley Land Fund had negotiated a limited development scenario with DCR acquiring a conservation restriction. The Town of Gill agreed to hold the underlying fee and the Franklin Land Trust surveyed out 4 ANR houselots on the southern end of the property to be sold to defray a portion of the total project cost. Lands Committee unanimously supported this acquisition. DCR Attorney Marcos Pittore was assigned to the project. Additional project funding came from the Blake Trust.
Winter 2008-2009	The CR was drafted to retain the property in a natural, scenic and open condition. Purposes included protecting Otter Pond and Fall River, glacial features, wildlife habitat and biological diversity, the Distinctive and Noteworthy Scenic Areas as identified by DCR's Scenic Landscape Inventory, BioMap2 Supporting Natural Landscape, and protecting and enhancing the value of abutting and nearby conservation areas. The document allows for sustainable and sound management of the forest resources in accordance with a Forest Stewardship Plan. Public access to the property is allowed. The Gill Town Forest is a 163 acre tract (less the two existing houselots, and the four ANR lots totaling 10 acres which were subdivided off.) The larger parcel is 101.519 acres on the east side of Hoe Shop Road and includes a 3.3 acre parcel in Bernardston. The smaller parcel is 61 acres and is on the west side of Hoe Shop Road.
July 9, 2009	The Conservation Restriction was recorded in the Franklin Registry of Deeds at Book 5709, Page 39.
July 7, 2014	A Forest Stewardship Management Plan was prepared by Mary K. Wigmore for the Town of Gill. The 'landowner goals' were to preserve the forest for habitat purposes and for public passive outdoor recreation.
April 2017	By the spring of 2017, only two of the four ANR lots had been sold. FLT inquired if DCR would be interested in accepting a no-cost CR on the remaining two lots if the Town held the underlying fee. DCR declined, suggesting that if the town's conservation commission were to

hold both lots in fee simple, the land would still be protected under Article 97. DCR staff time precluded accepting FLT's gift CR.

September 2017

Gill Conservation Commission, in accordance with the CR terms, consulted with DCR regarding the best material to use on an existing trail to keep hikers off adjacent private property. Snow fence was suggested.

Property Deed Copy

Bk: 05750 Pg: 129

2009 00012506
Bk: 5750 Pg: 129 Franklin County
Page: 1 of 3 09/17/2009 10:43 AM

Affected Premises

Hoe Shop Road
Gill, Massachusetts**QUITCLAIM DEED**

FRANKLIN LAND TRUST, INC., a Massachusetts non-profit corporation with a place of business in Shelburne Falls, Franklin County, Massachusetts

for consideration of **ONE DOLLAR (\$1.00)**, paidgrants to **THE INHABITANTS OF THE TOWN OF GILL**, of c/o Town Hall, 325 Main Road, Gill, Massachusetts 01354with **QUITCLAIM COVENANTS**,

The land in Gill, Franklin County, Massachusetts, more particularly described on Exhibit A attached hereto and incorporated herein.

SUBJECT TO a Conservation Restriction recorded in Franklin County Registry of Deeds, Book 5709, Page 39.

Being a portion of the premises conveyed to the grantor herein by deed of Ronald P. Weiss and Greenfield Savings Bank as Trustees of the Acilio R. Sandri Irrevocable Grandchild's Trust for the Benefit of Jeffrey W. Sandri, Ronald P. Weiss and Greenfield Savings Bank as Trustees of the Acilio R. Sandri Irrevocable Grandchild's Trust for the Benefit of Lisa Lou Sandri, and Wendy Van Epps, dated May 8, 2009, and recorded in Franklin County Registry of Deeds, Book 5668, Page 193.

This conveyance does not represent all or substantially all of the assets of the corporation.

IN WITNESS WHEREOF, the said FRANKLIN LAND TRUST, INC., has caused its corporate seal to be hereto affixed and these presents to be signed in its name and behalf by Richard K. Hubbard, its Executive Director, this 16th day of September 2009.

FRANKLIN LAND TRUST, INC.

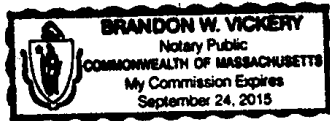
WitnessBy:
Richard K. Hubbard
Its Executive Director

Bk: 05750 Pg: 130

THE COMMONWEALTH OF MASSACHUSETTS

Franklin, ss.

On this 16th day of September, 2009, before me, the undersigned notary public, personally appeared Richard K. Hubbard, personally known to me to be the person whose name is signed on the within document, and acknowledged to me that he signed it voluntarily for its stated purpose, as Executive Director of Franklin Land Trust, Inc., a corporation.



Brandon W. Vickery
Notary Public Brandon W. Vickery
My commission expires: 9-24-2015

EXHIBIT A

The premises are bounded and described in a plan titled "Plan of Land in Gill & Bernardston, MASS. (Franklin County) Surveyed for Sandri Trust" dated April 29, 2009, Roberge Associates Land Surveying, 21 Mohawk Trail #283, Greenfield, Mass. and are shown as "East Tract 112.628 ± Acres" and "West Tract 61 ± Acres," recorded in said Registry of Deeds in Plan Book 128, Page 13;

EXCLUDING therefrom, Lots 1, 2, 3 and 4 as shown on a plan titled "Plan of 4 Lots in Gill (Franklin Co.) MASS. surveyed for Franklin Land Trust" dated May 12, 2009, Roberge Associates Land Surveying, 21 Mohawk Trail #283, Greenfield, Mass., recorded in said Registry of Deeds in Plan Book 128, Page 21

and Parcel 1, as shown on a plan of land titled "Plan of Barn Lot in Gill (Franklin Co.) MASS. surveyed for Franklin Land Trust" dated June 9, 2009, Roberge Associates Land Surveying 21 Mohawk Trail #283, Greenfield, Mass. and recorded in said Registry of Deeds in Plan Book 128, Page 35.

###

ATTEST: FRANKLIN, Joseph A. Gochinski Register

Landowner Contact Log

Date	Method	Representative	Contacted	Summary of Contact
11/2/17	Email	Lisa Trotto	Ray Purington	Initial Letter emailed
11/7/17	Email	Lisa Trotto	Ray Purington	Reply received and visit confirmed
11/14/17	Phone	Lisa Trotto	Ray Purington	Confirmed visit
11/14/17	Phone	Lisa Trotto	Amy Gordon	Confirmed visit
11/16/17	Phone and Visit	Lisa Trotto	Amy Gordon	Called upon arrival. Interview and Visit
11/16/17	Phone	Lisa Trotto	Ray Purington	Called to confirm another visit was needed to complete the fieldwork.
11/17/17	Phone and Visit	Lisa Trotto	Ray Purington	Completed Interview and Visit
11/20/17	Email	Lisa Trotto	Ray Purington	Followed up and sent an all in one Land Survey
1/11/18	Email	Lisa Trotto	Ray Purington	Draft BDR sent for review
1/29/18	Email	Lisa Trotto	Ray Purington	Received comments and edits for the BDR final report.

Landowner Correspondence

Email Correspondence

RE: Field Visit and brief interview request for Sandri property
Ray Purington/Gill Selectboard <administrator@gillmass.org>
Tue 11/7, 10:40 AM You; Amy Gordon (agordon49@gmail.com)

Hi Lisa,

It's a pleasure to hear from you. We knew that the Baseline was finally in the works, and are glad to see it moving forward.

November 16th works better for us. Amy Gordon, the Chair of our Town Forest Committee, is available to meet with you on-site before 1:00 PM. I am available to meet with you at my office in Town Hall. I'll try to take part during the field work, if my schedule allows.

Do you have an idea of your schedule for that day, in case other members of the Town Forest Committee want to participate?

Regards,

Ray Purington

Administrative Assistant

Town of Gill

325 Main Road

Gill, MA 01354

P: 413-863-9347 F: 413-863-7775

administrator@gillmass.org www.gillmass.org

From: LISA TROTTO [mailto:LISATRO@msn.com]

Sent: Thursday, November 02, 2017 3:04 PM

To: administrator@gillmass.org

Subject: Field Visit and brief interview request for Sandri property

Dear Mr. Purington,

I have been hired by the Department of Conservation and Recreation (DCR) to prepare a Baseline Documentation Report for the Sandri property on Hoe Shop Road in Gill and

Bernardston that is protected by a conservation restriction held by DCR. This work involves walking the property and documenting activities and condition of the land. Any structures (including their uses), property alterations and improvements located on the protected land needs to be inspected and documented. I also need to conduct a brief interview with a representative of the landowner.

I am currently planning on conducting this field work on November 9 or 16. If your schedule allows, it would be of great assistance to me if you or a representative could join me then. .

Please call me at 978-502-7396 or email via this email address if you would like to arrange to meet before or after the property visit or if you have any other questions or concerns.

I look forward to hearing from you. Lisa Trotto, Baseline Contract

Gill all-in-one survey

Ray Purington/Gill Selectboard <administrator@gillmass.org>

Mon 11/20, 2:34 PM You

Hi Lisa,

Glad you were able to finish up on Friday. And thanks for putting the abutter, Charles Garbiel, in touch with me. He and I will sort out the boundary blazes.

I've attached the "all in one" survey that I mentioned. Our OSRP is on the website. Go to gillmass.org and then click on the drop-down for Files (top of the page). Open Space is one of the choices.

Ray Purington

Administrative Assistant

Town of Gill

325 Main Road

Gill, MA 01354

P: 413-863-9347 F: 413-863-7775

administrator@gillmass.org www.gillmass.org

Waypoints Attributes Table

Property	Sandri						GPS Operator		Lisa Trotto		
Date	11/16/2017 & 11/17/2017						GPS Unit		Garmin GPS Map 64st		
Waypoint ID	Date	GPS Accuracy	Property Boundary	Boundary Certainty	Natural Feature	Cultural Feature	Land Use	Road Feature	Potential Issue	Comments	Number of Photos
1	11/16/17	3.0						jr	No	control	0
2	11/16/17	3.0						jr	No	control	0
3	11/16/17	3.0	rd	High				pr	No		3
4	11/16/17	3.0					ks	gr	No		1
5	11/16/17	3.0	rd	High			ks	gr	No		1
6	11/16/17	3.0					ks	tr	No		1
7	11/16/17	3.0	ip	High					No		1
8	11/16/17	3.0	ip	Medium					No		1
9	11/16/17	3.0	um	Low	hf				No		3
10	11/16/17	3.0			hf				No		1
11	11/16/17	3.0			hf		do		No		3
12	11/16/17	3.0	bz	High	hf				No		3
13	11/16/17	3.0	bz	High					No		1
14	11/16/17	3.0	bz	High					No		1
15	11/16/17	3.0	bz	High					No		1
16	11/16/17	3.0	ip	High					No		1
17	11/16/17	3.0	um	Medium			dv		No		3

Waypoint ID	Date	GPS Accuracy	Property Boundary	Boundary Certainty	Natural Feature	Cultural Feature	Land Use	Road Feature	Potential Issue	Comments	Number of Photos
18	11/17/17	3.0				ot	ag		No	old homestead site	1
19	11/17/17	3.0				wl			No	Old hand dug shallow well	1
20	11/17/17	3.0			ot	ot			No	depression in earth/tree stand	1
21	11/17/17	3.0	bz	High					No		2
22	11/17/17	3.0	cw	Medium				er	No		2
23	11/17/17	3.0	rd	High			ot	pr	No	trailhead	1
24	11/17/17	3.0	fl	High				pr	No		1
25	11/17/17	3.0	um	High			do		No		1
26	11/17/17	3.0	ip	High					No		1
27	11/17/17	3.0					dm		No	old dump site	1
28	11/17/17	3.0					dv		No	old hunting site	1
29	11/17/17	3.0	bz	High					No		1
30	11/17/17	3.0	ip	High					No		2
31	11/17/17	3.0	ip	High					No		2
32	11/17/17	3.0	ip	High					No		1
33	11/17/17	3.0	ip	High					No		2
34	11/17/17	3.0	ip	High					No		1
35	11/17/17	3.0	bz	High					No		1
36	11/17/17	3.0	um	Medium					No		2
37	11/17/17	3.0	um	Medium					No		1
38	11/17/17	3.0			in				No	multiflora rose	1
39	11/17/17	3.0				hf			No	Concrete slab/fish hatchery system	1

Waypoint ID	Date	GPS Accuracy	Property Boundary	Boundary Certainty	Natural Feature	Cultural Feature	Land Use	Road Feature	Potential Issue	Comments	Number of Photos
40	11/17/17	3.0					ks	br	No		1
41	11/17/17	3.0				hf	ag		No		1
42	11/17/17	3.0	fl	Medium					No		0
43	11/17/17	3.0	ip	High					No		2
44	11/17/17	3.0	ip	High					No		1
45	11/17/17	3.0	fl	Medium	wt				No		0
46	11/17/17	3.0	fe	High					No		1
47	11/17/17	3.0	ip	High				pr	No		2
48	11/17/17	3.0	sm	High				pr	No		2
49	11/17/17	3.0	bz	High				pr	No		1
50	11/17/17	3.0	fl	Medium					Yes		0

Natural Heritage Rare Species Information



Parcel: S-000242, 243, 275

Municipality: Gill, Bernardston

Acreage: 162.5

CR Holder: DCR

Grantor: Sandri

Rare Species and Natural Community Information:

The Massachusetts Natural Heritage & Endangered Species Program (NHESP) has no documented reports of **rare species** listed under the Massachusetts Endangered Species Act (MESA) on or near this tract as of October 31, 2017.

There are **no Certified Vernal Pools and two Potential Vernal Pools** on this tract/parcel.

There are no documented **Natural Communities** on this tract/parcel.

Part of this tract is **BioMap2 Core Habitat** for a Wetland Core. Part of this tract is **BioMap2 Critical Natural Landscape** for a Wetland Buffer and a Landscape Block.

This information is subject to change as records are updated over time.

Forest Management Plan



FOREST MANAGEMENT PLAN

Submitted to: Massachusetts Department of Conservation and Recreation
For enrollment in C1161/61A/61B and/or Forest Stewardship Program

Imperial Office


CHECK-OFFS						(B) 029-10019 -	
C1161	C1161A	C1161B	STWSHIP	C-S	Case No. (B) 106-10018	Orig. Case No.	new
cert. <input type="checkbox"/>	cert. <input type="checkbox"/>	cert. <input type="checkbox"/>	new <input checked="" type="checkbox"/>	EHA <input checked="" type="checkbox"/>	Owner ID 503734	Add. Case No.	
recert. <input type="checkbox"/>	recert. <input type="checkbox"/>	recert. <input type="checkbox"/>	renew <input type="checkbox"/>	Other <input type="checkbox"/>	Date Rec'd 6-17-14	Ecoregion	221 AF
amend <input type="checkbox"/>	amend <input type="checkbox"/>	amend <input type="checkbox"/>	Green Cert <input checked="" type="checkbox"/>		Plan Period 2015-2024	Topo Name	
Plan Change: _____ to _____				Conservation Rest. <input checked="" type="checkbox"/>	Rare Sp. Hab. No	River Basin	CT
				CR Holder DCR			

OWNER, PROPERTY, and PREPARER INFORMATION

Property Owner(s) The Town of Gill-c/o Administrative Assistant-Ray Purington

Mailing Address 325 Main Road - Gill, Massachusetts, 01354

Phone 413.863.9347

Property Location: Town(s) Gill and Bernardston

Road(s) Hoeshop Road and Bascom

Road

Plan Preparer Mary K. Wigmore

Mass. Forester License # 250

Mailing Address 1637 West Road-Williamsburg, MA 01096

Phone 413.628.4594

RECORDS

Assessor's Map No.	Lot/Parcel No.	Deed Book	Deed Page	Total Acres	Ch61/61A 61B Excluded Acres	Ch61/61A 61B Certified Acres	Stewshp Excluded Acres	Stewshp Acres
G-208	7	5750	129	98.219	NA	NA	0	98.219
G-208	1	5750	129	61.0	NA	NA	0	61.0
B-3	1	5750	129	3.3	NA	NA	0	3.3
Block 4								
TOTALS				162.519	NA	NA	0	162.519

Excluded Area Description(s) (if additional space needed, continue on separate paper)

HISTORY Year acquired 2009 Year management began 2009

Are boundaries blazed/painted? Yes ☐ No ☒ Partially ☐

What treatments have been prescribed, but not carried out (last 10 years if plan is a recert.)?

stand no. NA treatment NA reason NA

(if additional space needed, continue on separate page)

Previous Management Practices (last 10 years)

Stand #	Cutting Plan #	Treatment	Yield	Value	Acres	Date
NA						

Remarks: (if additional space needed, continue on separate page)

Local stewardship responsibility lies with the Town Forest Task Force with oversight by the Conservation Commission.

overall

Name _____

STEWARDSHIP PLANNING WORKSHEET

These two sheets will help record your goals and visions for your property. Use the first page to start your thinking about issues to discuss or questions you may wish to ask your consulting forester prior to your plan's preparation. It is an optional worksheet for you to use as you wish. The second page will be included as part of the plan.

Ownership

- How many years have you or your family owned this property? 5 yrs
- How many more years do you expect to own it? 1 to 10 ☒ 11 or more
- Have you done any estate planning? yes ☐ no
- What do you think you will eventually do with this property?
 - ☐ Will it as is to heirs ☐ Divide among heirs ☐ Sell for development
 - ☐ Protect some or all land from development ☐ Don't know ☐ Other _____
- Are you interested in classifying the property under Chapter 61, 61A or 61B for tax purposes?
 - ☐ Yes ☐ No ☐ Already is ☐ Don't know

The Land

- Are you aware of any important natural or cultural features on your land? (Check all that apply)
 - ☒ Abandoned Fields ☒ Apple Trees badly slipped
 - ☒ Beaver Pond ☒ Springs or Seeps
 - ☒ Brooks or Streams ☒ Waterfalls
 - ☒ Forested Wetlands ☒ Stone Walls (small, infrequent)
 - ☒ Rock Outcrops or Ledges ☒ Old Foundations (old wood)
 - ☒ Very Large or Unique Trees ☒ Vernal Pools (none certified)
 - ☐ Mowed Fields ☒ eskers Colquhoun brook: Fall River
- Is your property posted against: Trespassing ☐ Hunting ☐ Fishing ☐ Motorized vehic. ☐
- Are your property boundaries well marked? ☐ Yes ☐ No not allowed
 - Surveyed, not completely marked pins CR
 - Accomplishing Goals
- How much of the management work do you plan on doing yourself?
 - ☐ None ☒ Some of it ☒ Most of it
- How many days of free labor per year do you have (self, family, friends)?
 - ☐ None ☐ 1 to 5 ☐ 10 to 20 ☒ more than 20
- What percent of earnings from woodland are you are willing to reinvest in the land?
 - ☐ None ☐ 10% to 25% ☐ 33% to 50% ☒ more than 50% ☐ don't know
- How much out-of-pocket money are you willing to invest to improve your property?
 - ☐ None ☐ \$100 to \$500 ☐ \$1000 to \$2000 ☒ more than \$2000
- Are you willing to work with your neighbors to accomplish mutual goals?
 - ☒ Yes ☐ No ☐ Don't know

Page 2(a) of 35

Revised May 2009

Landowner Goals

Please check the column that best reflects the importance of the following goals:

Goal	Importance to Me			
	High	Medium	Low	Don't Know
Enhance the Quality/Quantity of Timber Products*	X			
Generate Immediate Income			X	
Generate Long Term Income		X		
Produce Firewood			X	
Defer or Defray Taxes	N/A			
Promote Biological Diversity	X			
Enhance Habitat for Birds	X			
Enhance Habitat for Small Animals	X			
Enhance Habitat for Large Animals	X			
Improve Access for Walking/Skiing/Recreation	X			
Maintain or Enhance Privacy			X	
Improve Hunting or Fishing			X	
Preserve or Improve Scenic Beauty	X			
Protect Water Quality	X			
Protect Unique/Special/ Cultural Areas		X		
Attain Green Certification			X	
Other: <u>education</u>	N/A			

*This goal must be checked "HIGH" if you are interested in classifying your land under Chapter 61/61A.

In your own words, describe your goals for the property:

work w/ others in the community to preserve a quiet, semi-wild place
for birds, animals, and passive recreation at minimal cost to the town.

Stewardship Purpose

By enrolling in the Forest Stewardship Program and following a Stewardship Plan, I understand that I will be joining with many other landowners across the state in a program that promotes ecologically responsible resource management through the following actions and values:

1. Managing sustainably for long-term forest health, productivity, diversity, and quality.
2. Conserving or enhancing water quality, wetlands, soil productivity, carbon sequestration, biodiversity, cultural, historical and aesthetic resources.
3. Following a strategy guided by well-founded silvicultural principles to improve timber quality and quantity when wood products are a goal.
4. Setting high standards for foresters, loggers and other operators as practices are implemented; and minimizing negative impacts.
5. Learning how woodlands benefit and affect surrounding communities, and cooperation with neighboring owners to accomplish mutual goals when practical.

Signature(s): Amy GordDate: June 9, 2014Owner(s) (print) _____
(This page will be included with the completed plan.)Page 26 of 38

Section 1: PROPERTY OVERVIEW

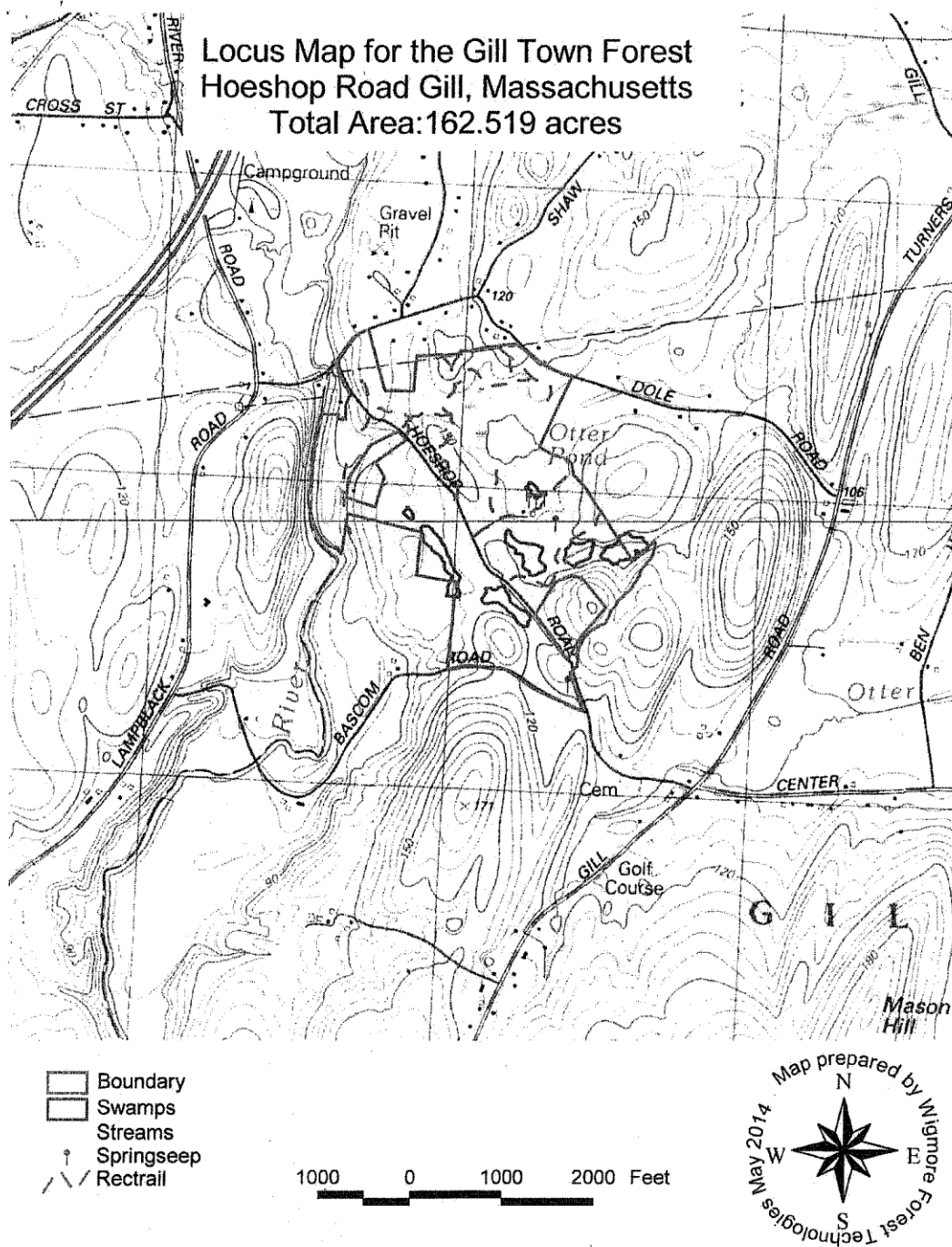
History and Background: The 163-acre Gill Town Forest property was acquired in 2009 through a cooperative effort by the Franklin Land Trust, the MA Department of Conservation and Recreation, and the Town of Gill. The property had been owned by the Sandri family who actively managed their forestland, consistent with land use in the area and part of the local heritage of land ownership and working forests. The Town, Land Trust, and DCR worked together to conserve the 163-acre Town Forest, which was funded partially by selling off 4 house lots totaling 10 acres located on the eastern edge of the property. In addition, DCR purchased a Conservation Restriction (hereinafter called the "CR") to legally and permanently protect the land for conservation and public outdoor recreational use. Other funding sources were the Ruth Cook Trust and the Lesson Blake Trust with a large contribution. The result: the Gill Town Forest contains 162.519 acres in two compartments bisected by Hoeshop Road in Gill. The large parcel on the east side of Hoeshop Road contains 101.519 acres (including 3.3 acres over the town line in Bernardston), and the smaller one on the west side contains 61 acres. The Gill Town Forest is now a legally protected piece of the local natural heritage.

The Landscape/Regional Context: The local pattern of land use includes woodlands, working forests, and agricultural businesses inclusive of vegetable farming, dairy production, livestock, and hay production. An active gravel pit lies due north of this site, and a small campground operates to the west. Other uses of local properties include forest management, timber harvesting, horseback riding, bird watching, snowmobiling, hiking, and photography. The Town Forest is similar to its neighbors in its historic uses for agriculture, pastures, and timber production. Bernardston lies less than two miles north-west of the property.

Boundaries: Roberge Associates of Greenfield completed two surveys of the property in 2009, which are recorded in the Franklin County Registry of Deeds in Plan Book 128, Pages 21 and 28. The Forest Stand Location map in this document does not present the meets and bounds of the boundaries. The inclusion of a copy of the survey map accurately defines the bounds. Iron pipe monuments exist at corner positions. The inventory work for this report located many of these corner pins. The integrity of the boundaries is well maintained with no sign of encroachments.

Topography: The general relief is characteristic of glacial outwash, eskers, and kettle pond topography. In the eastern portion, a series of five small hilltops ring a wide depression with the central focal point being Otter Pond. Kettle ponds formed from the calving of large ice chunks in the wake of the retreating glaciers. Once the ice melted, the kettle depressions remained. A wide glacial plain slopes westerly away from the Hoeshop Road into the micro-watershed basin of the Fall River. A soil medium known as the Hollis-Charlton Association lies beneath this terrain. These well-drained soils lie upon the sloping uplands of Franklin County. They formed in stony, sandy, glacial till, which derived mainly from schist and granite. They vary in depth, yet all contain a fine sandy loam composition. White pine dominates most of the forest structure, as this species is very well suited to these soils.

Unique Cultural and Physical Features: The Massachusetts Natural Heritage Endangered Species Program designates Otter Pond with its adjacent wetlands, the streams, Fall River, and its riverbanks as BioMap 2Core Aquatic Buffer Zone. These protective upland buffers support the broader wetland systems and its habitat functionality. NHESP designates the red maple and marsh wetlands, which surround Otter Pond, as BioMap 2 Core Wetland Habitat. These undisturbed wetland systems provide intact buffering capacity without any fragmentation along Otter Pond. They are likely to support critical wetland functions such as natural hydrological conditions, diverse plant, and animal habitats now and into the future. These core wetland habitats capture heavy rains, prevent downstream flooding, absorb greenhouse gases, and purify and store ground water.



The Massachusetts Division of Fish and Wildlife Natural Heritage Endangered Species Program designates the property as a Supporting Natural Landscape and a Living Waters Critical Supporting watershed. These designations represent the areas with the highest potential to sustain or degrade Core Habitats and protect both freshwater and terrestrial biodiversity in Massachusetts. The United States Fish and Wildlife Service identified Fall River as habitat for Atlantic salmon populations.

Eskers are long, winding ridges of stratified sand and gravel, which occur in formerly glaciated regions. Some fine examples of this land feature are found on this property near the Dole Road areas. A large foundation sits on a small stream channel near the western bound west of Hoeshop Road. It may have been the remains of a rudimentary fish hatchery system. The Fall River forms the western boundary of the Town Forest. A narrow outwash plain lies beside the river, and it offers a uniquely beautiful passive recreation spot. These designations and unique physical features make this area a high value conservation forest.

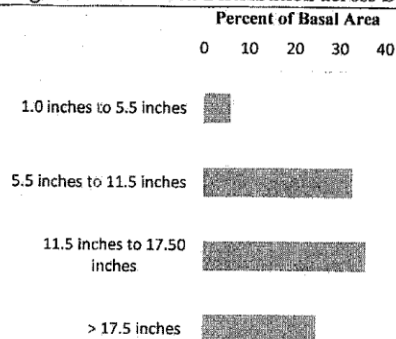
Impact on Nearby Protected Land: The Gill Town Forest provides wildlife connectivity across the neighboring conservation parcels (identified on the Mass GIS 2010 Protected land base Layer) of Remillard, Brechenser, and Bascom Hollow Farm. Habitat, recreation, or forest management work on the Town Forest would not have an adverse impact on these neighboring lands. Otter Pond forms the headwaters of one of the main tributaries of Otter Brook, which drains into the Connecticut River watershed basin. The forest ecosystem naturally maintains high water quality in the larger watershed.

Purpose of the Plan: The Gill Town Forest Task Force requested the completion of this plan as a guide for the stewardship and care of this property. Massachusetts Department of Conservation and Recreation mandates the completion of a Forest Stewardship Plan. This plan describes the natural resources, goals for their conservation, feasible projects to achieve these goals, and provisions and recommendations for monitoring projects.

The Forest Ecosystem, Forest Stands/Cover Types, and Condition:

General Summary: Most of the area is covered by an all-aged or un-even aged species-rich forest. An analysis of the distribution of the age-class and sizes of trees across the entire forested ecosystem indicates balance amongst the age and size classes with the exception a deficiency (only 6% of the stocking density) in the youngest age class of seedlings (trees less than five inches in diameter). The stocking distribution across the other age/size classes approximates balance as indicated in Figure 1: Percentage Basal Area Distribution across Diameter/Size Classes.

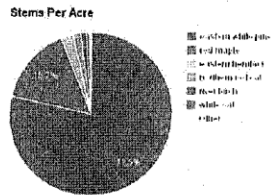
Figure 2: Basal Area Distribution across Diameter Classes in the Forest by Percent of Total Basal Area



Un-even aged, species-rich forests have trees and groups of trees of different ages and a wide mix of species with complex developmental dynamics. They have a natural capacity to withstand either anthropogenic or natural disturbance because of the younger age classes' replacement function. They provide inherent biodiversity protection and ecological resiliency. All layers of the forest are well stocked; even the forest floor supports a dense mat of herbaceous vegetation inclusive of wildflowers, ferns, moss, and shrubs. Maintenance of this all-aged condition and its further development later in the rotation allows compliance with the main biodiversity conservation provisions of the CR.

The species composition summary by proportion of the total stocking for the forest records as white pine (51%), hemlock (15%), red oak (15%), red maple (9%), white oak (5%), black birch (3%) with the remaining stocking in aspen, pitch pine, shagbark hickory, white ash, black oak, black cheery, paper birch, and pignut hickory. The weighted average of relative stocking density across the entire forest is 57%. Maximum stand growth occurs at this level, and enough trees occupy the growing site to discourage any detrimental effects on the growth of individual tree form. The general health of the forest is very good with some minor infestations of hemlock elongated scale, hemlock wooly adelgid, beech-bark disease, and bacterial cankers on the immature cheery. A healthy forest supports diverse and vibrant habitat, and it functions as a dynamic, living system.

Figure 3: Stocking Density by Species as Percent of Stems Per Acre



Stand Delineation: The forest was stratified into two sections, identified as the west and east side of Hoeshop Road. Stratification facilitates accurate statistical sampling. The compartments were further delineated into forest stands, which are the smallest unit of area useful for land management decisions. A forest stand represents a plant community with similar age, size, species composition, and overall condition. Each stand is given a general forest type code. These codes are described briefly in Table 1: Forest Stand/Cover Type List by Stand Number, Stand Name, and Area. The forest stands are described in detail in Section 2.2: Forest Stand Description Summary Forms. The forest stands are located on the property in Figure 3: The Forest Stand Locator Map.

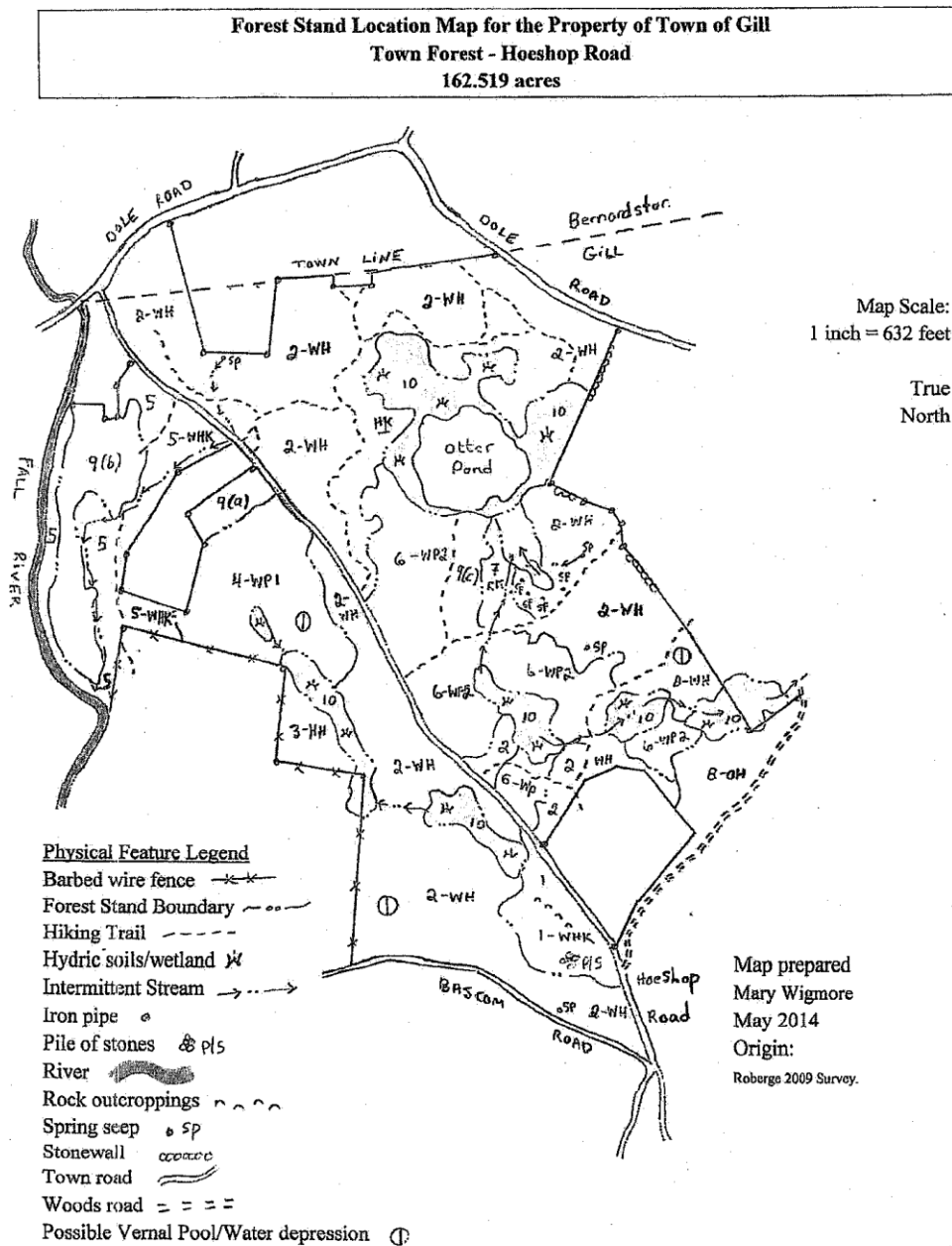


Table 1: Forest Stand and Forest Cover Type Map and Description by Area

Stand Number	Cover Type/Stand	Stand Description	West Portion	East Portion	Total Areas
#1	WHK	White pine, hemlock, and limited hardwoods.	4 acres		4 acres
#2	WH	White pine and hardwoods with red oak dominance.	21 acres	54.519 acres	75.519 acres
#3	HH	Hemlock with mixed hardwoods inclusive of oak, maple, and birch.	2 acres		2 acres
#4	WP1	Groves of white pine with minor hardwood component.	12 acres		12 acres
#5	WHK/RZ	Riparian white pine, hemlock, and hemlock maturing forest on a steep slope and stream and riverbank.	10 acres		10 acres
#6	WP2	Grove of all-aged white pine timber crops with small patches of immature hardwood.		23 acres	23 acres
#7	RM	Red maple shrub marshy stand.		2.5 acres	2.5 acres
#8	OH	Red oak timber with lower layer of other hardwoods and hemlock with mountain laurel on a steep slope.		5 acres	5 acres
#9	GF-ESH	The meadow on Bascom Road, the grass and shrub meadow along the Fall River and the herbaceous plant, grass, and fern meadow near the old house site.	7 acres	2.5 acres	9.5 acres
#10	RM-MS-SS	Red maple marsh, shrub swamp, and marshy swamp wetlands scattered throughout the property.	5 acres	9 acres	14 acres
#11	Pond	Otter Pond		5 acres	5 acres
			61 acres	101.519 acres	162.519 acres
		Total Property Area: 162.519+/- acres			

3 acres in Bernardston

Non-Native Invasive Plants: Native, desirable plant communities thrive within this forest ecosystem. Non-native, invasive plants grow in scattered individual stems or small clumps throughout many of the stands. Overstory shade in the interior forest prevents their spread. These plants do not dominate the growing space even in more open sunlit areas. These plants pose no threat to the ecological function of the forest.

Wildlife Habitat Concepts and Conditions: The habitat conditions of the Gill Town Forest rate above average for diversity. Habitat management is done with the control of the ages, sizes, and densities of the vegetation. Food, water, cover, and space are elements essential to all wildlife. Techniques for the enhancement and protection of the habitat and its ability to conserve biodiversity are summarized by specific habitat feature and stand in Section 3 of this plan.

A description of the main habitat features recorded during the field inventory in April 2014 follows below. Specific plant names for the source of each habitat feature are referenced in Table 2. Please note that this is a

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short list of the species observed during the field inventory in April 2014. A wildflower list by a member of the Town Forest Task Force is also included with this report. These tables imply a high degree of landscape biodiversity.

- ❖ **Food:** A variety of native plants provides food for wildlife species, which in turn provide food for other species further along the food chain. The food sources are adequate for the sustenance of the local populations using the Town Forest.
 - **Browse:** Buds, twigs, and leaves: High stocking of native woody shrubs and vines, buds, twigs, and leaves of native tree seedlings and saplings, and herbaceous plants- palatable to most mammals.
 - **Herbaceous Vegetation: Herbage:** Dense mats of herbage cover even the shady areas: Leaves, stems, rhizomes, and roots of non-woody plants-generally rich in nutrients and palatable to herbivores.
 - **Mast:** Fruits and seeds of trees and shrubs: hard mast (nuts and seeds) and soft mast (berries and fleshy fruits)-These are among the most important high energy foods of many animals and birds.
 - **Shelter/Cover:** Wildlife need places to hide, rest, sleep, and take cover from environmental stress. Cover is species specific. Birds and small mammals take cover in bushes, thickets, and brush piles. Aquatic animals take cover in woody debris in water or rock piles.
 - **Winter Deer Yards:** Isolated patches of dense immature sapling and pole trees beneath an overstory cover of hemlock grows along one small section of the western edge of Otter Pond and due south of a wetland site along the southern bound. The groves of dense mixed-age white pine offer the winter cover. These thick softwood stands provide cover that intercepts snow, reduces snow depth making travel less energy intensive to the deer. They also support a slightly warmer microclimate with less wind. Evidence of deer browse and bedding were noted in all of these areas.
 - **Edge Zones:** These are the transition sites where different plant communities or different habitats meet. Here wildlife species realize the benefits of two or more adjoining habitats without traveling great distances. Examples of the edge habitat are
 - Extensive transition between the forest ecosystem and the meadowlands (Stand 9(a), 9 (b), and 9(c)) as well as forest and the home sites around the property. These areas provide adequate sunlight, abrupt edges between trees, grassland and woody shrubs and sprouts that include commonly preferred forages of deer and rabbits. Songbirds gather in high-densities at the meadow/shrub and forest edge. These brushy areas also make excellent hiding cover for deer and rabbits and nesting cover for turkeys. Some raptors may spend considerable time along these types of high-contrast edges because of high visibility, the presence of suitable perches for hunting, and the presence of prey.
 - Another high-profile edge zone exists with the transition between the wetland/shrub, aquatic plant areas, and the maturing forest canopy. The mosaic pattern of their dispersion amongst the forest on both sides of Hoeshop Road juxtaposes two valuable habitats. These narrow, irregular strands of wetland provide an additional 5,000 linear feet of edge to the forest.
 - The edge effect offered by the red maple sapling/pole and shrub swamps that surround Otter Pond and the maturing forest canopy adjacent to it is good. A different host of birds and animals that depend on aquatic food chain for their life cycles benefit from this edge.
 - As briefly noted above, the irregular geometric shapes of each edge magnify their benefit and linear surface footage.
 - **Cavities:** These are dead trees and trees, which contain dead wood. They provide one quarter of the New England wildlife species with shelter from weather, escape from predators, forage, food storage, perching stations, and sites for breeding and raising young. Excavator birds such as the woodpeckers and sapsuckers enlarge and deepen cavities. Species that use cavity trees include woodpeckers, yellow-bellied sapsuckers, black-capped chickadee, eastern bluebird, and kestrel. The inventory data recorded an average of 2 to 3 cavity or potential cavity trees per acre. Live, declining white pine timber sized trees, dead pine, and hardwood stems, found extensively on the edge of Otter Pond and scattered throughout the riparian

zones and the interior forest contribute to this abundance. The following two types of cavity trees exist here.

- ◆ **Den trees:** Living trees with cavities which are used for mammal dens
- ◆ **Snags:** Standing dead trees with cavities which are used by birds
- **Dead Wood/Coarse Woody Debris:** This refers to the fallen dead trees and the remains of large branches on the ground in forests and in rivers or wetlands. Cavities may form in large fallen logs, which provide shelter for non-flying species. Branch sized debris offers escape cover for animals. Dead wood of all sizes provides the main food source for fungi, insects, and other decomposers organisms. This habitat feature covers about 20% on average of the forest floor.
- ◆ **Water:** Water is needed by wildlife for drinking, bathing, and reproducing. Water habitat and specific riparian habitat features are discussed below:
 - **Stream and Riparian Habitat:** These are ecosystem structures, which surround rivers, streams, wetlands, marshes, vernal pools, and spring seeps. Each compartment supports these unique habitat features. Aquatic food webs evolve in these areas, which support species farther along the terrestrial food web. The Fall River bank (also the western bound of the Town Forest) supports a mixed height/age community of hemlock, pine, red maple, aspen, black birch, and red oak trees, which offer perching and denning opportunities. These trees shade the banks, which keeps water temperature cool and increases oxygen absorption.
 - The wetland areas with their longer sunlit periods and its accompanying photosynthesis support algae and aquatic plants, which are an important food source.
 - This riparian stocking forms a filter strip along the banks, prevents particulate matter, and dissolved nutrients from entering the river and streams.
 - The maturing streamside and riverside vegetation provides large woody debris into the water, which creates deep pools with slower currents for predator escape and resting sites for fish.
 - The existence of such an extensive riparian and streamside habitat structure provides additional benefit for terrestrial wildlife. Any of the habitat elements discussed above has greater value near water. For example, a cavity tree with many perching stations is more useful to a kingfisher on the stream bank.
- ◆ **Diverse Tree Species Composition:** Many of the best native mast producing trees and shrubs grow within here.
- ◆ **Vertical Structure Diversity:** Wildlife species are dependent upon different vegetative layers in the forest known as the forest floor (including roots and soil), the herb/ground layer, understory, midstory, and canopy layers. Each layer offers a unique set of habitat features. A large variety of sizes and types of plant matter, including some large maturing pine and oak trees, grow on the Town Forest giving it a multi-layered or vertically stratified condition. Taken as one large 162-acre mosaic of plant communities, the vertical stratification becomes obvious. The maturing forest ecosystem surrounds pockets of marsh, shrub swamp, open water, meadows, streams, the Fall River, and spring seeps. Embedded within this model is the stand level vertical stratification dependent upon the different age classes.
- ◆ **Early Successional Habitats:** These areas are a matrix of grassland, herbaceous plants, and meadows (along the Fall River bank and due south of Otter Pond), mowing (Stand 9(b)), and wetland/marshes (Sections of Stand 10). They are sometimes referred to as early-successional habitat. They have structural diversity that provides nesting sites, escape cover, and food for wildlife. Cottontails and other small mammals benefit from shrub cover, which they use to escape detection from hawks and owls. Turkeys, quail, kingbirds, and others benefit from the abundance of insects found in herbaceous openings.

Table 2: Plant Community List for the Gill Town Forest as Observed in May 2014

<u>FERNS</u>	<u>TREES</u>
Dennstaedtia punctilbula (hay-scented fern) Polystichum arostichoides (Christmas fern) Thelypteris noveboracensis (New York fern) Dryopteris fragrans (woodfern) Dryopteris spinulose (spinulose fern) Onoclea sensibilis (sensitive fern) Osmunda cinnamomea (cinnamon fern) Osmunda regalis (royal fern) Pteridium aquilinum (bracken fern) Osmunda claytoniana (interrupted fern) Athyrium filix-femina (lady fern)	Acer pensylvanicum (striped maple) Acer rubrum (red maple) Acer saccharum (sugar maple) Amelanchier canadensis (shadblow) Betula lenta (river birch) Betula papyrifera (paper birch) Carpinus caroliniana (blue beech, musclewood) Carya cordiformis (bitternut hickory) Carya ovata (shagbark hickory) Castanea mollissima (Chinese chestnut) Catalpa speciosa (northern catalpa) Fagus grandifolia var. grandifolia (beech) Fraxinus americana (white ash) Hamamelis virginiana (witch hazel) Ostrya virginiana (ironwood, hophornbeam) Platanus occidentalis (sycamore, plane-tree) Populus grandidentata (large-toothed aspen) Prunus pensylvanica (fire or pin cherry) Prunus serotina (black cherry) Quercus alba (white oak) Quercus rubra (red oak) Pinus strobus (eastern white pine) Quercus velutina (black oak) Tsuga Canadensis (Eastern hemlock) Salix nigra (black willow) Malus domesticus (Apple) Sassafras albidum (sassafras) Malus sylvestris (Flowering crabapple)
<u>SHRUBS</u>	<u>VINES</u>
Alnus incana (speckled alder) Alnus serrulata (smooth alder) Amelanchier arborea (downy serviceberry) Aronia melanocarpa (black chokeberry) Cornus amomum ssp. obliqua (silky dogwood) Cornus racemosa (gray dogwood) Ilex verticillata (winterberry) Lindera benzoin (spicebush) Viburnum acerifolium (maple leaf viburnum) Prunus virginiana (chokecherry) Rhus glabra (smooth sumac) Cornus florida (flowering dogwood) Rhododendron viscosum (swamp azalea) Rhus hirta (staghorn suma) Rubus occidentalis (black raspberry) Rubus odoratus (thimbleberry) Salix discolor (pussy willow) Sambucus canadensis (elderberry) Spiraea tomentosa (steeplesbush, hardhack) Vaccinium angustifolium (low-bush blueberry) Vaccinium corymbosum (highbush blueberry) Viburnum lentago (nannyberry) Kalmia angustifolia (sheep laurel)	Parthenocissus quinquefolia (Virginia creeper) Vitis aestivalis (summer grape) Toxicodendron radicans (poison ivy)
	<u>Non-native, Invasive Plants</u> Alliaria petiolata (Garlic mustard) Berberis vulgaris (Common Barberry) Berberis thunbergii (Japanese barberry) Frangula alnus (Glossy Buckthorn) Ligustrum obtusifolium (Border Privet) Lythrum salicaria (Purple loosestrife) Rosa Multiflora (Multiflora Rose) Phragmites australis (Common reed) Fallopia japonica (Japanese knotweed)

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Kalmia latifolia (mountain laurel)

Table 3: Gill Town Forest Wildflower List by Gill Town Forest Task Force-2009

Common Name	Scientific Name	Common Name	Scientific Name
Yarrow	Achillea millefolium	White Avena	Geum canadense
Red Baneberry	Actaea rubra	Purple Avena	Geum rivale
Bugle	Ajuga reptans	Gill-Over-The-Ground	Glechoma hederacea
Garlic Mustard	Alliaria officinalis	Thin-Leaved Sunflower	Helianthus decapetalus
Common Ragweed	Ambrosia artemisiifolia	Day-Lily	Hemerocallis fulva
Hog-Peanut	Amphicarpa bracteata	Cow-Parsnip	Heracleum maximum
Wood Anemone	Anemone quinquefolia	Dame's Rocket	Hesperis matronalis
Thimbleweed	Anemone virginiana	Orange Hawkweed	Hieracium aurantiacum
Groundnut	Apocynum	King Devil	Hieracium pratense
Spreading Dogbane	androsaemifolium	Rough Hawkweed	Hieracium scabrum
Wild Sarsaparilla	Aralia nudicaulis	Bluets	Houstonia caerulea
Spikenard	Aralia racemosa	Water-Pennywort	Hydrocotyle americana
Jack-In-The-Pulpit	Arisaema	Common St. Johnswort	Hypericum perforatum
Common Burdock	Articum minus	Marsh St. Johnswort	Hypericum virginicum
Swamp Milkweed	Asclepias incarnata	Stargrass	Hypoxis hirsuta
Common Milkweed	Asclepias syriaca	Spotted Touch-Me-Not	Impatiens capensis
White Milkweed	Asclepias variegata	Common Morning-Glory	Ipomoea purpurea
Large-Leaved Aster	Aster macrophyllus	Larger Blue Flag	Iris versicolor
New England Aster	Aster novae-angliae	Sheep Laurel	Kalmia angustifolia
Purple-Stemmed Aster	Aster puniceus	Mountain Laurel	Kalmia latifolia
Panicled Aster	Aster simplex	Blue Lettuce	Lactuca biennis
Flat-Topped White Aster	Aster umbellatus	Motherwort	Leonurus cardiaca
Small White Aster	Aster vimineus	Poor-Man's-Pepper	Lepidium virginicum
Winter Cress	Barbarea vulgaris	Round-Headed Bush-Clover	Lespedeza capitata
Beggar-Ticks	Bidens frondosa	Canada Lily	Lilium canadense
European Beggar-Ticks	Bidens tripartita	Butter-And-Eggs	Linaria vulgaris
Field Mustard	Brassica rapa	Indian-Tobacco	Lobelia inflata
Marsh-Marigold / Cowslip	Caltha palustris	Downy Lobelia	Lobelia puberula
Mouse-Ear Chickweed	Cerastium vulgatum	Birdfoot Trefoil	Lotus corniculatus
Turtlehead	Chelone glabra	Ragged-Robin	Lychnis flos-cuculi
Lamb's-Quarters / Pigweed	Chenopodium album	Bugleweed	Lycopus virginicus
Spotted Wintergreen	Chimaphila maculata	Fringed Loosestrife	Lysimachia ciliata
Ox-Eye Daisy	Chrysanthemum leucanthemum	Whorled Loosestrife	Lysimachia quadrifolia
Enchanter's Nightshade	Circaea quadrisulcata	Yellow Loosestrife	Lysimachia terrestris
Pasture Thistle	Cirsium pumilum	Purple Loosestrife	Lythrum salicaria
Bull Thistle	Cirsium vulgare	Wild Lily-Of-The-Valley	Malanthemum canadense
Virgin's Bower	Clematis virginiana	Indian Cucumber Root	Medeola virginiana
Goldthread	Coptis groenlandica	White Sweet Clover	Mellilotus alba
Bunchberry	Cornus canadensis	Sharp-Winged Monkey-Flower	Mimulus alatus
Pink Lady's Slipper	Cypripedium acaule	Square-Stemmed Monkey-Flower	Mimulus ringens
Queen Anne's Lace	Daucus carota	Partridgeberry	Mitchella repens
Small-Leaved Tick-Trefoil	Desmodium ciliare	Indian-Pipe	Monotropa uniflora
Deptford Pink	Dianthus armeria	True Forget-Me-Not	Myosotis scorpioides
Mayflower	Epigaea repens	Bullhead Lily	Nuphar variegatum
Purple-Leaved Willow-Herb	Epilobium coloratum	Fragrant Water Lily	Nymphaea odorata
Narrow-Leaved Willow-Herb	Epilobium leptophyllum	Common Evening-Primrose	Oenothera biennis
Helleborine	Epipactis helleborine	Sundrops	Oenothera fruticosa
Daisy Fleabane		Star-of-Bethlehem	Ornithogalum umbellatum

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Common Fleabane	Erigeron annuus	One-Flowered Cancer Root	Orobanche uniflora
Hollow Joe-Pye-Weed	Erigeron philadelphicus	Yellow Wood Sorrel	Oxalis ?
Boneset	Eupatorium fistulosum	Wood Betony	Pedicularis canadensis
White Snakeroot	Eupatorium perfoliatum	Pokeweed	Phytolacca americana
Cypress Spurge	Eupatorium rugosum	Clearweed	Pilea pumila
Common Strawberry	Euphorbia cyparissias	English Plantain	Plantago lanceolata
Galinsoga	Fragaria virginiana	Common Plantain	Plantago major
Wild Madder	Galinsoga ciliata	Fringed Polygala / Gaywings	Polygala paucifolia
Fragrant Bedstraw	Galium mollugo	Solomon's Seal	Polygonatum biflorum
Wintergreen / Checkerberry	Galium triflorum	Halberd-Leaved Tearthumb	Polygonum arifolium
Wild Geranium	Gaultheria procumbens	Long-Bristled Smartweed	Polygonum cespitosum
	Geranium maculatum	Swamp Smartweed	Polygonum coccineum
	Polygonum sagittatum	Tall Goldenrod	Solidago altissima
Arrow-Leaved Tearthumb	Polygonum scandens	Silver-Rod	Solidago bicolor
Climbing False Buckwheat	Potentilla argentea	Zig Zag Goldenrod	Solidago flexicaulis
Silvery Cinquefoil	Potentilla norvegica	Lance-Leaved Goldenrod	Solidago graminifolia
Rough Cinquefoil	Potentilla recta	Early Goldenrod	Solidago juncea
Rough-Fruited Cinquefoil	Potentilla simplex	Rough-Leaved Goldenrod	Solidago patula
Common Cinquefoil	Prenanthes altissima	Spiny-Leaved Sow-Thistle	Sonchus asper
Tall White Lettuce	Prunella vulgaris	Meadowsweet	Spiraea latifolia
Heal-All	Pyrola elliptica	Steeplebush / Hardhack	Spiraea tomentosa
Shinleaf	Pyrola rotundifolia	Nodding Ladies'-Tresses	Spiranthes cernua
Round-Leaved Pyrola	Ranunculus acris	Long-Leaved Chickweed	Stellaria longifolia
Common Buttercup	Rhus radicans	Common Chickweed	Stellaria media
Poison Ivy	Rosa multiflora	Star Chickweed	Stellaria pubera
Multiflora Rose	Rosa palustris	Skunk Cabbage	Symplocarpus foetidus
Swamp Rose	Rubus	Common Dandelion	Taraxacum officinale
Brambles (blackberry)	Rubus	Tall Meadow-Rue	Thalictrum polygamum
Brambles (raspberry)	Rubus	Foamflower	Tiarella cordifolia
Dewberry	Rudbeckia hirta	Starflower	Trientalis borealis
	Rumex acetosella	Hop Clover	Trifolium agrarium
Black-Eyed Susan	Rumex crispus	Red Clover	Trifolium pratense
Sheep Sorrel	Rumex obtusifolius	White Clover	Trifolium repens
Curled Dock	Sambucus canadensis	Nodding Trillium	Trillium cernuum
Broad/Bitter Dock	Sanicula marilandica	Coltsfoot	Tussilago farfara
Common Elderberry	Saponaria officinalis	Common Cattail	Typha latifolia
Black Snakeroot	Scutellaria lateriflora	Slender Nettle	Urtica gracilis
Bouncing Bet	Senecio aureus	Indian Poke	Veratrum viride
Mad-Dog Skullcap	Silene cucubalus	Common Mullein	Verbascum thapsus
Golden Ragwort	Sisyrinchium montanum	American Brooklime	Veronica americana
Bladder Campion	Smilacina racemosa	Sweet White Violet	Viola blanda
Blue-Eyed Grass	Smilax herbacea	Dog Violet	Viola conspersa
False Solomon's Seal		Wild Grape (vine)	Vitis (many varieties)
Carion-Flower		Golden Alexanders	Zizia aurea

Habitat Management Techniques and Recommendations:

The enhancement and protection of the greatest number of habitats achieves the goal of conservation of local biodiversity. A full set of guidelines and techniques for each of the important habitat elements is summarized in Section 3 of this plan. Sometimes the best approach will be to simply preserve or leave things alone.

Silviculture:

The Role of Silviculture: Silviculture is the practice of controlling the establishment, growth, composition, health, and quality of forest and forest ecosystems to meet the diverse needs and values of the owner and society. The use of silviculture upon a high value conservation forest with a large degree of biodiversity requires clear vision and a thoughtful approach. Its application to these lands is an allowable and encouraged

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management technique within the CR provisions. The valuable conservation lands have been designated into two broad categories of suitable for silviculture or unsuitable for silviculture.

An inner core zone of 90.519 acres functions as an area of protection for the most fragile ecological systems. This area includes all of Stands 3, 5, 7, 8, 9, 10, and 11 and a filter strip of 75 feet along the edges of these areas within the other forest stands. Tree cutting is only permitted in these areas for the protection of the property or human safety. Other vegetation could be managed for the preservation of the existing habitat conditions (i.e. invasive plant removal or mowing). An outer zone of 72-forested acres functions as a transition area into more ecologically resilient landscape able to sustain silvicultural work. Access routes into this zone must be well planned and monitored extensively during any management treatment. Prescriptions will focus on selection treatments of a conservative nature.

Silviculture Approach: The age, condition, and structure of the forest ecosystems within the 72 acre outer zone would benefit from the application of Thinnings. The rotation age (period of years to grow a stand to its specified condition) is set at the biological age for these trees. White pine reaches maturity between 175 and 225 years of age. Most of the hardwood species reach their maturity between of 175 to 300 years. At a weighted average age range of 85 to 140 years, these trees are immature. Concerns for their replacement with seedlings and saplings due to their advanced decline are not warranted yet.

This choice of thinnings as a silvicultural tool is suitable because of the existing all-aged or un-even aged condition of the stands and the need for preservation of the forest's beauty, the protection of the site ecology, and the protection of habitat. Thinnings remove a conservative number of trees from the upper or lower canopy layers to open the most promising trees. These removals retain a high degree of crown closure in the upper canopy and the bulk of the lower layer stems or simply the best of the lower canopy. The full crown closure without disturbance above or the dense lower canopy shade either restricts branching and retains continuous distribution of foliage thereby maintaining a more diverse feeding and nesting habitat.

A potential harvest would increase growing space in the canopy for the superior crop and legacy tree crowns, thereby concentrating production on the best trees. The removals would not vacate enough growing space below to encourage reproductive growth, although some seedlings develop from any canopy opening. Application of the thinning technique favors the trees of best potential quality and discriminates against poor quality and high-risk stems. The increase in tree vigor protects against abiotic agents. Legacy trees (trees of all species greater than 24 inches in diameter) would be chosen for retention through their biological lifespan if either the Crown or Low Thinning were applied.

The field application of the Crown Thinning involves the choice of superior crop, legacy, and mast trees and the removal of their main competitors in the upper canopy. Low thinning applications also retain the best-formed, most vigorous immature hardwood stems. At some point down the road (perhaps in 20 years in this forest), a bunch of subordinate trees in the lower strata will have to come out to encourage seedling growth. For now, treatment would be confined to the space around the crop trees. Light, conservative removals will retain the growth of the shrub layer, retard the growth of any undesirable vegetation, and maintain the desirable vertical stratification across the forest.

Execution of the thinnings across the forest stands in one operation makes the project most profitable and manageable. Thinnings generate revenue. These funds should be re-invested into the property for the completion of the management work. Silviculture is applied on forest stand at set intervals known as the cutting cycle. Cutting cycle lengths depends upon site productivity, access routes, and the owner's use of the site. The cutting cycle for these lands would be set at fifteen years. Therefore, one would expect to enter the land for timber harvest projects and produce revenues very fifteen years.

Non-native, Invasive Plant Treatment: The non-native species, which were observed during the field inventory, are listed in Table 2 of this report. Their threat to the native plant community is low, with the exception of the Common Reed in Otter Pond and the Japanese knotweed along the Fall River banks. Mechanical methods of control will prove adequate for the land plants. If a combination of mechanical and chemical methods is considered, the assistance of a certified and licensed invasive plant control specialist will be used. If Option 1 (No disturbance) is chosen as a long-term strategy, the canopy shade may prevent the spread of the shrubs.

Mechanical controls are one of the most common control techniques. Hand pulling ensures that, with proper identification, only target plants are removed. Depending upon the species and the size of the plant, it may be helpful to use a weeder, trowel, or spade. Plants are easiest to remove after a rain, when the ground is soft. Grasp plants at the base near the soil and pull slowly to ensure that you remove the entire plant and root stem—many woody and herbaceous plants can re-sprout from underground roots, so getting the entire root is crucial. Even in the meadow sites (Stand 9), the invasive plants are not found in large monocultures with extensive root systems.

If a combination method is considered, the best approach maybe single stem cutting. Stems should be cut close to the ground in the fall. For woody stemmed species, apply herbicide directly to the cut surface immediately after cutting, before the stem starts to dry out. For larger stumps, you only need to apply the herbicide to the living tissue in the outer layer. The herbicide can be applied with a sponge, pain brush, or spray bottle. It is worthy of note that mechanical means of treatment for Japanese knotweed may be counterproductive and cause further spread of the plant.

The commitment to a treatment program for invasive plants requires persistence and patience. One application of either mechanical or chemical methods will not guarantee removal. Successive treatments over a two to three year period with each treatment reducing the amount of necessary resource for effectiveness usually work best. A continual monitoring program ensures identification of their advancement to earlier threatening levels or the success of treatment. A good documentation system with record of treatment dates, acres, and GIS data facilitates efficient management of the protocol. The use of a volunteer staff, student interns, or the aid of the Franklin Land Trust seasonal AmeriCorps presents cost-effective treatment options.

Recreation and Aesthetics: The Gill Town Forest is a beautiful property. Trails wind their way through a variety of landscapes and habitats. There is a special solace and peace in the natural wonder of these lands. The provisions of the CR specify passive recreational use of these lands by the public. Further development of the trail system will proceed with care and consideration for the protection of the ecosystem values. Proposed routes include:

Application of the proposed silvicultural work will change the appearance of the Town Forest. Conservative application minimizes this visual impact. Tree removals will occur alongside the main hiking trails. Efforts are recommended for the clean up all harvest debris trailside through removal from the trail surface and some brush piling into useful habitat dens.

The success of silviculture on this site depends upon the cooperation of your patrons. Educational forums and field tours should be conducted prior to the commencement of any activity in which the objectives and the techniques of silviculture could be clearly expressed. Field tours during the active phase of the work are recommended for further engagement with patrons. Their feedback, visions, and comments inform the adaptive management approach to the stewardship of the Gill Town Forest. Care with the application of the silviculture is essential. Working with a reliable timber harvester who will listen to your goals and aesthetic concerns is also

essential. Silviculture could be one more useful tool to the Town of Gill in your execution of the Stewardship duties as outlined in your CR.

Forest Stewardship Goals/Objectives: The CR document directly informs the Forest Stewardship Management Goals for the Gill Town Forest. The goals in a descending order of priority are as follows:

1. To protect the natural watercourses and wetlands including Otter Pond and Fall River;
2. To protect the glacial features such as eskers and kettle ponds;
3. To protect and maintain native habitat and biodiversity;
4. To protect BioMap2 Supporting Natural Landscapes and Living Waters Critical Supporting Watershed as designated by Massachusetts Natural Heritage and Endangered Species program;
5. To protect the aesthetic appeal of these lands;
6. To promote and encourage passive recreational use on the lands by the general public in full accordance with Clause III, Section B1 to B5 of the CR.
7. To maintain the all-aged, species rich forested ecosystem growing here now with attention to the growth of the timber crops and its replacement crop when biologically necessary near the rotation's end.
8. To promote sustainable forest management activities within appropriate zones of the property which are consistent with all the provisions of the CR through the choice of three possible alternative approaches each suitable for the condition of the forested ecosystem.

Town Forest Ability to meet These Goals: This property offers a good example of a fully functioning ecosystem with natural ecological resilience to environmental changes, a high degree of biodiversity, and the potential for success of any conservation efforts. Challenges to the implementation of the management plan ideas would be the intelligent engineering of a harvest road system if silviculture work were considered. This road network could serve future recreational trail needs if done well without disturbance to the inner core zones of the property.

Summary of The Management Recommendations:

1. Designation of an inner core zone for the protection of the BioMap 2 designations, biodiversity, water resources, riparian areas, and the valuable native habitat. A GIS shape file of this area would be documented for future reference. Human disturbance within the riparian areas would be prohibited with the exception of erosion control measure installation (the possibility of planting of shrubs, native herbage and grasses, or mulch if necessary at high-use sites along the main trails) and recreational trail/s use.
2. Maintenance of the meadow habitat with a periodic schedule of mowing and cutting.
3. Trail/s maintenance projects, which provide safety for Town Forest patrons.
4. Maintenance of the valuable edge habitat within the open/low vegetation areas with possible native plantings, mowing, cutting, invasive plant control, apple tree release and pruning, and bird box installation.
5. Maintenance of the valuable edge habitat within the forest side of the edge with the creation of brush piles from any potential harvest debris or downed material.
6. The maintenance of an all-aged, species-rich forest stand structure and a vigorous timber crop through the application of Crown Thinnings with Retention of Legacy Trees upon 72 acres. The habitat enhancement techniques, which are summarized in Section 3, will be integrated into into any silvicultural work. All silvicultural work will be conducted in strict compliance with the provisions of the CR, the Massachusetts Harvest Cutting Practice Act, and both the required and suggested BMPs in the Massachusetts Forestry Best Management Practices Manual (2013).

Funding Sources: The recreational trail, habitat enhancement, and invasive plant control programs require investment. The Town should seek any form of assistance available to municipalities for these projects.

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- The Partners for Wildlife Program through the US Fish and Wildlife Service
- The Community Preservation Act (Massachusetts)
- The Massachusetts Department of Conservation and Recreation Recreational Trails Program
- The Massachusetts Forest Stewardship Community Forest program

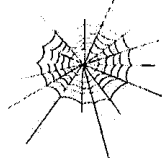
Creative marketing of the needs for this work to the Town Forest patrons might elicit special fund drives. The recruitment of student researchers or special internships for the implementation of some of this work to the Northfield Mount Hermon School, the Four Rivers Charter School, and the University Of Massachusetts School Of Conservation Resource Management may help to reduce the costs of the management on these lands.

Stewardship Issues Specific to Gill Town Forest: #1: The timber harvest project would require the construction of rudimentary woods access roads and the installation of small areas for log decking. The roads will not exceed twelve feet in width, will not cross any riparian area inclusive of stream, spring seeps, or wetlands, and will minimize impact on the ecological functionality of the forest. These roads and landing areas are necessary for the removal of timber products in order to maintain the desirable all-aged forest stand condition. It is not feasible to utilize the narrow recreational trails for harvest access. The road construction will fully comply with all provisions of the CR and the Massachusetts 2013 Best Management Practices Manual guidelines for access road construction. After the proposed harvest work, the road system would be graded to a level condition, treated with the installation of erosion prevention measures along any sloping sections, and seeded well with native grasses for both aesthetics and erosion control. #2. A rudimentary road accesses the Fall River from Bascom Road. This road will be improved for emergency vehicular use only. Grading work and the placement of gravel is recommended for the improvement of this road. A gate will be placed at the access point on Bascom Road to this area.

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Section 2.1: Mandatory DCR Stewardship Issues Template

Massachusetts is a small state, but it contains a tremendous variety of ecosystems, plant and animal species, management challenges, and opportunities. This section of your plan will provide background information about the Massachusetts forest landscape as well as issues that might affect your land. **The Stand Descriptions and Management Practices sections of your plan will give more detailed property specific information** on these subjects tailored to your management goals.



Biodiversity: Biological diversity is, in part, a measure of the variety of plants and animals, the communities they form, and the ecological processes (such as water and nutrient cycling) that sustain them. With the recognition that each species has value, individually and as part of its natural community, maintaining biodiversity has become an important resource management goal.

While the biggest threat to biodiversity in Massachusetts is the loss of habitat to development, another threat is the introduction and spread of invasive non-native plants. Non-native invasives like European Buckthorn, Asiatic Bittersweet, and Japanese Honeysuckle spread quickly, crowding out or smothering native species and upsetting and dramatically altering ecosystem structure and function. Once established, invasives are difficult to control and even harder to eradicate. Therefore, vigilance and early intervention are paramount.

Another factor influencing biodiversity in Massachusetts concerns the amount and distribution of forest growth stages. Wildlife biologists have recommended that, for optimal wildlife habitat on a landscape scale, 5-15% of the forest should be in the seedling stage (less than 1" in diameter). Yet we currently have no more than 2-3% early successional stage seedling forest across the state. There is also a shortage of forest with large diameter trees (greater than 20"). See more about how you can manage your land with biodiversity in mind in the "Wildlife" section below. (Also refer to *Managing Forests to Enhance Wildlife Diversity in Massachusetts* and *A Guide to Invasive Plants in Massachusetts* in the binder pockets.)



Rare Species: Rare species include those that are **threatened** (abundant in parts of its range but declining in total numbers, those of **special concern** (any species that has suffered a decline that could threaten the species if left unchecked), and **endangered** (at immediate risk of extinction and probably cannot survive without direct human intervention). Some species are threatened or endangered globally, while others are common globally but rare in Massachusetts.

Of the 2,040 plant and animal species (not including insects) in Massachusetts, 424 are considered rare. About 100 of these rare species are known to occur in woodlands. Most of these are found in wooded wetlands, especially vernal pools. These temporary shallow pools dry up by late summer, but provide crucial breeding habitat for rare salamanders and a host of other unusual forest dwelling invertebrates. Although many species in Massachusetts are adapted to and thrive in recently disturbed forests, rare species are often very sensitive to any changes in their habitat.

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Indispensable to rare species protection is a set of maps maintained by the Division of Fisheries and Wildlife's Natural Heritage & Endangered Species Program (NHESP) that show current and historic locations of rare species and their habitats. The maps of your property will be compared to these rare species maps and the result indicated on the upper right corner of the front page of the plan. Prior to any regulated timber harvest, if an occurrence does show on the map, the NHESP will recommend protective measures. Possible measures include restricting logging operations to frozen periods of the year, or keeping logging equipment out of sensitive areas. You might also use information from NHESP to consider implementing management activities to improve the habitat for these special species.



Riparian and Wetlands Areas: Riparian and wetland areas are transition areas between open water features (lakes, ponds, streams, and rivers) and the drier terrestrial ecosystems. More specifically, a **wetland** is an area that has hydric (wet) soils and a unique community of plants that are adapted to live in these wet soils. Wetlands may be adjacent to streams or ponds, or a wetland may be found isolated in an otherwise drier landscape. A **riparian area** is the transition zone between an open water feature and the uplands (see Figure 1). A riparian zone may contain wetlands, but also includes areas with somewhat better drained soils. It is easiest to think of riparian areas as the places where land and water meet.

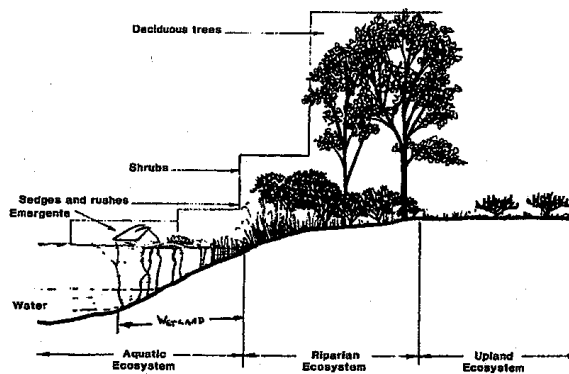


Figure 1: Example of a riparian zone.

The presence of water in riparian and wetland areas make these special places very important. Some of the functions and values that these areas provide are described below:

Filtration: Riparian zones capture and filter out sediment, chemicals and debris before they reach streams, rivers, lakes and drinking water supplies. This helps to keep our drinking water cleaner, and saves communities money by making the need for costly filtration much less likely.

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Flood control: By storing water after rainstorms, these areas reduce downstream flooding. Like a sponge, wetland and riparian areas absorb stormwater, then release it slowly over time instead of in one flush.

Critical wildlife habitat: Many birds and mammals need riparian and wetland areas for all or part of their life cycles. These areas provide food and water, cover, and travel corridors. They are often the most important habitat feature in Massachusetts' forests.

Recreational opportunities: Our lakes, rivers, streams, and ponds are often focal points for recreation. We enjoy them when we boat, fish, swim, or just sit and enjoy the view.

In order to protect wetlands and riparian areas and to prevent soil erosion during timber harvesting activities, Massachusetts promotes the use of "Best Management Practices" or BMPs. Maintaining or reestablishing the protective vegetative layer and protecting critical areas are the two rules that underlie these common sense measures. DCR's Massachusetts Forestry Best Practices Manual (included with this plan) details both the legally required and voluntary specifications for log landings, skid trails, water bars, buffer strips, filter strips, harvest timing, and much more.

The two Massachusetts laws that regulate timber harvesting in and around wetlands and riparian areas are the Massachusetts Wetlands Protection Act (CH 131), and the Forest Cutting Practices Act (CH132). Among other things, CH132 requires the filing of a cutting plan and on-site inspection of a harvest operation by a DCR Service Forester to ensure that required BMPs are being followed when a commercial harvest exceeds 25,000 board feet or 50 cords (or combination thereof).



Soil and Water Quality: Forests provide a very effective natural buffer that holds soil in place and protects the purity of our water. The trees, understory vegetation, and the organic material on the forest floor reduce the impact of falling rain, and help to insure that soil will not be carried into our streams and waterways.

To maintain a supply of clean water, forests must be kept as healthy as possible. Forests with a diverse mixture of vigorous trees of different ages and species can better cope with periodic and unpredictable stress such as insect attacks or windstorms.

Timber harvesting must be conducted with the utmost care to ensure that erosion is minimized and that sediment does not enter streams or wetlands. Sediment causes turbidity which degrades water quality and can harm fish and other aquatic life. As long as Best Management Practices (BMPs) are implemented correctly, it is possible to undertake active forest management without harming water quality.



Forest Health: Like individual organisms, forests vary in their overall health. The health of a forest is affected by many factors including weather, soil, insects, diseases, air quality, and human activity. Forest owners do not usually focus on the health of a single tree, but are

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concerned about catastrophic events such as insect or disease outbreaks that affect so many individual trees that the whole forest community is impacted.

Like our own health, it is easier to prevent forest health problems than to cure them. This preventative approach usually involves two steps. First, it is desirable to maintain or encourage a wide diversity of tree species and age classes within the forest. This diversity makes a forest less susceptible to a single devastating health threat. Second, by thinning out weaker and less desirable trees, well-spaced healthy individual trees are assured enough water and light to thrive. These two steps will result in a forest of vigorously growing trees that is more resistant to environmental stress.



Fire: Most forests in Massachusetts are relatively resistant to catastrophic fire. Historically, Native Americans commonly burned certain forests to improve hunting grounds. In modern times, fires most often result from careless human actions. The risk of an unintentional and damaging fire in your woods could increase as a result of logging activity if the slash (tree tops, branches, and debris) is not treated correctly.

Adherence to the Massachusetts slash law minimizes this risk. Under the law, slash is to be removed from buffer areas near roads, boundaries, and critical areas and lopped close to the ground to speed decay. Well-maintained woods roads are always desirable to provide access should a fire occur.

Depending on the type of fire and the goals of the landowner, fire can also be considered as a management tool to favor certain species of plants and animals. Today the use of prescribed burning is largely restricted to the coast and islands, where it is used to maintain unique natural communities such as sandplain grasslands and pitch pine/scrub oak barrens. However, state land managers are also attempting to bring fire back to many of the fire-adapted communities found elsewhere around the state.



Wildlife Management: Enhancing the wildlife potential of a forested property is a common and important goal for many woodland owners. Sometimes actions can be taken to benefit a particular species of interest (e.g., put up Wood Duck nest boxes). In most cases, recommended management practices can benefit many species, and fall into

one of three broad strategies. These are **managing for diversity, protecting existing habitat, and enhancing existing habitat.**

Managing for Diversity – Many species of wildlife need a variety of plant communities to meet their lifecycle requirements. In general, a property that contains a diversity of habitats will support a more varied wildlife population. A thick area of brush and young trees might provide food and cover for grouse and cedar waxwing; a mature stand of oaks provides acorns for foraging deer and turkey; while an open field provides the right food and cover for cottontail rabbits and red fox. It is often possible to create these different habitats on your property through active management. The appropriate mix of habitat types will primarily depend on the composition of the surrounding landscape and your objectives. It may be a good idea to create a brushy area where early successional habitats are rare, but the same practice may be inappropriate in the area's last block of mature forest.

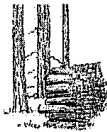
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Protecting Existing Habitat – This strategy is commonly associated with managing for rare species or those species that require unique habitat features. These habitat features include vernal pools, springs and seeps, forested wetlands, rock outcrops, snags, den trees, and large blocks of unbroken forest. Some of these features are rare, and they provide the right mix of food, water, and shelter for a particular species or specialized community of wildlife. It is important to recognize their value and protect their function. This usually means not altering the feature and buffering the resource area from potential impacts.

Enhancing Existing Habitat – This strategy falls somewhere between the previous two. One way the wildlife value of a forest can be enhanced is by modifying its structure (number of canopy layers, average tree size, density). Thinning out undesirable trees from around large crowned mast (nut and fruit) trees will allow these trees to grow faster and produce more food. The faster growth will also accelerate the development of a more mature forest structure, which is important for some species. Creating small gaps or forest openings generates groups of seedlings and saplings that provide an additional layer of cover, food, and perch sites.

Each of these three strategies can be applied on a single property. For example, a landowner might want to increase the habitat diversity by reclaiming an old abandoned field. Elsewhere on the property, a stand of young hardwoods might be thinned to reduce competition, while a “no cut” buffer is set up around a vernal pool or other habitat feature. The overview, stand description and management practice sections of this plan will help you understand your woodland within the context of the surrounding landscape and the potential to diversify, protect or enhance wildlife habitat.



Wood Products: If managed wisely, forests can produce a periodic flow of wood products on a sustained basis. Stewardship encompasses finding ways to meet your current needs while protecting the forest’s ecological integrity. In this way, you can harvest timber and generate income without compromising the opportunities of future generations.

Massachusetts forests grow many highly valued species (white pine, red oak, sugar maple, white ash, and black cherry) whose lumber is sold throughout the world. Other lower valued species (hemlock, birch, beech, red maple) are marketed locally or regionally, and become products like pallets, pulpwood, firewood, and lumber. These products and their associated value-added industries contribute between 200 and 300 million dollars annually to the Massachusetts economy.

By growing and selling wood products in a responsible way you are helping to our society’s demand for these goods. Harvesting from sustainably managed woodlands – rather than from unmanaged or poorly managed forest – benefits the public in a multitude of ways. The sale of timber, pulpwood, and firewood also provides periodic income that you can reinvest in the property, increasing its value and helping you meet your long-term goals. Producing wood products helps defray the costs of owning woodland, and helps private landowners keep their forestland undeveloped.



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Cultural Resources: Cultural resources are the places containing evidence of people who once lived in the area. Whether a Native American village from 1,700 years ago, or the remains of a farmstead from the 1800's, these features all tell important and interesting stories about the landscape, and should be protected from damage or loss.

Massachusetts has a long and diverse history of human habitation and use. Native American tribes first took advantage of the natural bounty of this area over 10,000 years ago. Many of these villages were located along the coasts and rivers of the state. The interior woodlands were also used for hunting, traveling, and temporary camps. Signs of these activities are difficult to find in today's forests. They were obscured by the dramatic landscape impacts brought by European settlers as they swept over the area in the 17th and 18th centuries.

By the middle 1800's, more than 70% of the forests of Massachusetts had been cleared for crops and pastureland. Houses, barns, wells, fences, mills, and roads were all constructed as woodlands were converted for agricultural production. But when the Erie Canal connected the Midwest with the eastern cities, New England farms were abandoned for the more productive land in the Ohio River valley, and the landscape began to revert to forest. Many of the abandoned buildings were disassembled and moved, but the supporting stonework and other changes to the landscape can be easily seen today.

One particularly ubiquitous legacy of this period is stone walls. Most were constructed between 1810 and 1840 as stone fences (wooden fence rails had become scarce) to enclose sheep within pastures, or to exclude them from croplands and hayfields. Clues to their purpose are found in their construction. Walls that surrounded pasture areas were comprised mostly of large stones, while walls abutting former cropland accumulated many small stones as farmers cleared rocks turned up by their plows. Other cultural features to look for include cellar holes, wells, old roads and even old trash dumps.



Recreation and Aesthetic Considerations: Recreational opportunities and aesthetic quality are the most important values for many forest landowners, and represent valid goals in and of themselves. Removing interfering vegetation can open a vista or highlight a beautiful tree, for example. When a landowner's goals include timber, thoughtful forest management can be used to accomplish silvicultural objectives while also reaching recreational and/or aesthetic objectives. For example, logging trails might be designed to provide a network of cross-country ski trails that lead through a variety of habitats and reveal points of interest.

If aesthetics is a concern and you are planning a timber harvest, obtain a copy of this excellent booklet: *A Guide to Logging Aesthetics: Practical Tips for Loggers, Foresters & Landowners*, by Geoffrey T. Jones, 1993. (Available from the Northeast Regional Agricultural Engineering Service, (607) 255-7654, for \$7). Work closely with your consultant to make sure the aesthetic standards you want are included in the contract and that the logger selected to do the job executes it properly. The time you take to plan ahead of the job will reward you and your family many times over with a fuller enjoyment of your forest, now and well into the future.

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Invasive Species Management: Invasive species pose immediate and long-term threats to the woodlands of MA. Defined as a non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human, animal, or plant health, invasives are well-adapted to a variety of environmental conditions, out-compete more desirable native species, and often create monocultures devoid of biological diversity. The websites of the Invasive Plant Atlas of New England, www.nbi-nin.ciesin.columbia.edu/ipane, and the New England Wildflower Society, www.newfs.org are excellent sources of information regarding the identification and management of invasive plants. Some of the common invasive plants found in MA are listed below.

- Oriental Bittersweet (*Celastrus orbiculata*)
- Glossy Buckthorn (*Frangula alnus*)
- Multiflora Rose (*Rosa multiflora*)
- Japanese Barberry (*Berberis thunbergii*)
- Japanese Knotweed (*Fallopia japonica*)
- Autumn Olive (*Eleaagnus umbellata*)

Early detection and the initiation of control methods soon after detection are critical to suppressing the spread of invasive species. Selective application of the proper herbicide is often the most effective control method. See the next section for information on the use of chemicals in forest management activities.



Pesticide Use

Pesticides such as herbicides, insecticides, fungicides, and rodenticides are used to control "pests". A pest is any mammal, bird, invertebrate, plant, fungi, bacteria or virus deemed injurious to humans and/or other mammals, birds, plants, etc. The most common forest management use of a pesticide by woodland owners is the application of herbicide to combat invasive species. MA DCR suggests using a management system(s) that promotes the development and adoption of environmentally friendly no-chemical methods of pest management that strives to avoid the use of chemical pesticides. If chemicals are used, proper equipment and training should be utilized to minimize health and environmental risks. In Massachusetts, the application of pesticides is regulated by the MA Pesticide Control Board. For more information, contact MA Department of Agricultural Resources (MDAR), Pesticide Bureau at (617) 626-1776

On MA Private Lands Group Certification member properties, no chemicals listed in CHEMICAL PESTICIDES IN CERTIFIED FORESTS: INTERPRETATION OF THE FSC PRINCIPLES AND CRITERIA, Forest Stewardship Council, Revised and Approved, July 2002, may be used.

This is your Stewardship Plan. It is based on the goals that you have identified. The final success of your Stewardship Plan will be determined first, by how well you are able to identify and define your goals, and second, by the support you find and the resources you commit to implement each step.

It can be helpful and enjoyable to visit other properties to sample the range of management activities and see the accomplishments of others. This may help you visualize the outcome of alternative management

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decisions and can either stimulate new ideas or confirm your own personal philosophies. Don't hesitate to express your thoughts, concerns, and ideas. Keep asking questions! Please be involved and enjoy the fact that you are the steward of a very special place.



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Section 2.2: STAND DESCRIPTIONS

These descriptions can be best interpreted with the aid of the **Forest Stand Location Map**. The stand numbers in the discussions are identical to the stand numbers within each region on the map.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#1	WK	4 ac	12 inches	213 SF	11,500 MBF and 10 cords	60: WP

Narrative: Maturing white pine and hemlock grow above a densely stocked lower stratum of hemlock, pine, oak, birch, and maple. Quality of the pine is variable with both high value stems and defective, black knotted ones. The hemlock crop retained branches along the main trunks of all sizes and ages. Overstory shade prevents reproductive growth; patches of shade tolerant hemlock and beech seedlings dot the forest floor. Field inventory recorded minor infestations of hemlock elongated scale and hemlock wooly adelgid on the hilltop areas.

The terrain sweeps down slope from a small hilltop on Hoeshop Road to the southwest into a wetland and westerly across a distinctive rock outcropping before rising to another hilltop. The stand grows above a mix of the Hollis and Scituate soils. These are shallow, well-drained soils, which produce fair yields of timber. Decaying stumps indicate a harvest here over 30 years ago. A verdant spring seep effuses water towards Bascom Road across a small a patch of alder, ilex, and yellow birch and red maple saplings. One narrow trail climbs the western hilltop, and another sweeps along the lower slope of this hill through the rocky outcroppings with their covering of lichen, moss, and ferns. Some unusual herbs include dragons tooth, lambkill, and princess pine. The dense lower strata hemlock provides winter protection for deer.

During the next ten years, this stand will continue its role as an ecological resilient mixed age and species forest, providing valuable habitat and biodiversity. The stand will also fill a stewardship role providing recreational and aesthetic opportunities with the addition of some new trail to the western peak and across the rock outcroppings and improvements on old trail. Retention of the crown closure protects the deeryard.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#2	WH	75.519 acres	12 inches	133 SF	7,772 MBF and 5 cords	65: WP
Overstory white pine: 18 inches							

Narrative: Natural dynamics and past disturbance created a matrix-like blend of many age and size classes across this stand. White pine dominates a composition inclusive of red oak, hemlock, black birch, white oak, aspen, red maple, cherry, ash, and hickory. The quality of the timber crop is variable. Many pine stems have good quality, but just as many have large black knot defects and past weevil damage. A root heaving phenomena occurs from high winds on the tall pine tops (Some pine stems reach up near 80 feet.). The root collar thrusts upward out of the soil creating instability.

The oldest red oak timber has good form and high value, yet the middle-aged crop has epicormic branch defects and crown decline. Immature pine pole stems have excellent form with small crowns. Inclusions of very dense pockets of sapling and pole hemlock, birch, red maple, oak, and pine dot the lower canopy. The reproductive stocking density is also variable with dense thickets in sunlit areas. All overstory species were observed. The size and quality of the white pine, red oak, and red maple increases closet to Otter Pond and its surrounding wetlands.

The general terrain is a level outwash plain of sand and gravels with undulations across gentle slopes. Unique esker formations rise from this plain in the northern sections of the stand. The Warwick, Gloucester, and Charlton soils lie beneath this terrain. All three are fine, sandy loams with surface stone and high amounts of available water. Trees grow well on these soils, and they develop deep root systems.

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The rich soils support a dense herbage and shrub layer. Invasive plants (most notably Japanese barberry and multiflora rose) contribute an estimated 12% of this vegetation; they are scattered throughout the stand. Some stems of privet grow in this stand near the old home site in the eastern portion. Some valuable native shrubs include high and low bush blueberry, witchhazel, and shadbush; all set ample fruit each season. A lot of standing dead pine snags was noted near the riparian areas with cavities. An old well is located in this stand near the old home site on the east side of Hoeshop Road

The development of the complex all aged, species-rich matrix structure will progress in this stand naturally with time or in a more expedited fashion with silvicultural application. The application of either Crown Thinnings or Low Thinnings will improve the vigor of the best timber crops in the applicable age class, encourage seed production, promote further vertical stratification, and provide opportunity for habitat enhancement. The stand will also fill a stewardship role by providing recreational and aesthetic opportunity with the addition of some new trail/s through the stand to Otter Pond and around the wetlands.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#3	HH	2 acres	12 inches	133 SF	7.772 MBF and 5 cords	65:WP
Overstory white pine: 18 inches							

Narrative: This small stand sits due west of a wetland along the western boundary. The trees grow in the well-drained fine, sandy Charlton loams, which produce good timber yields. The stand supports an all-aged hemlock grove with scattered red oak pole and timber trees and overstory, high quality white pine. Overstory shade prevents reproductive growth, except in naturally sunlit areas. The sandy, moist soils grows lycopodium well. Shade tolerant species dominate this age class (hemlock, beech, and black birch). The stand is healthy with minor amounts of hemlock wooly adelgid infestation. The juxtaposition of this dense hemlock deer yard near the open water and wetlands appreciates the value of the denning and snag trees in the area. This grove provides an excellent winter deer habitat and wolf tree opportunity. Retention of the current stocking levels and species composition maintains this habitat value. Compliance with any of the economically feasible techniques from Section 3 of this report enhances the habitat condition.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#4	WP1	12 acres	18 inches	87 SF	12.253 MBF and 4 cords	65:WP
Overstory white pine							
Pole Hardwood: 5 inches							

Narrative: This stand spreads across a gently sloping plain above the productive fine, sandy Warwick loams. Mature white pine timber crops tower (average height 80 feet) above a moderately stocked seedling, sapling, pole, and layers in this rudimentary all-aged stand. The quality of the white pine is mixed; the youngest trees have the best form and defect-free boles. All of the timber crops are healthy with vigorous crowns. A timber harvest 25 to 30 years ago opened the pine canopy for the younger age classes' development. Species cited in this layer are black birch, hemlock, red maple, white oak, and white pine. The immature black birch trees dominate this age class; they are outgrowing all other species.

An extensive edge effect manifests from the juxtaposition of this stand to a meadow. Several large white pine wolf trees (diameter greater than 30 inches) and large standing dead pine trees provide denning, nesting, and perching sites and cavities in the overstory. The harvest operation left high volumes of large sized coarse woody debris on the forest floor. The vertical stratification in the canopy allows a dense mat of herbaceous plants and ferns growing space. Some unique species here are low bush and high bush blueberry and false Solomon seal.

The immature hardwood crop will develop beneath consistent shade of mature, statuesque white pine trees. Thinnings from either canopy height (Crown or Low) would improve the vigor of the stand, maintain the

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desirable all-aged, species-rich structure, and enhance habitat diversity. The overstory shade protects the form and quality of the best of the young birch, oak, and cherry stems. If a silviculture option is exercised, retention of all wolf and snag trees along the meadow edge will enhance habitat.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#5	RZ-WK	10 acres	20 inches	65 SF	7.247 MBF and 4 cords	60:WP
Overstory white pine							

Narrative: This complex stand descends a moderate slope into the Fall River flood plain area. Its length extends across the well-drained Warwick sandy loams onto the moister, fine Whitman sands. It has a complex structure, which changes along a continuum of habitat and vegetation. Upslope and along a sharp ridgeline above the river, mature pine and hemlock shade immature hardwoods and shrubs. As the terrain drops into the floodplain, scattered red maple pole and timber trees shade dogwood, elderberry, skunk cabbage, marsh marigold, ilex, and ferns. The invasive plants Japanese barberry and multiflora rose grow densely along the shallow channel of a spring-fed stream, which parallels the Fall River. The towering pine and hemlock provide excellent denning, nesting, and perching opportunities near the river site. Songbirds particularly enjoy the drastic edge effect of the forest/floodplain meadow and vertical stratification of the tall softwoods and the shrub layer.

Riparian forests protect the ecological integrity, promote ecosystem resilience, maintain high water quality, and soil and bank stability. Native plant communities are an essential component of these green infrastructures. Although the forest ecosystem will not be disturbed, a control program for the non-native, invasive plants will protect the local biodiversity. The strip of land along the Fall River and the spring-fed stream supports the highest density of Japanese barberry and glossy buckthorn. A combination of mechanical and chemical methods might prove most effective here. A trail runs along the ridgeline above the Fall River, and one passes through the section of the stand near the old foundation in the stream (speculation of an old hatchery site).

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#6	WP1	12 acres	13 inches	168 SF	11.668 MBF and 6.5 cords	70:WP
Overstory white pine: 19 inches							

Narrative: This stand undulates across a small knoll as it gently rises from Hoeshop Road before a descent into the wetlands, which surround Otter Pond. The entire stand grows above the stony, sandy Gloucester loam soils. Trees develop deep roots in these soils, tend towards wind firmness, and grow good yields of timber crops. White pine is especially well adapted to these soils. A densely stocked white pine grove with two distinct ages and a mix of hardwood sapling, pole, and timber trees covers this raised knoll and wide sandy plain. This fast growing, immature (age range of 45 to 110 years of age) white pine has good quality. The nicest stocking and highest value pine grows in this grove north of the old driveway access road. The wind catches the tops of these tall trees (some heights exceed 90 feet) and "heaves" their root systems upward.

The overstory shade limits seedling growth to natural openings or the small openings from a conservative past harvest. 25% of the forest floor supports reproductive growth. Species found here are white pine, hemlock, black birch, red oak, and red maple. The shade also limits the herbage layer. Some unique plants thriving in the cool shade include lady slipper, princess pine, New York fern, cinnamon fern, and sensitive fern (the latter two near the pond and wetlands). Non-native, invasive plants grow amongst this grove. Their density was highest near the wetland sites, along the connecting streams, and near the edge of the stand along the wet meadow at the old home site. Species cited were Japanese barberry, glossy buckthorn, and multiflora rose.

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Two large raptor nests were observed in tall pines near Otter Pond, which grow on a uniquely beautiful peninsula with grasses and ferns beneath them. Large diameter living white oak and hickory trees dot the upper canopy. They both set ample annual mast crops. A fair stocking of younger white oak and hickory were also noted. Beaver activity raises the water table into this stand, causing decline and mortality in the older pines. These offer excellent denning, nesting, and perching sites on the water's edge. The largest pine trees grow near the wetlands and on the edge of Otter Pond.

Walking amongst this aging pine grove offers a quiet solace. Natural dynamics will play out slowly in this immature stand. Decline and mortality will eventually open more growing space for hardwood and pine seed germination, and slowly vertical stratification with its addition of a third age class will increase across the stand. Thinnings would accelerate this progress, therefore enhancing the habitat value of the area, improving the quality and vigor of the white pine crop, and promoting the desirable all-aged, species diverse stand structure. Protection of the biodiversity in this grove requires the initiation of some invasive plant control prior to any thinning operations.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#7	RM	2.5 acre	4 to 6 inches 40 SF		2 cords	55: RM

Narrative: This small stand lies upon a level plain due south of Otter Pond and adjacent to the shrub swamps on its edge. The red maple grows above the poorly drained, fine, sandy Whitman loams. These soils are saturated most of the year, and trees grow very slowly upon them. Red maple sapling and pole stems grow upon hummocky soils with standing water between them. They grow to a certain size, decline, die-off, and new trees sprout from the stumps. The quality is poor to fair with water defects. The moist, wet loams support scattered, dense growth of highbush blueberry, grasses, skunk cabbage, cinnamon fern, and ilex. Japanese barberry infiltrates these herbaceous zones. Water from wetland stream flow and spring seep effusions move through this small stand towards Otter Pond. Forested wetlands act as a final barrier of defense for the catchment of toxins and sediment before entry into the pond. Maintenance of this stand in its current structure and condition promotes biodiversity and the maintenance of water quality in the Otter Brook watershed system.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#8	OH	5 ac	11.5 inches 130 SF		5.009 MBF and three cords	60: RO

Narrative: In this small stand along the eastern bound, a mixed age grove of overstory red oak shades immature hemlock sapling, pole, and small timber crops upon a steep slope. The terrain rises sharply from the wetland site and levels near the old access road to the Scott place. The stand grows above the rocky and stony Hollis sandy loams. Trees grow slow upon these soils. The red oak timber quality is fair. The thick, acidic oak duff allows only limited hemlock, beech, and red maple seedling growth. A dense carpet of mountain laurel dominates the lower forest layer. Evidence of woolly hemlock adelgid was recorded here. This stand anchors a small corner of the woodlot and prevents sediment loss into the wetlands below. Maintenance of this all-aged oak grove in its current structure and condition promotes biodiversity, maintains water quality, and protects a winter deer yard.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#9	GF-ESH	9.5 ac	NA	NA	NA	Fair to Good

Narrative: This stand is a collection of grasslands, old fields, meadowlands, and some shrub habitat. These areas provide a low vegetation layer adjacent to a high forest canopy across the landscape. They hold high value as habitat due to their insect breeding capacity, nesting, and cover opportunities, and high biodiversity. Maintenance of this habitat niches is recommended through bi-annual mowing or brush hogging. Control of the

marginal stocking of non-native, invasive plant communities scattered through these open areas will promote biodiversity and protect the native habitat benefits.

9 (a): A narrow plain on the banks of the Fall River above sandy, rich Warwick soils supports an old field with a mixture of grasses, goldenrod, sweet meadow and steplebush. On the edges of the meadow, black birch seedlings, sumac, and blueberry have become established. Very few Japanese barberry, glossy buckthorn, and multiflora rose plants dot this site.

9 (b): This small rectangular meadow adjoins a home site along Bascom Road above the productive, sandy Warwick loams. A true grassland habitat dominates this area with minor non-native plants along the southern edge. Mowing maintains this grassy habitat.

9 (c): This strip of shrubs, grasses, and ferns parallels the stream flow near the old home site east of Hoeshop Road. The southern edge of the meadow rest upon the dry, sandy Gloucester soils, and the northern tip lies above the poorly drained Whitman soils. Dense herbaceous plants and ferns prevent the infiltration of the area by trees seedlings and invasive plants. The land slopes northward to Otter Pond, and walking through this stand offers a unique aesthetic appeal.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#10	RZ/RM/MS/SS	14 acres	NA	NA	NA	Poor to Fair

Narrative: These sites rest above a hardpan layer, which holds water in sandy, gravel soils, or deep, rich muck soils. Wetlands, marsh shrubland, red maple sapling/pole marshes, and riparian zones in general serve a vital water quality protection function with their ability to draw toxins and sediments out of water as it slowly moves through them. They also provide water for all wildlife populations and essential habitat for aquatic-dependent birds and animals, fish, amphibians, and invertebrates. Maintenance of their condition promotes local biodiversity.

Two serial extensions of wetland stretch through the sections east and west side of Hoeshop Road. Stream flow connects these isolated wetlands. They are deep in the forested ecosystem. The system on the east side of Hoeshop Road has one large central marsh, which drains both into Otter Pond and directly into the Otter Brook watershed. Common plants in both of these systems include winterberry, elderberry, gray dogwood, highbush blueberry, bracken fern, cattail, steplebush, and red maple.

The marsh which surrounds Otter Pond exists in a continuum of vegetation from Common reed, sedges, cattails closet to the pond and outward to hydric loving shrubs, red maple saplings, and pole stems. Common reed is a non-native, invasive plant, which threatens the native wetland plant community. A beaver greeted me during each visit to the Otter pond during the field inventory. Other wildlife citing in these stands included a great blue heron, frogs, geese, ducks, and white tailed deer.

Section 2.3: MANAGEMENT PRACTICES To be done within next 10 years						
OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#1	WK	1. Optional Habitat Enhancement Work –See Section #3 for specifics 2. Optional Invasive Plant removal near the spring seep on Bascom Road and the roadsides through the stand.			

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#2	WH	1. Possible Thinnings	42 acres	35 SF basal area removed	
Estimated Timber Products: <u>Option 2:</u> 70 MBF White pine timber, 10 MBF Hemlock timber, 80 cords pine pulp in standing trees and top wood, 50 cords of firewood in standing trees. <u>Option 3:</u> 60 cords of firewood and 35 cords of white pine and hemlock pulpwood. 2. Optional Trail Development and Improvement 3. Optional Invasive Plant Control prior to Crown Thinnings 4. Optional Habitat Enhancement Work –See Section #3 for specifics						

Narrative: Healthy forest stands provide good habitat, support healthy wildlife populations, and increase ecological resiliency of a forest. Intermediate harvests in an all-aged stand structure improve the overall stand condition and individual tree growth. Option 2 would remove pine trees within a diameter range of 15 to 23 inches. These stems have both crown and bole defects, root heaving evidence, and juxtaposition next to superior trees. The mechanics of harvesting mandates the removal of smaller trees in the way of felling larger ones. Option 3 would remove red maple, hemlock, and black birch pole trees (diameter range six to 15 inches).

The designation of a 75-foot filter strip around all riparian zones promotes the conservation of biodiversity throughout the harvest. Implementation of the techniques outlined in Section 3 of this plan guarantees protection of both biodiversity and habitat. Open ground harvesting during the late summer or early fall promotes mineral soils scarification and the preparation of an ideal seedbed. The installation of five small log-landing sites avoids interaction with the inner core zone of fragile ecosystem. Conversion of these small openings to native grass and wildflower meadows post-harvest enhances habitat value. Thoughtful harvest road design and layout assures compliance with all of the CR provisions. Some of these roads could be incorporated into future trail networks.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#3	HH	1. Optional Habitat Enhancement Work –See Section #3 for specifics			

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#4	WP	1. Possible Thinnings	12 acres	25 SF basal area removed from specific canopy layer	
Estimated Timber Products: <u>Option 2:</u> 30 MBF White pine timber and 60 cords pine pulp in standing trees and top wood. <u>Option 3:</u> 20 cords of firewood and 30 cords of pine and hemlock pulpwood. 2. Optional Trail Development and Improvement 3. Optional Invasive Plant Control prior to Thinnings 4. Optional Habitat Enhancement Work –See Section #3 for specifics						

Narrative: The mature white pine timber in this stand is an excellent seed source. The younger age classes are developing beneath their shade. Silvicultural application of thinnings in either the upper or the lower canopy would further the development of the all-aged condition and improve the vigor and high quality condition of the stand. Healthy forest stands provide good habitat, support healthy wildlife populations, and increase ecological resiliency of a forest. This stand eclipses two small sections of swamp. A 75-foot filter strip zone would be

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established around these fragile eco-niches for the protection of site biodiversity. Pre-harvest control of the invasive plant community within this stand will further protect the site's biodiversity, prevent their spread throughout the stand, and promote native seedling development. One small log landing could be installed along Bascom Road for truck access on level, dry sandy soils. Two landings would be required on Hoeshop Road in this stand near trailhead areas. Post-harvest grading and seeding of these sites provides excellent browse and insect breeding areas.

Trees for removal in either choice of thinning include three different sizes and ages of white pine timber crops. Some younger trees with a diameter range of 15 to 19 inches would be targeted, and another group of older, larger trees that range in diameter from 25 to 29 inches. All trees chosen would be high-risk stems, which may not survive another 15 years on site. Their crowns are small and asymmetrical, and their root systems heave upward from winds. They are trees, which compete with the crowns of the best pine genotypes in the stand. The immature pine for harvest are poorly formed, not vigorous, and in competition with the better immature hardwood crowns. Sapling and pole hardwoods would also be removed in the mechanics of the felling of larger pine stems. Low thinnings would remove the black birch pole stems with nectria infections and the inferior red maple stump sprout and suppressed poles and saplings.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#5	RZ-WK	1. Optional Invasive Plant Control 2. Optional Trail maintenance and improvement 3. Optional Habitat Enhancement Work –See Section #3 for specifics			

Narrative: The trail near the old stream foundation features a couple of old apple trees and a wide spreading maple on a small knoll. This area with its view of the spring-fed stream the spring wildflowers offer a pleasing short hike. This trail could connect down to the meadow site with a little work.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#6	WP	1. Possible Thinnings 23 acres 40 SF basal area removed from specific canopy layer Estimated Timber Products: Option 2: 55 MBF White pine timber and 45 cords pine pulp in standing trees and top wood. Option 3: 40 cords of pine and pulpwood. 2. Trail Development and Improvement 3. Invasive Plant Control prior to Thinnings 4. Habitat Enhancement Work –See Section #3 for specifics 5. Pruning of the immature white pine trees.			

Narrative: Thinnings in either the upper or the lower canopy will open the growing space for an increase in tree vigor of the appropriate age class trees. Although reproduction is not the objective, these small, conservative removals also open forest floor space for seedling development and encourage the desirable all-aged stand condition. Healthy forest stands provide good habitat, support healthy wildlife populations, and increase ecological resiliency of a forest. This stand eclipses three small sections of swamp. A 75-foot filter strip zone would be established around these fragile eco-niches for the protection of site biodiversity. Pre-harvest control of the invasive plant community within this stand will further protect the site's biodiversity, prevent their spread throughout the stand, and promote native seedling development. Two landings would be required on Hoeshop Road in this stand near trailhead areas, and one could be located along the old driveway access road. Post harvests the grading and seeding of these sites provides excellent browse and insect breeding areas. The narrow hauling roads might be useful for future trails.

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Trees for removal in either choice of thinning include two different sizes and ages of white pine timber crops. Crown thinning would remove younger trees with a diameter range of 11 to 13 inches and another group of older, larger trees greater than 24 inches in diameter. All trees chosen would be high-risk stems, which may not survive another 15 years on site. Their crowns are small and asymmetrical, and their root systems heave upward from winds. They are trees, which compete with the crowns of the best pine genotypes in the stand. Low thinning would remove the immature pine with poor forms, low vigor, and position next to the better immature pine crowns. Sapling and pole hardwoods would also be removed in the mechanics of the felling of larger pine stems. Either thinning operation would release the sprawling white oak or hickory crowns for increased mast production. The immature pine pole trees with excellent growth rates, good form, in addition, tiny branches could be pruned for quality improvement.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	#9	GF-ESH	1. Optional Invasive Plant Control 2. Optional Trail maintenance and improvement along the Fall River 3. Optional Habitat Enhancement Work –See Section #3 for specifics 4. Optional Improvement of access road into the meadow along the Fall River			

Narrative: 9 (a): The meadow along the Fall River offers a peaceful solitude for hikers or fisher persons. An existing access road needs improvement for the eventual necessity of emergency vehicle access. Simple grading and some gravel placement will open the area to use by emergency-wheeled vehicles. A fabricated metal gate and signage will be placed at the entrance to the road. Bi-annual mowing or brush hogging will maintain this valuable habitat vegetation and remove the infiltration of tree seedlings.

9 (b): Annual mowing of this grassy and herbaceous meadow maintains its habitat value.

9 (c): Timing of the mowing of this moist site for late summer or early fall will protect the soil integrity.

All mowing work should respect the breeding and nesting season from mid-April to late August.

	STD NO	TYPE	AC	SIZE-CLASS MSD	BA/AC	VOL/AC	SITE INDEX
STEW	#10	RZ/RM/MS/SS	4 acres	NA	NA		

Narrative: A program of invasive plant control will remove the Common reed plants from the Otter Pond.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	ALL	ALL	BOUNDARY DELINEATION			2014 to 2015

The boundaries of the property will be defined through painting. The Roberge survey map will be used for delineation purposes. As Frost stated, "Good fences make good neighbors." The establishment of the boundary of any woodlot indicates a commitment to its stewardship.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	ALL	ALL	Monitoring and Site Assessments			

Narrative: Annual reviews of the property for the status of invasive plant control, the development of the desirable forest stand conditions inclusive of forest health, seedling development, or environmental damages.

OBJ	STD NO	TYPE	TREATMENT	AC	TO BE REMOVED BA/AC TOT VOL	TIMING
STEW	ALL	ALL	FOREST STAND REVIEW FOR MANAGEMENT PLAN REVISION			2024







As mandated by the CR, a full review of the site will be conducted at the end of a ten-year period. A revised management plan must be submitted to the Department of Conservation and Recreation at this time.

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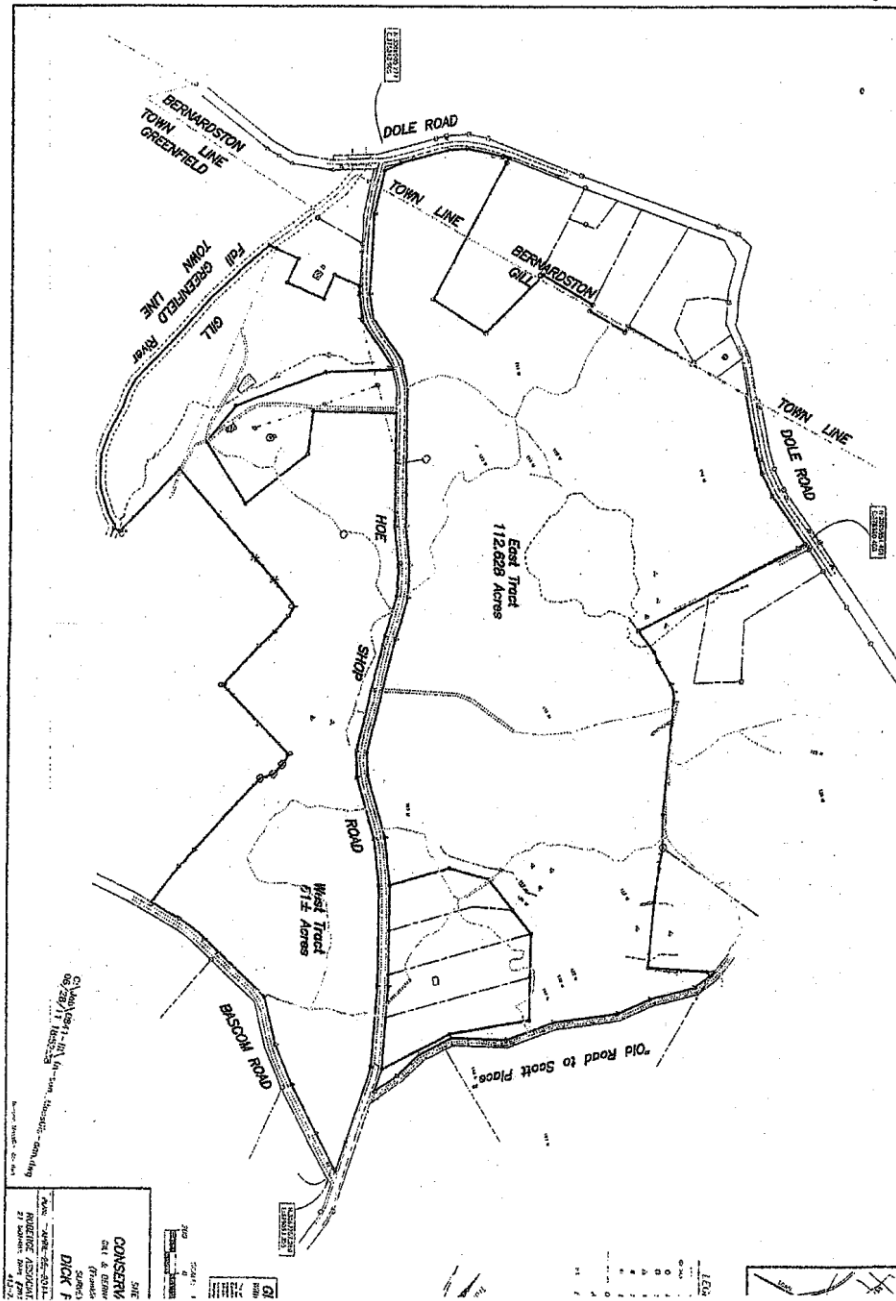
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-  Boundary
-  Swamps
-  Forest Cover Types
-  Streams
-  Springseep
-  Rectrail

1000 0 1000 2000 Feet





SECTION #3: WILDLIFE HABITAT MANAGEMENT TECHNIQUES SUMMARY SPECIFIC TO THE STANDS ON THE GILL TOWN FOREST			
Habitat Element and Value Found In The Town Forest	Location Within The Town Forest by Compartment and Stand Number	Suitable Enhancement or Preservation Technique Applicable to Stand	Specific Guidelines for Implementation
Browse layer-food source and cover for wildlife	Stands #2, #4, and #6 -72 acres of land suitable for silviculture.	1. Establish new native seedlings, saplings, and shrubs and encourage the growth of existing vegetation.	1. Create openings in the main canopy during the application of Crown or Low Thinnings. 3. Invasive plant control executed before any harvest work. 3. Remove hazard trees along the main trail system.
Herbage Layer	Stand #9 and #10	1. Release stocking of native seedling, sapling, and shrub layer	1. A program of invasive plant control and stocking reduction will release the native seedlings and shrubs.
Mast Trees/Shrubs	All stand where applicable. Native herbage has high stocking levels now and little threat of suppression. Stands #2, #4, and #6 where applicable-mast trees are sparse in the pine groves.	1. Retain and release when applicable red oak, white oak, shagbark hickory, pignut hickory, black birch, yellow birch, sugar maple, and ash large diameter, maturing stems. 2. Retain or release native soft mast shrubs or small trees such as raspberry, striped maple elderberry, blueberry, hazelnut, or dogwood.	1. A program of invasive plant control and stocking reduction will release the native herbage. 1. Retain at the minimum 20 stems per acre of large mast producing trees with diameter greater than 18 inches in the mixed pine and hardwood stands. 2. Retain all mast trees in the white pine groves. 3. Release the crown of of superior mast producing trees on 2 or 3 sides.
Edge Zones and Early Successional Habitat	Stand #9 Stands #7, #9, and #10	1. Maintain high quality condition of the native grass, forbs, herbaceous plants, and shrubs in the open sites and along the edges.	5. Release through manual clippings or thinning native small trees such as elderberry, striped maple, or dogwood from overtopping competition. 6. Release of the apple trees which dot each section of Stand #9. 1. Plant native shrubs and fruiting trees to diversify the species composition within the edge habitat for the development of cover and food. 2. Mow or cut tall shrubs every 7 to 10 years. 3. Avoid edge and meadow maintenance from April to August during nesting season.

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Edge Zones within Forest Stands		4. Establish a program of grassland bird management with 2 bluebird or kestrel boxes per 300 feet. 5. Initiate a program of invasive plant control to promote native plant communities within the edge and mowing sites. Follow all treatment with the initiation of a monitoring and evaluation program for future planning. 6. Release apple trees within the open areas for overtopping competition on all sides.
	Stand #2, #4, and #6	1. Create brush piles with the windfalls or any tree removal debris at the edges for cover within Stands #2, #4, and #6. 2. Retain scattered large trees throughout Stands #2, #4, and #6 for denning and perching near the edges.
Cavity Trees	Stands #2, #4, and #6-during silviculture work.	1. Retain cavity trees and potential cavity trees at woodland edges, in deep interior of the forests, and along stream and riverbanks. 2. A general rule-of-thumb is to retain at least 2 trees greater than 18 inches per acre.
Den Trees and Snag Trees	Stands #2, #4, and #6-during silviculture work.	1. Retain all den trees greater than or equal to 25 inches in diameter in the riparian zones. 2. Retain a minimum of 2 or more den trees per acre greater than or equal to 25 inches in diameter in the upland habitat sites. 3. Retain 3 to 5 potential den trees greater than or equal to 18 inches in diameter per acre with existing cavities throughout all stands. 4. Retain all snag trees or stumps greater than 6 inches in diameter throughout all stands unless the stem is a hazard to the Town Forest patrons.
Coarse Woody Debris (CWD)	All stands Technique #4 is specific to Stands #2, #4, and #6 during silviculture work.	1. Larger pieces of CWD are more valuable than smaller pieces—they last longer, hold more moisture, are useable structures for a greater number of organisms, and cannot be easily replaced. 2. Ecologically, it is advantageous to maintain the full range of decay and diameter classes of CWD in all stands—different functions and ecosystem processes require CWD in different stages of decay. 3. The composition and arrangement of CWD should be managed within acceptable levels of

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<p>River, Stream, and Riparian Habitat-inclusive of areas within and near wetlands, marshes, spring seeps, streams, and the Fall River</p>	<p>All stand -specific to areas adjacent to the Fall River, streams, wetlands, and spring seeps.</p>	<p>1. Retain structural trees with habitat value near riparian zones 2. Maintain moderate to high stocking levels of all layers of native vegetation within the riparian zone. 3. Maintain and improve the structural stability of the bank areas along the Fall River and all streams.</p>	<p>Risk of wildfire, insect pest, and forest disease outbreaks across the Town Forest. 4. Create CWD where its volumes are low from the debris from management harvest work.</p> <p>1. Retain all trees large enough and appropriately placed to cast shade upon the Fall River and streambeds, spring seeps, and vernal pools. 2. Preserve the dense stocking of native plants within 50 feet to 80 feet of all riparian zones through a policy of non-disturbance in these riparian filter sites. This vegetation acts like a filter strip. 3. Retain all valuable habitat stems near the riparian zones such as cavity trees, den trees, wolf trees, and perching stations. 4. Install erosion prevention measures in heavy traffic areas along the trail system within the riparian filter strip. 5. Stabilize the bank zones with seed or native seedlings at all crossing points for the recreational trail system. 6. All crossing of active flowing or potentially flowing waters must be bridged for bank stability. 7. Initiate a program of invasive plant control and stocking reductions to promote native plant communities within all riparian zones. Follow all treatment with the initiation and a monitoring and evaluation program for future planning. 9. Retain all sized coarse woody debris within the riparian zones.</p>
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Revised May 2009

Signature Page Please check each box that applies.

☐ **CH. 61/61A Management Plan** I attest that I am familiar with and will be bound by all applicable Federal, State, and Local environmental laws and /or rules and regulations of the Department of Conservation and Recreation. I further understand that in the event that I convey all or any portion of this land during the period of classification, I am under obligation to notify the grantee(s) of all obligations of this plan which become his/hers to perform and will notify the Department of Conservation and Recreation of said change of ownership.

☒ **Forest Stewardship Plan.** When undertaking management activities, I pledge to abide by the management provisions of this Stewardship Management Plan during the ten year period following approval. I understand that in the event that I convey all or a portion of the land described in this plan during the period of the plan, I will notify the Department of Conservation and Recreation of this change in ownership.

☒ **Green Certification.** I pledge to abide by the FSC Northeast Regional Standards and MA private lands group certification for a period of five years. To be eligible for Green Certification you must also check the box below.

☐ **Tax considerations.** I attest that I am the registered owner of this property and have paid any and all applicable taxes, including outstanding balances, on this property.

Signed under the pains of perjury:

Owner(s) Amy A Gordon Date June 9, 2014

Owner(s) _____ Date _____

I attest that I have prepared this plan in good faith to reflect the landowner's interest.

Plan Preparer Mary H. Wagoner Date 6/9/2014

I attest that the plan satisfactorily meets the requirements of CH61/61A and/or the Forest Stewardship Program.

Approved, Service Forester [Signature] Date 9/3/14

Approved, Regional Supervisor _____ Date _____

In the event of a change of ownership of all or part of the property, the new owner must file an amended Ch. 61/61A plan within 90 days from the transfer of title to insure continuation of Ch. 61/61A classification.

Owner(s) Town of Gill Page 36 of 38

Fall River Trails Map

(EAST OF Hoe Shop ROAD) FALL RIVER TRAILS

WETLAND TRAIL: (red trail on map) *easy walking*

Starting at the main parking area, walk behind the gate and proceed along the old access road. The Wetland Trail is basically a loop, and can be entered from one of two trailheads on the right hand side of the old access road.

As you stand beside the trailhead furthest from the gate you will see a meadow to your left (filled with ferns and skunk cabbage in the summer) and a view down to Otter Pond. This was once the site of a house. Iris flowers still grow here, as do a large sugar maple and catalpa tree. On the other side, the forest is made up of pine, hemlock, and assorted hardwoods, such as hickory, birch, and oak. A Chinese chestnut tree grows on the edge of this clearing.

The trail is an easy, gentle walk, a dappled, ferny stroll through mixed evergreens and hardwood. In many places, the trail passes along the edge of wetland areas filled with cattails.

OTTER POND TRAIL: (gold trail on map) *includes hills*

A short walk from the gate toward the interior of the forest brings you to a trailhead on the left. Proceed up a piney woodland trail. The meadow of the old house site can be glimpsed down to the right. As you ascend the knoll, you can stand and admire a serene outlook of Otter Pond with its water lilies, cattails, and beaver lodges. As you come down the trail to the edge of the pond, you might even see a beaver or an otter. Turn left, and following the edge of the pond, you will come to "sculptures" carved by beavers out of hemlock trees. As the trail begins to rise up away from the pond, there is a stately stand of American beech to the left, and shortly thereafter, another open view of the pond. A left turn brings the trail past more beaver activity. This trail soon joins up with an old logging road which ends at Hoe Shop Road. A left turn and a short ¼ mile stroll up Hoe Shop Road (the dirt road) will bring you back to the main parking area. A short 1/10 of a mile stroll in the other direction will bring you to the trailhead of the Fields Trail. Trailhead is on the left side of the road as you walk north.

A partial list of what you might see as you walk:

Animals: Otter, Beaver, White-Tailed Deer, Eastern Chipmunk, Gray Squirrel, Red Squirrel, Black Bear, Coyote, Moose (someday, we hope!), Red-Spotted Newt, Gray Tree frog, Painted Turtle, Snapping Turtle

Birds: Turkey, Wood Duck, Canada Geese, Ruby-throated Hummingbird, American Robin, Wood Thrush, Black-Capped Chickadee, Barred Owl, Pileated Woodpecker, White-breasted Nuthatch, Nut hatch

Flowers: Pink Lady's Slipper, Turtlehead, Wood Anemone, Canada Lily, Canada Mayflower, Bullhead Lily, Fragrant Water Lily, Skunk Cabbage, Starflower, Coltsfoot, Partridgeberry

Trees: Red Oak, White Oak, Eastern Hemlock, White Pine, Red Pine, Red Maple, Sugar Maple, Sycamore, Birch (Black, Yellow, White, Gray), Shagbark Hickory, Green Ash, Wild Apple, Beech, Chinese Chestnut

Pests: Poison Ivy, Multiflora Rose, Japanese Knotweed, Mosquito, Ticks-please provide yourself with proper protection.

Brother and Sister Clesson Blake and Ruth (Blake) Cook were born on Mountain Road in Gill, where they lived for most of their lives, maintaining a small farm and working woodlot. Both were strong proponents of conservation and they left their estates to be used for the benefit of land conservation in Gill. Chief among the projects supported by the Clesson P. Blake Trust and Ruth J. Cook Trust was the 2009 acquisition by the Franklin Land Trust of 173 acres on the Hoe Shop Road owned by the estate of Acilio R. Sandri.

After permanently protecting most of the land with a Conservation Restriction held by the Massachusetts Department of Conservation and Recreation (DCR), the Franklin Land Trust gifted 162.5 acres to the Town of Gill. This scenic and ecologically diverse property is now known as the Blake Town Forest of Gill.

Stewardship of the Town Forest has been made possible by the formation of the Gill Town Forest Committee, in collaboration with the Town of Gill's Conservation Commission. The Committee was awarded a DCR Community Forest Stewardship Implementation Grant in 2016. The grant has made it possible to establish and mark the boundaries of the property, to develop and mark trails, and to provide information to the public.

(WEST OF Hoe Shop ROAD) **FALL RIVER TRAIL.S****ESKER TRAIL:** (purple trail on map) *Some steep walking areas*

Trailhead is directly across from the main parking area. It runs parallel to Hoe Shop Road before turning right onto an esker.* As you walk along this pretty ridge, a wetland area can be glimpsed down to the left. The trail takes a ninety degree turn to the left for a briefly steep descent, and then turns right, traversing the esker diagonally for a more gradual descent. Another left turn brings you through a white pine forest. Initially wide and spacious, the trail narrows into a lane through pine branches. The trail descends between two parcels of private property.

****STAY ON TRAIL AND PLEASE RESPECT PRIVACY OF HOMEOWNERS****

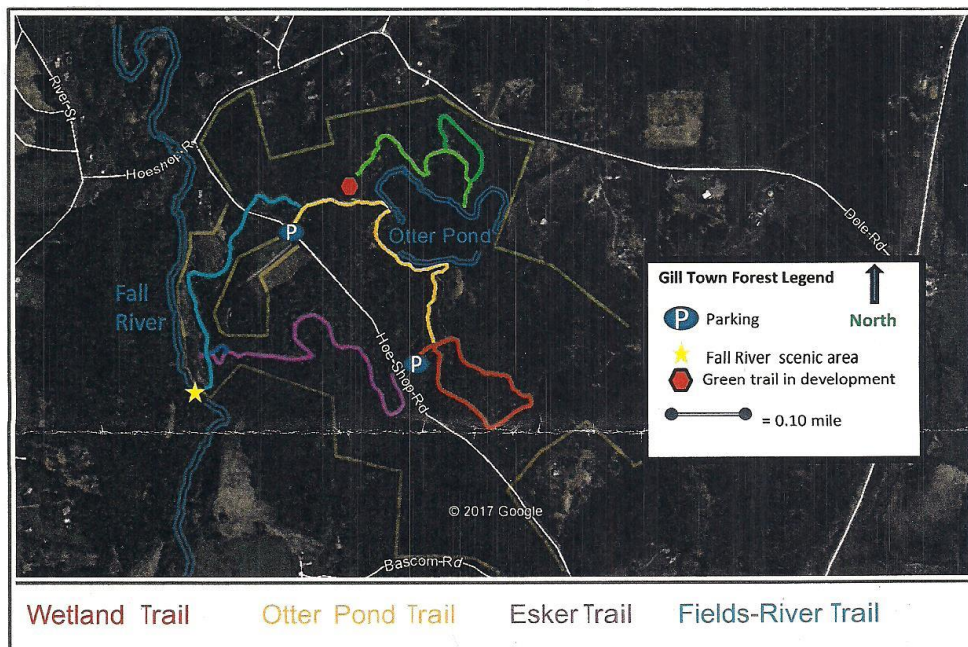
Cross the bridge to the lower field and then proceed left to arrive at the scenic area by the Fall River.

*ESKER: A LONG, WINDING RIDGE OF STRATIFIED SAND AND GRAVEL, EXAMPLES OF WHICH OCCUR IN GLACIATED REGIONS OF EUROPE AND NORTH AMERICA.

Return to Hoe Shop Road by Esker Trail or by following the Fields-River Trail through the woods along the river, then turn right into upper field. Follow edge of field and forest, keeping forest on your right, until you come to path making a steep ascent up wooded hill to Hoe Shop Road. (Go to the right and follow Hoe Shop Road southeast for 0.35 miles to get back to the main parking area.)

FIELDS-RIVER TRAIL: (light blue trail on map) *one steep hill at Hoe Shop Road access point*

Trailhead is on the west side of Hoe Shop Road, 0.35 miles northwest of main parking area. A steep descent through wooded hill onto open upper field. Turn left and follow the edge of field and forest (keeping forest on your left). This will bring you to the lower field. WALK STRAIGHT ACROSS FIELD TO TRAIL THAT FOLLOWS THE RIVER. At the south end of the field is the Fall River scenic area. Return by retracing steps or by following Esker Trail. Trailhead for Esker Trail is at the edge of field and forest, about a quarter of the way along the lower field.



BLAKE TOWN FOREST GILL, MASSACHUSETTS