

FOREST STEWARDSHIP PLAN

BERLIN TOWN FOREST

LAWSON LOT

MAY 14, 2003

FOREST STEWARDSHIP PLAN

This is a forest management plan developed under 2002 Federal and State forest stewardship guidelines.

Date Prepared 5-13-03
Plan Time Frame: 2003 - 2011
Property Owner(s): TOWN OF BERLIN - CONSERVATION COMMISSION
Address: 108 SHED RD
BERLIN, VT
05602
Telephone: 802-229-9298
Email:

**Property Address
(if applicable):** DARLING ROAD
BERLIN, VT
WASHINGTON County

**Legal description
or directions to
site:** The Lawson Lot is located on Darling road, a class 4 town road that goes from Belin Pond (Brookfield) to West Berlin (Vt. Rte. 12) The western boundary of the lot is approximtly 1300 ft. from Brookfield road.

Property Code:

Prepared By: RUSS BARRETT - COUNTY FORESTER
Company: STATE OF VERMONT
Address: 5 PERRY ST., STE 20
BARRE, VT
05641
Telephone: 802-476-0172
Email: russ.barrett@anr.state.vt.us

Approvals

Landowner:	_____	Date:	_____
Preparer:	_____	Date:	_____
Approving Agency:	_____	Date:	_____

GENERAL INFORMATION

Landowner Assessment

Description of resources and level of interest from the landowner: Stewardship responsibility for Town Forests in Berlin rests with the Town Conservation Commission. The chairperson (2003) is Andrea Chandler. Over the last few years the commission has been very active acquiring a land base to protect and enhance the Berlin Pond watershed. The "Lawson Lot" is the latest addition.

Time, money, interest and energy are all at a relatively high level and much has been accomplished since the commission has been active.

Landowner's goals for the property:

- Provide both local and broad-scale variation in the overstory canopy
- Maintain a closed overstory canopy with an open or sparse understory
- Minimize disturbance
- Preserve existing openings in the forest
- Allow Visual Access
- Leave many big trees
- Promote vegetation that displays colorful foliage and/or fruit in Autumn
- Promote vegetation that produces interesting fruit (berries, seeds, nuts, etc.)
- Maintain existing water yields
- Protect water resources
- Protect wetlands
- Protect riparian zones
- Provide coldwater fish habitat
- Enhance biological diversity on a regional level
- Enhance biological diversity on a local level
- Discourage or eliminate exotic elements
- Develop hiking trails
- Create viewscapes or vistas
- Increase the richness of wildlife species
- Generate periodic income from timber production

Goal Comments:

General Property Information

Total land area: 123.0 acres

Number of stands/mgmt units: 5

Region/subsection or ecosystem type: Humid temperate

General property description: Grand list says - 110 acres open and wooded land on Darling road in Town of Berlin while field and map measurements indicate approximately 123 acres.

Description of surrounding properties: Connects two parcels in public ownership - Boyer State Forest and Montpelier City Forest.

Soils information: Vershire-Glover complex - The shallow, somewhat excessively drained Glover soils are on summits and shoulders and the moderately deep, well drained Vershire soils are on the shoulders and backslopes.

Cabot silt loam - very deep, gently sloping and somewhat poorly drained and poorly drained. It is on toeslopes of knolls, on till plains and drainageways.

Buckland silt loam - very deep, gently sloping and moderately well drained. It is on footslopes of knolls and on till plains. Some units have a friable substratum.

Management access: Via Darling road. Improved access will be needed before any harvesting activities begin as a critical bridge washed out a few years ago.

Presence of threatened and endangered species: None found that we are aware of.

Cultural importance: Old farmstead, with stone foundations and bisected by a class 4 town road.

Map information: A GIS map is included in the plan.

Items with an asterisk are shown on the map:

- * North arrow (required)
- * Scale bar (required)
- * Legend (required)
- * Locator map
- * Stand boundaries

LOCATION MAP
BERLIN TOWN FOREST
"LAWSON LOT"



EXISTING CONDITIONS FOR UNIT 1: '1'

Land area: 42.5 Acres

Landuse History: Stand 1 was last harvested in 1995 when the largest and most valuable trees were cut.

Forest Type:
- Existing Northern Hardwood/Hemlock mix
- Potential same

Successional Trend: Northern Hardwood/Hemlock stand that was last harvested in 1995 when largest and best quality trees were cut. The present stand seems to be perpetuating itself in most areas, however there will be an aspen/birch component develop in some of the more heavily cut over areas.

Mixed hardwood/spruce regeneration with moderate deer browse.

Forest Health: No major health problems

Site Quality: Low to medium site 2 soils Site index is 61 for sugar maple.

Approximate age: 70 Years **Size Class:** pole/small sawtimber
Trees per acre: 157 **Mean Stand Diameter:** 8.6 inches
Basal area (BA): 73 **Acceptable BA:** 54
Growth Rate: 0 % **Timber Quality:** medium

Stocking: Stocking is somewhat variable depending on how it was cut in 1995 - overall the stand is just about c-level on the mixed wood stocking guide.

Stand volume: 1942 board feet

Habitat and wildlife use: Sign of grouse, woodcock, deer and turkey presence.

Recreational opportunities: Class 4 road goes through middle of property and has good multi use trail potential. Good hunting for early successional species.

Potential for timber production: fair to good -it will take quite a few years for this stand to recover from the previous harvest.

Potential for other uses: Good bird watching possibilities.

Water quality issues: With exception of vernal pools stand 1 has no water quality issues.

Important natural features: 2 nice vernal pools are located in stand 1

PLANS FOR UNIT 1: '1'

Landowner's objectives for this stand: Maintain forest cover and receive periodic income from timber. Protection of Berlin Pond watershed.

Silvicultural Prescription

Recommended silvicultural system: Uneven-aged management, favoring sugar maple, white ash and hemlock and red spruce. Maximum allowable diameter is 22 inches. The desired cutting cycle is 24 years.

Details of the silvicultural prescription: No activity recommended at present time. Reexamine in 12 years for possible improvement harvest.

Planned Activities

EXISTING CONDITIONS FOR UNIT 2: '2'

Land area: 8.0 Acres

Landuse History: lightly cut in 1995

Forest Type:
- Existing Northern Hardwoods
- Potential Northern Hardwoods

Successional Trend: Typical northern hardwood stand that was small enough to escape high grade harvesting in 1995. White birch component will decrease as stand becomes more of a classic beech, maple, yellow birch mix in the future.

Forest Health: no major problems

Site Quality: fair to good Site index is 61 for sugar maple.

Approximate age: 70 Years **Size Class:** Small Sawlogs (11.5 - 17.5")
Trees per acre: 224 **Mean Stand Diameter:** 8 inches
Basal area (BA): 93 **Acceptable BA:** 83
Growth Rate: 0 % **Timber Quality:** medium

Stocking: Stocking lies about halfway between the a and b- level on the northern hardwood stocking guide.

Stand volume: 2810 board feet

Habitat and wildlife use: upland birds and mammals

Recreational opportunities: hunting, hiking, birdwatching

Potential for timber production: good to excellent

Potential for other uses:

Water quality issues: none except around vernal pools

Important natural features: 3 vernal pools on edges of stand

PLANS FOR UNIT 2: '2'

Landowner's objectives for this stand: Receive periodic income while maintaining closed forest canopy. Watershed protection for Berlin Pond.

Silvicultural Prescription

Recommended silvicultural system: Uneven-aged management, favoring Sugar maple, white ash and yellow birch. Maximum allowable diameter is 22 inches. The desired cutting cycle is 24 years.

Details of the silvicultural prescription: Improvement cut when harvesting in adjacent stands - remove UGS and thin to between 70 and 75 square feet of basal area.

Planned Activities

EXISTING CONDITIONS FOR UNIT 3: '3'

Land area: 41.5 Acres

Landuse History: Light cut of largest trees in 1995.

Forest Type:
- Existing Northern hardwood/hemlock
- Potential same

Successional Trend: Hardwood/hemlock/spruce mix with some mature aspen present. Largest and best quality pine and aspen cut in 1995. It will probably remain a mixed stand in the future.

Forest Health: Aspen declining with evidence of hypoxylon canker, but otherwise no major health problems.

Invasive - honeysuckle in understory.

Site Quality: Site 2 for hardwoods and wetter areas site 2 for softwoods. Site index is 59 for sugar maple.

Approximate age: 80 Years **Size Class:** Small Sawlogs (11.5 - 17.5")
Trees per acre: 171 **Mean Stand Diameter:** 9.48 inches
Basal area (BA): 91 **Acceptable BA:** 66
Growth Rate: 0 % **Timber Quality:** medium
Stocking: Stocking is between c and b- level on the mixed wood stocking guide.

Stand volume: 3285 board feet

Habitat and wildlife use: Upland birds and mammals

Recreational opportunities: hunting, hiking, birdwatching

Potential for timber production: fair to good

Potential for other uses:

Water quality issues: Adjacent Darling road crosses stream on southern boundary of stand. 2 vernal pools are shared with Boyer State Forest.

Important natural features: vernal pools and stream in Berlin Pond watershed

PLANS FOR UNIT 3: '3'

Landowner's objectives for this stand: Receive periodic income while maintaining a closed forest canopy for protection and enhancement of Berlin Pond watershed.

Silvicultural Prescription

Recommended silvicultural system: Uneven-aged management, favoring Mixed hardwood/softwood. Maximum allowable diameter is 22 inches. The desired cutting cycle is 24 years.

Details of the silvicultural prescription: No activity for this 10 year planning period. Examine for possible improvement cut in 12 to 15 years.

Eradicate invasive honeysuckle in understory.

Planned Activities

EXISTING CONDITIONS FOR UNIT 4: '4'

Land area: 12.0 Acres

Landuse History: Old field pine - the best quality stems were cut in 1995.

Forest Type:
- Existing White Pine/Aspen
- Potential pine/ash/aspen

Successional Trend: Large, old field white pine over white ash and aspen. Apples scattered throughout the stand. Soils are seasonably wet.

Forest Health: Blister rust on many of the pine stems.

Site Quality: Fair to good, but very wet in spots. Site index is 71 for white pine.

Approximate age: 70 Years **Size Class:** Small Sawlogs (11.5 - 17.5")
Trees per acre: 124 **Mean Stand Diameter:** 11 inches
Basal area (BA): 97 **Acceptable BA:** 67
Growth Rate: 0 % **Timber Quality:** medium
Stocking:
Stand volume: 7785 board feet

Habitat and wildlife use: Upland birds and mammals

Recreational opportunities: limited - hunting

Potential for timber production: fair to good

Potential for other uses:

Water quality issues: At least 1 spring present.
Wet, eroding skid road should be stabilized

Important natural features: Nice apple orchard.

PLANS FOR UNIT 4: '4'

Landowner's objectives for this stand: Receive periodic income and create a closed forest canopy. Protection for Berlin pond Watershed.

Silvicultural Prescription

Recommended silvicultural system: Uneven-aged management, favoring White pine and white ash. Maximum allowable diameter is 24 inches. The desired cutting cycle is 15 years.

Details of the silvicultural prescription: No activity for 10 year planning period. Possible salvage of blister rust trees if opportunity presents itself sooner.

Release and prune apples.

Stabalize eroding skid road.

Planned Activities

2004: release and prune apple trees
Priority: 2

2007: continue release and pruning of apple trees
Priority: 2

EXISTING CONDITIONS FOR UNIT 5: '5'

Land area: 19.0 Acres

Landuse History: Reverting agricultural land

Forest Type:
- Existing Reverting field - aspen
- Potential Aspen-Birch

Successional Trend: Agricultural land reverting to forest - some areas of stand could feasibly be maintained as field with occasional mowing.

Forest Health: Hypoxolyn canker in aspen

Site Quality: fair Site index is 60 for aspen.

Approximate age: 45 Years **Size Class:** Small Sawlogs (11.5 - 17.5")
Trees per acre: 105 **Mean Stand Diameter:** 9 inches
Basal area (BA): 54 **Acceptable BA:** 28
Growth Rate: 0 % **Timber Quality:** low
Stocking: understocked
Stand volume: 3317 board feet

Habitat and wildlife use: Upland birds and mammals.

Recreational opportunities: hiking, hunting, birdwatching

Potential for timber production: low

Potential for other uses:

Water quality issues: Stream along stand boundary and class 4 road which borders stream in places.

Important natural features: Stream and natural opening created by excessive wetness.

PLANS FOR UNIT 5: '5'

Landowner's objectives for this stand: Maintain openings where possible with mowing and maintain class 4 road to minimize erosion.

Silvicultural Prescription

Recommended silvicultural system: Even-aged management. Desired rotation age is 60 years.

Details of the silvicultural prescription: No harvesting activity for 10 year planning period. If possible maintain mowable portions of old fields.

Planned Activities

2003: mow fields, release and prune apple trees.

Priority: road maintenance for erosion
1

2006: Mow fields

Priority: Check road for erosion work
1

2009: Monitor roads and trails.

Priority: 1

2011: Mow fields

Priority: Check road for erosion
1

SUMMARY OF PLANS BY YEAR

- 2003 -

UNIT	PRIORITY	ACTIVITY
5	1	mow fields, release and prune apple trees. road maintenance for erosion

- 2004 -

UNIT	PRIORITY	ACTIVITY
4	2	release and prune apple trees

- 2006 -

UNIT	PRIORITY	ACTIVITY
5	1	Mow fields Check road for erosion work

- 2007 -

UNIT	PRIORITY	ACTIVITY
4	2	continue release and pruning of apple trees

- 2009 -

UNIT	PRIORITY	ACTIVITY
5	1	Monitor roads and trails.

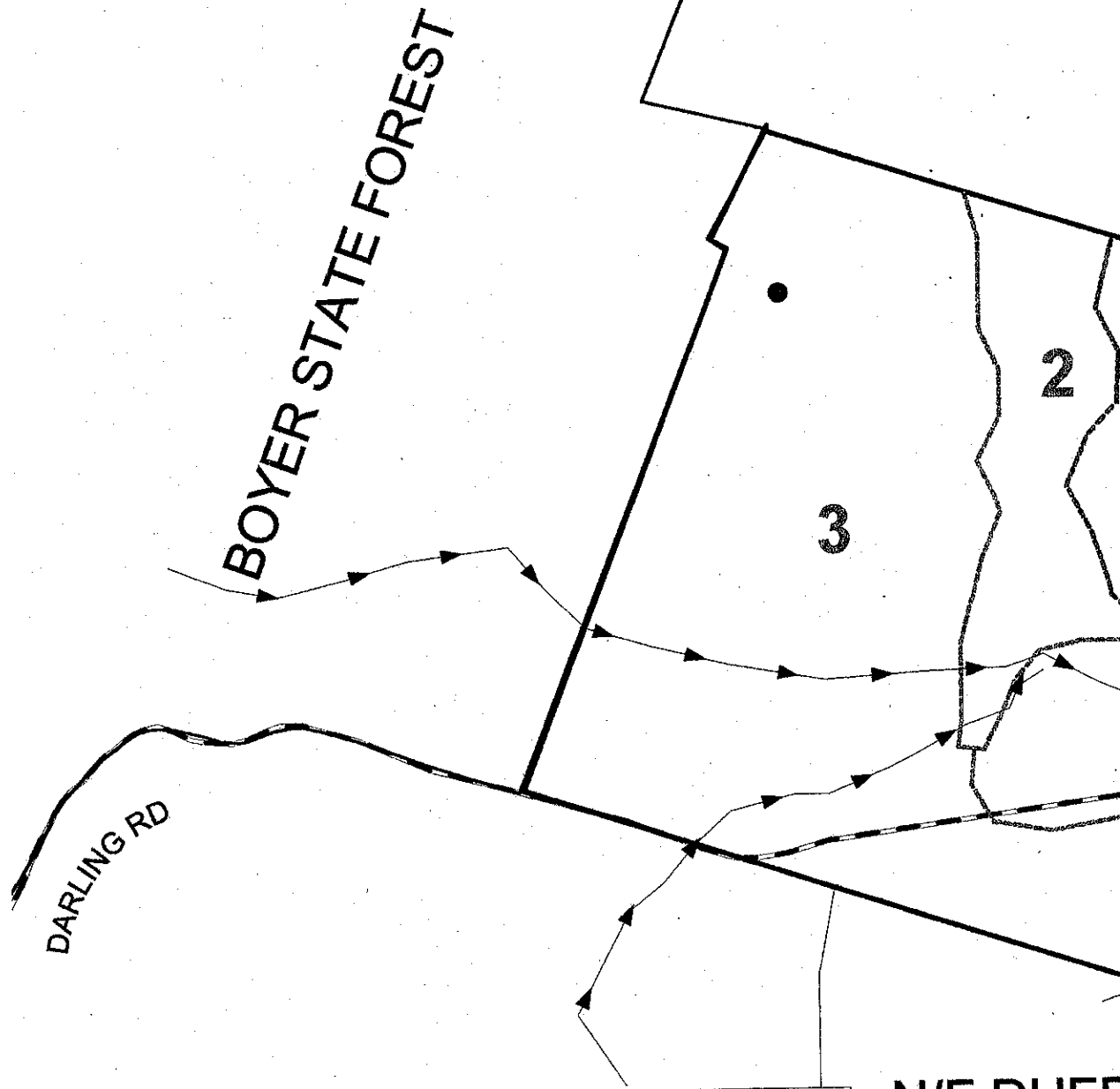
- 2011 -

UNIT	PRIORITY	ACTIVITY
5	1	Mow fields Check road for erosion

- UNIT SUMMARY TABLE -

UNIT	ACRES	COVER TYPE	STAND DIAMETER	BASAL AREA	SILVICULTURAL SYSTEM
1	42.5	Northern Hardwood/Hemlock mix	8.6 in.	73	Unevenaged mgmt. Maximum diameter 22 inches. Cutting cycle of 24 years.
2	8.0	Northern Hardwoods	8 in.	93	Unevenaged mgmt. Maximum diameter 22 inches. Cutting cycle of 24 years.
3	41.5	Northern hardwood/hemlock	9.48 in.	91	Unevenaged mgmt. Maximum diameter 22 inches. Cutting cycle of 24 years.
4	12.0	White Pine/Aspen	11 in.	97	Unevenaged mgmt. Maximum diameter 24 inches. Cutting cycle of 15 years.
5	19.0	Reverting field - aspen	9 in.	54	Evenaged mgmt. Rotation age is 60 years.

BERLIN TOWN FOR



LEGEND

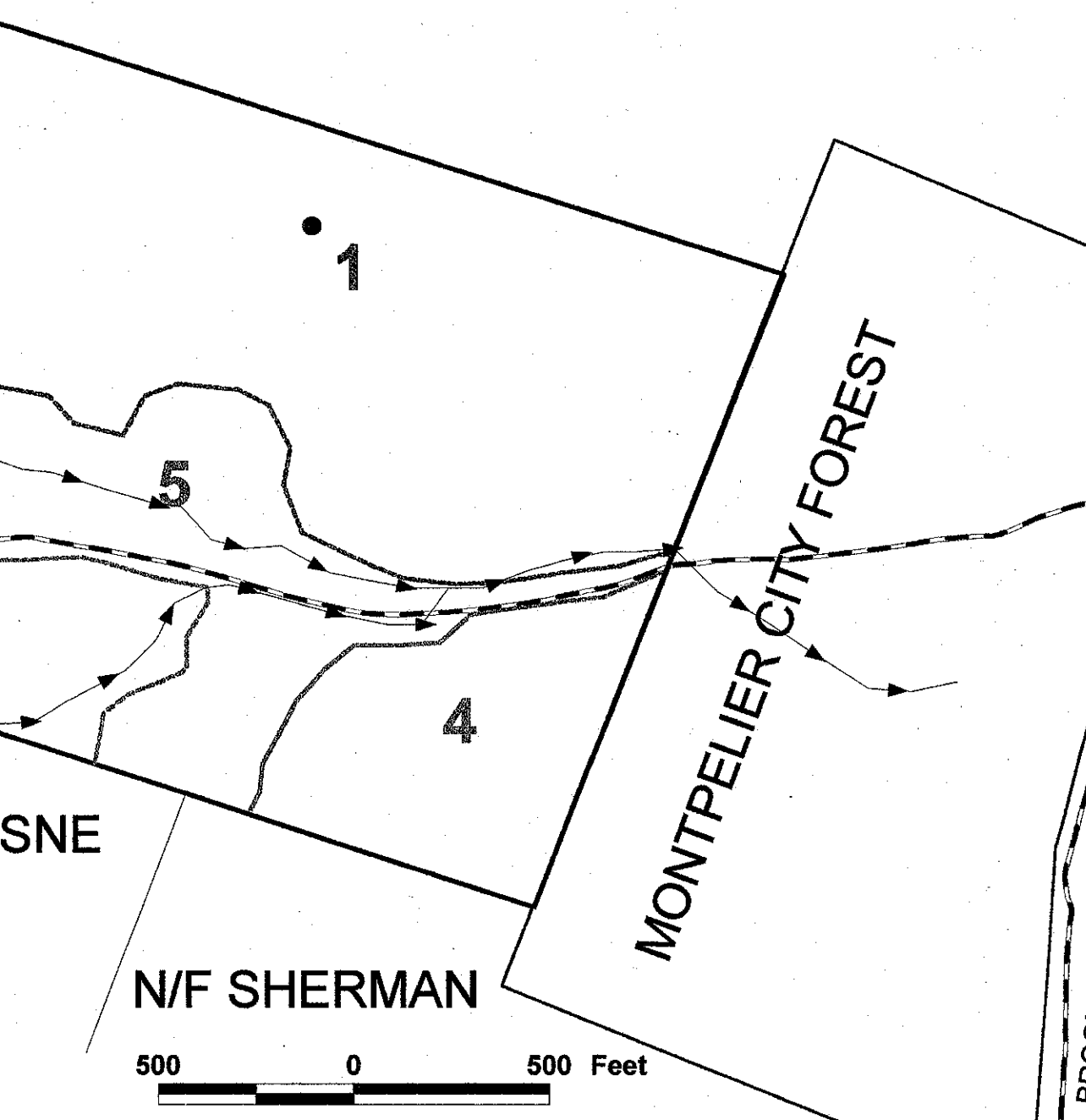
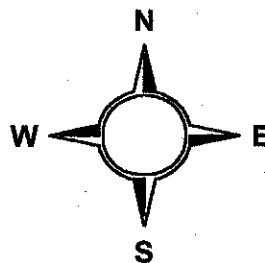
Vernal Pool	●
Streams	—▶—
Town Rd.	- - - - -
Parcel Boundary	—————

N/F DUFF

SCALE 1:5
1"= 417'

EST - LAWSON LOT

N/F LAFFAL



SNE

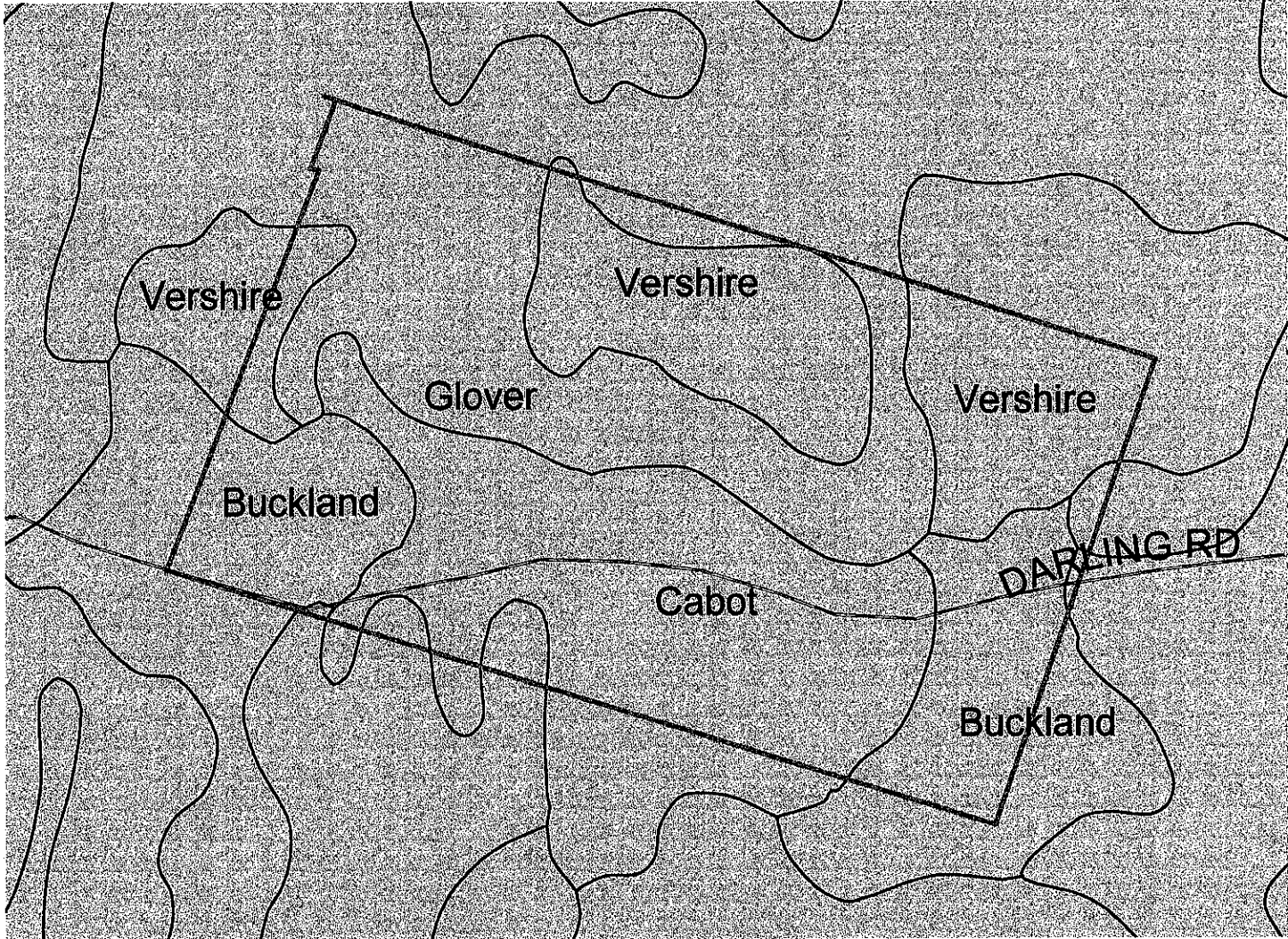
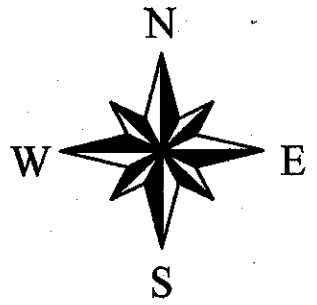
N/F SHERMAN

MONTPELIER CITY FOREST

BROOKFIELD RD



SOILS MAP LAWSON LOT



SCALE 1:7500