

Forest Cutting Plan

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

DEC 12 2016

For DCR Use Only:

File Number 1288407-17 Case No. 128-10032
 Date Rec'd 10/03/16 Nat. Hert. NO
 Earliest Start 10/18/16 Nat. Hert. Imp. ---
 River Basin MERRIMACK Pub. Dr. Wat. yes
 Gen. Obj. LJ ACEC ---

City of Haverhill

Site Information

Location

Town Haverhill
 Road Lake Street
 Acres 65.5 +/- Proposed Start Date 9/15/2016
 Vol. MBF 116.352 Vol. Cds. 48+/- Vol. Tons 1,965+/-

Plan Preparer

Name Gary H. Gouldrup, NEFCo
 Address 72 Townsend Street
 Town, State, Zip Pepperell, MA 01463
 Phone 978-433-8780
 Type of Preparer Mass Licensed Forester - LF
 *Mass. Forester License # 81
 *Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name City of Haverhill
 Mailing Address C/o Robert Moore
City Hall Room 300, 4 Summer Street
 Town, State, Zip Haverhill, MA 01830
 Phone 978-374-2334
 Ch61 Ch61A CH61B Stew *Case # 1288-10032
 FSC GC CR CR Holder ---

Licensed Timber Harvester**

Name Hopkinton Forestry
 Address Box 2089
 Town, State, Zip Henniker, NH
 Phone 603 428 8400
 Mass. Lic. Harvester # ---

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

Best Management Practices

Stream Crossings

Indicate location on map	SC-1	SC-2	SC-3	SC-4	SC-5
Type of Crossing	BR	BR	BRCU	NA	NA
Existing Structure	No	Yes	No		
Type of Bottom	STMU	Cement	MU		
Bank Height (ft)	0.5	2-3	1		
Stabilization	COMU	ST	ST		

Harvesting in Wetlands

Indicate location on map	HW-1	HW-2	HW-3	HW-4
Forest Type (see pg 2)	WP	MH	MH	OH
Acres to be Harvested	1+/-	3+/-	0.5+/-	0.5+/-
Resid. Basal Area (>50%?)	Yes	Yes	Yes	Yes

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4	WC-5
Length of Crossing	60'+/-	30'+/-	75'+/-	30'+/-	15'
Mitigation	DRFR	DRFR	DRFR	DRFR	DRFR
Stabilization	COMU	COMU	COMU	ST	ST

Service Forester Comments

Filter Strips

Indicate location on map	FS-1	FS-2	FS-3	FS-4	FS-5
Width (50', 100', or VA)	VA	50	VA	50	NA

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LJ Ledge
TH Lic. Tim Har	BR Bridge	MU Mulch	DR Dry	ST Stony
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud
LO Landowner	PO Poled	ST Stone		GR Gravel
OT Other	OT Other	HB Hay Bales		OT Other
		OT Other		

Note:
 Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin.
 Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information.

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

Products to be Harvested*

Table with 4 columns: Species, MbF/Cds, Species, MbF/Cds. Rows include White Pine, Red Pine, Pitch Pine, Hemlock, Spruce, Other Sfld., White Ash, Beech, White Birch, B & Y Birch, Black Cherry.

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

Cutting Standards

Table with 5 columns: Indicate location on map, Forest Type, Acres, Landowner Objective, Designation of Trees, Type of Cut, Source of Regeneration. Rows include ST-1, ST-2, ST-3, ST-4.

See Page 5 for Stand 5

Landowner Signature

The most important information on a cutting plan is the Landowner's objective, as this will determine which trees will be harvested and which will remain; this decision will also determine the future condition of the forest for decades to come.

[X] LT - Long-term Forest Management

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

[] ST - Short-term Harvest

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

I (we) have read the Massachusetts Cutting Plan Information Sheet, and am aware of my (our) management options. I (we) hereby certify that I (we) have the legal authority to carry out the operation described above. I (we) certify that I (we) have notified the Conservation Commission in the town in which the operation is to take place and the abutters of record within two hundred feet of the area to be harvested. I (we) understand that the volumes and values (Ch61 only) in this plan have not been independently verified by the service forester upon approval and will report final values and volumes to the Director or his/her agent if the final figures differ from those reported.

Signature of landowner(s) [Signature] Date 9/12/2016

Determination and Status

Form with checkboxes for Approved, Disapproved, Expires, Extension, Amendment. Includes handwritten dates 10-2018 and 12-7-16.

Final Report and Comments

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

Signature of Service Forester/Director's Agent [Signature] Date

Table with 4 columns: Forest Types, Designation of Trees, Type of Cut, Source of Regeneration. Lists various codes and their corresponding descriptions.

Forest Cutting Plan

Narrative Page (Effective Date: 1/1/04)

Use this page to provide further explanation or if Other (OT) was used in any category on pages 3 or 4.

Landowner City of Haverhill

Town Haverhill

File Number 128-8407-17

Cutting Standards

Indicate location on map	ST-5	ST-6
Forest Type	WO	NA
Acres	16.0+/-	
Landowner Objective	LT	
Designation of Trees	CT	
Type of Cut	SE	
Source of Regeneration	ADSE	

Stand Type 1 (ST-1):

This mixed oak and mixed hardwood stand will be treated as an improvement thinning by individual and group selection harvesting aimed at reducing the basal area by approximately 25-33%. The desire is to open the understory for new production of native tree species and to develop wind firm trees with healthy crowns in the overstory. Removing the target canker damaged black birch is a high priority.

Stand Type 2 (ST-2):

This white pine forest type will be treated in a shelterwood harvesting system where individual and small groups will be removed from the overstory. The desire is to open the understory for new production of native tree species and to develop wind firm trees with healthy crowns in the overstory. Approximately 25-33% of the basal area and overstory volume will be removed in this harvest. A focus will be to harvest trees that have been damaged in past forest fires and are now hazard trees along trails.

Stand Type 3 (ST-3):

This red maple and mixed hardwood forest type will be treated as an improvement thinning by individual and group selection harvesting aimed at reducing the basal area by approximately 25-33%. The desire is to open the understory for new production of native tree species and to develop wind firm trees with healthy crowns in the overstory.

Stand Type 4 (ST-4):

This red oak and mixed hardwood forest type will be treated as an improvement thinning by individual and group selection harvesting aimed at reducing the basal area by approximately 25-33%. A focus will be to harvest trees that have been damaged in past forest fires and are now hazard trees along trails.

Stand Type 5 (ST-5):

This white pine and mixed oak stand will be treated as an improvement thinning by harvesting individual and small groups of trees. The harvest will remove approximately 25-33% of the basal area and overstory volume, although recent forest fires have caused severe damage in sections of this stand and the harvesting intensity will be greater in these areas. A focus will be to harvest trees that have been damaged in past forest fires and are now hazard trees along trails.

Stand Treatment

Forest Cutting Plan

Narrative Page (Effective Date: 1/1/04)

Use this page to provide further explanation or if Other (OT) was used in any category on pages 3 or 4.

Landowner City of Haverhill

Town Haverhill

File Number 128-8407-17

BMPs Information Regeneration & Future Condition

Use this Section to provide further explanation or if Other (OT) was used in any category in the Best Management Practices Section on Page 3.

- 1) Flag skid trails prior to harvesting. Skid timber when ground conditions are dry, frozen or otherwise stable.
- 2) Bridges will be used at all stream crossings except SC-2. SC-2 is an existing cement ford and spillway which will eventually be replaced.
- 3) Whole-tree chipping will be conducted during the harvest for aesthetics, fire protection, and wood utilization.
- 4) Install water bars on steep slopes where necessary

Use this Section to describe the types of trees to be harvested and/or retained if Other (OT) was used for "Designation of Trees" in the Stand Treatment Section on page 4.

Stand No.	Species to be Cut	Size of Trees to be Cut	Quality of Trees to be Cut	% BA/Acre Removed
1	BB, RM, OM, WP, MH	All Sizes	Poor to Good	25-33% +/-
2	WP, MH, OM, MH	All Sizes	Poor to Good	25-33% +/-
3	MH, WP, RM, BB	All Sizes	Poor	25-33% +/-
4 & 5	WP, OM, BB, MH	All Sizes	Poor to Good	25-40% +/-

Use this Section to describe how Chapter 132 requirements will be met if a non standard system (HG, DL, or OT) was used for the "Type of Cut" in the Cutting Standards Section on page 4.

Stand No.	Source of Regeneration (ex. AD, SE)	How will Regeneration be obtained/protected? If using AD - Describe the species present and how the regeneration will be protected If using SE - Describe the source of the seed and the number of seed trees/acre
-----------	--	--

1-5	AD	White pine and mixed hardwood saplings will be protected by directional felling by aid of using a feller-buncher. Skid trails will be flagged prior to harvesting to protect advanced regeneration.
	SE	The source of regeneration will be high quality white pine, mixed oak, and mixed hardwood trees.

Stand No.	Desired Future Condition Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory
-----------	---

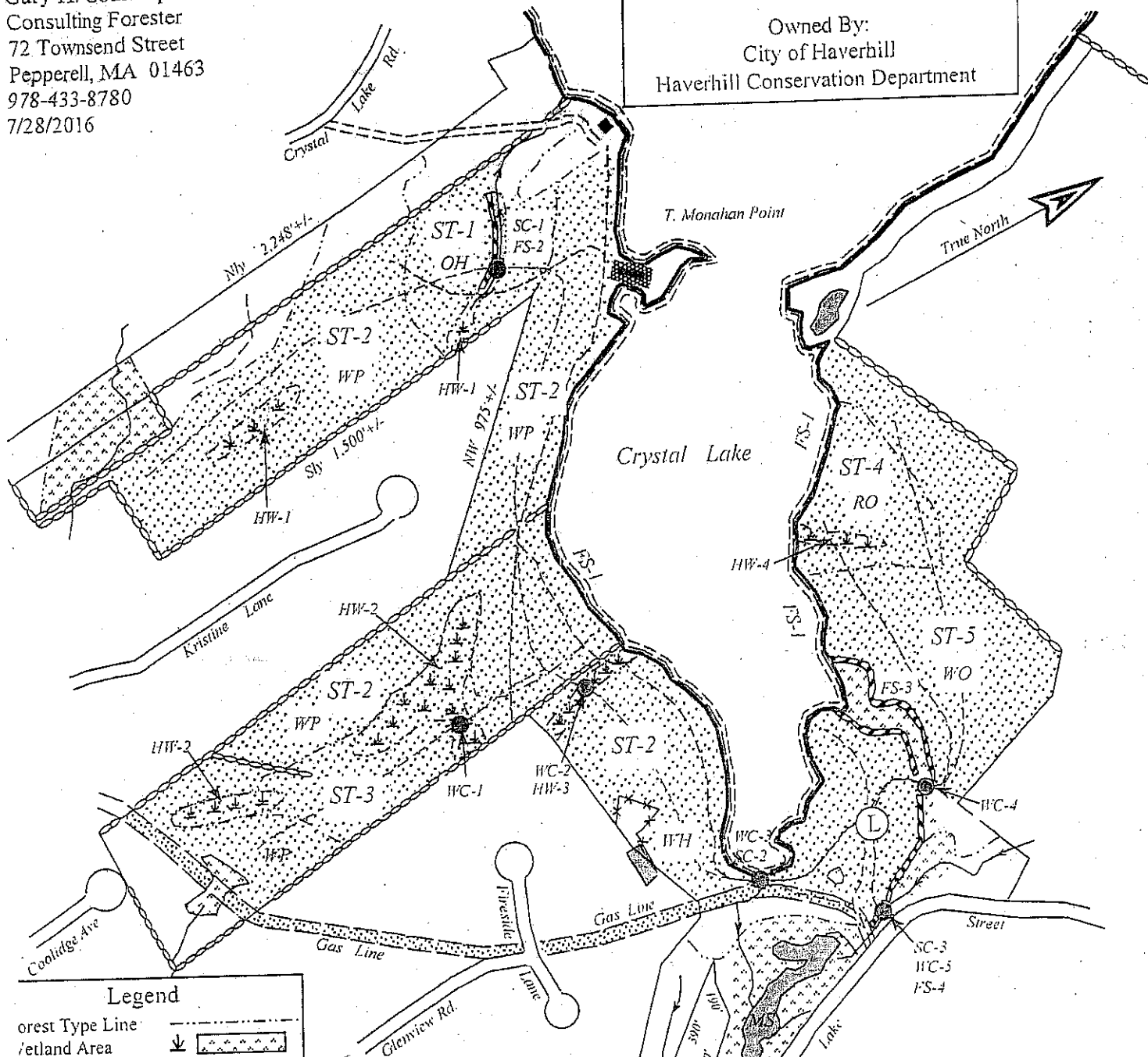
All	See Forest Stewardship Management Plan on file with DCR.

SC-2 and WC-3 will be on the east side of the cement dam. This cement dam will eventually be rebuilt.

Prepared By:
 Gary H. Gouldrup
 Consulting Forester
 72 Townsend Street
 Pepperell, MA 01463
 978-433-8780
 7/28/2016

Land in Haverhill, MA
 Crystal Lake East Conservation Area
 Lake Street Lot

Owned By:
 City of Haverhill
 Haverhill Conservation Department



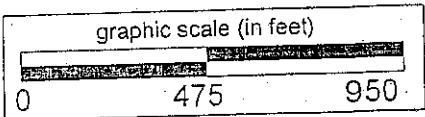
Legend

Forest Type Line	
Wetland Area	
Roads Road/ Trail	
Stone Wall	
Land Type #	
Wire Fence	
Stream	
Gas Line	
Oak-Hardwood	OH
White Pine-Hardwoods	WH
Fixed Hardwoods	MH
White Pine	WP
Marsh	MS
Fixed Oak	OM
Building	

Chapter 132 Codes

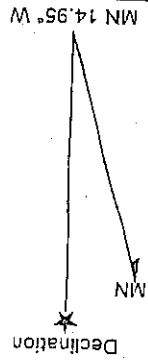
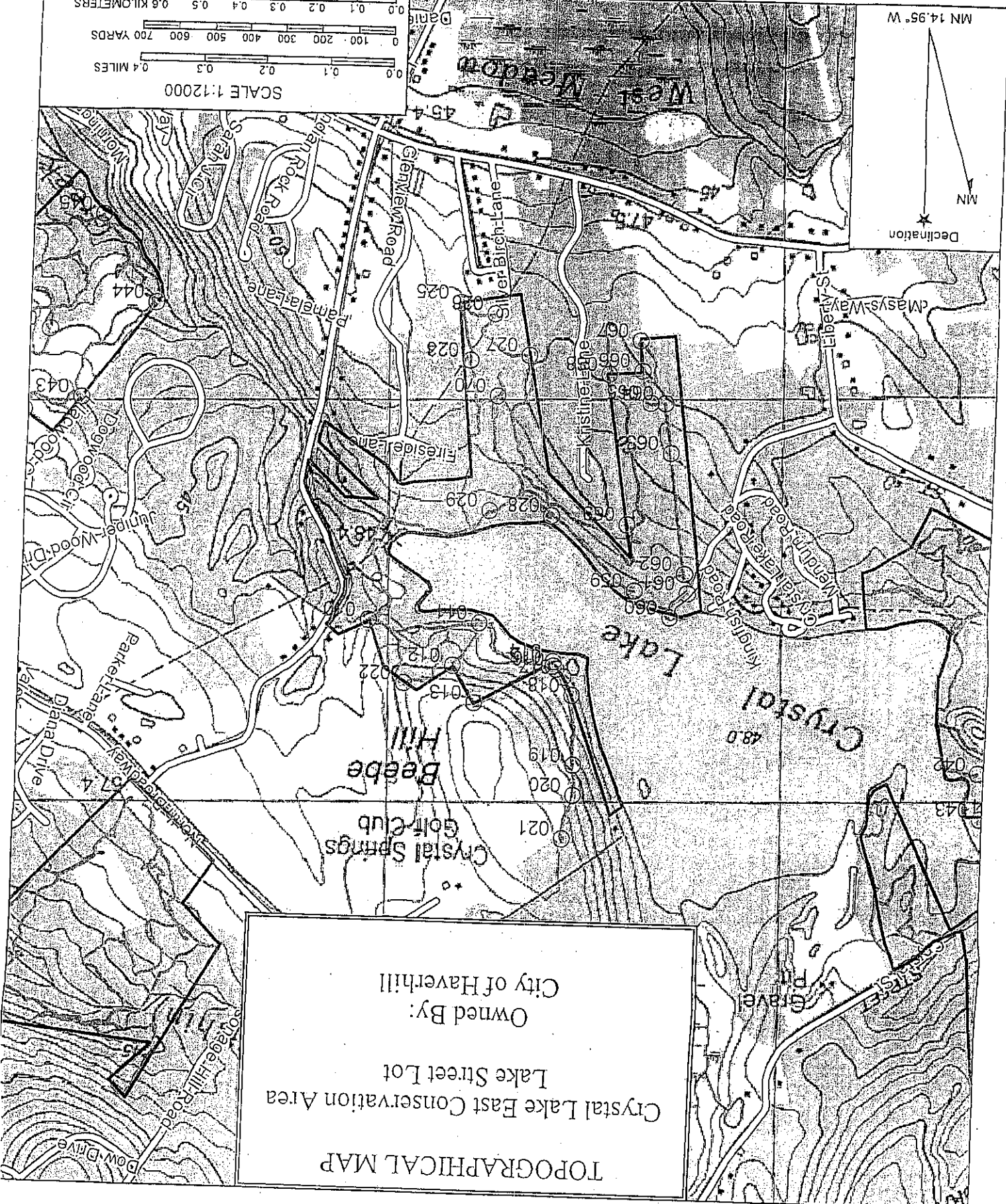
Filter Strip	FS	
Wetland Crossing	WC	
Stream Crossing	SC	
Stand Type	ST	
Wetland Harvest	HW	
Landing	L	
Skid Trail		
Harvest Area		

Map based on:
 GPS Field Work and
 City of Haverhill GIS,
 2014



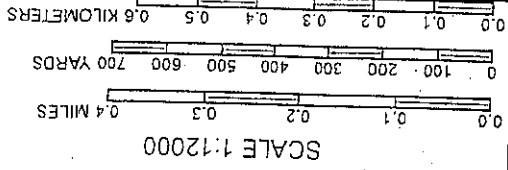
TOPOGRAPHICAL MAP

Crystal Lake East Conservation Area
Lake Street Lot
Owned By:
City of Haverhill



Name: HAVERHILL
Date: 07/28/16
Scale: 1 inch = 1,000 ft.

Location: 042° 47' 55.38" N 071° 08' 36.55" W
Crystal Lake - City of Haverhill





DCR
COMMONWEALTH OF MASSACHUSETTS
 Department of Conservation and Recreation
 Division of State Parks and Recreation

FILE # 128-8402-17

FOREST CUTTING PLAN CERTIFICATE

Post this in a conspicuous place within the area in which the harvesting operation is to take place.

This certifies that City of Haverhill (Name of Owner) City Hall Room 300 (Address) 4 Summer St. Haverhill, MA in accordance with the provision of M.G.L. Chapter 132, Section 40-46, filed in Clinton with the Dept. of Conservation and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the Lake St. lot. 01830

Approval Date 12/7/16
 Director's Agent Laura Daakley
 DCR Phone No. 978-937-2092 X112

ISSUED BY:

 Priscilla E. Geigis, Director
 Division of State Parks and Recreation

