

# FOREST STEWARDSHIP PLAN

---

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

**Date Prepared:** 8/29/2012  
**Plan Time Frame:** 2013 - 2022  
**Property Owner(s):** Town of Waitsfield  
**Address:** 9 Bridge St.  
Waitsfield, Vermont  
05673  
**Telephone:** 802-496-2218  
**Email:** waitsfld@madriver.com  
**Property Address:  
(if applicable)**  
**Legal description or  
directions to site:** Wu Ledges is a 125 acre parcel located just south of the village of Waitsfield and east of the Mad River and Route 100.  
**Property Code:** Municipal Forest  
**Prepared By:** Russ Barrett  
**Company:** State of Vermont, Dept. FPR  
**Address:** 5 Perry St., Ste. 5  
Barre, VT  
05641  
**Telephone:** 802-476-0172  
**Email:** russ.barrett@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:** Recent history has shown that the citizens and officials of Waitsfield have the interest to spend sufficient time and energy to accomplish goals associated with their Forest Stewardship Plans plans on municipal ownerships.

- Create a generally uniform overstory canopy with scattered gaps or other variation in overstory structure
- Create new openings in the forest
- Allow Visual Access

**Landowner's goals for the property:**

- Leave many big trees
- Promote vegetation that displays colorful foliage and/or fruit in Autumn
- Promote vegetation that maximizes a variety of foliage
- Promote vegetation with a variety of growth habits and forms
- Generate periodic income from timber production
- Increase the richness of wildlife species
- Maintain existing water yields
- Protect water resources
- Protect wetlands
- Protect riparian zones
- Enhance biological diversity on a local level
- Develop appropriate mountain bike trails
- Develop hiking trails
- Create viewscapes or vistas

**Goal comments:**

## **General Property Information**

**Total land area:** 127.0 Acres

**Total number of stands/mgmt units:** 3

**Region/subsection or ecosystem type:** Northern Green Mountains (biophysical region)

**General property description:** Wu Ledges is 125 acres in size and ranges from 700 feet to just over 1100' in elevation. The property is generally west facing and characterized by terrain that ranges from nearly level to extremely steep with spectacular ledge outcroppings. The forest is generally mature and portions of the property were logged under supervision of forester Leo Laferriere about 10 years ago. For forest management purposes, the property can be grouped into two major forest types: northern hardwood and hemlock/hardwood. The northern hardwood type tends to occupy the valleys and gently sloped benches while the hemlock/hardwood tends to occupy the ridge tops and steeper slopes of the property.

**Description of surrounding properties:** The "Lawton Parcel", just west of Wu Ledges has a conservation easement and the Town of Waitsfield owns a small parcel west of the "Lawton Parcel" that was formerly owned by Lawton. The "Lareau swimhole" abuts Wu ledges on the west side of the Mad River.

**Soils information:** A soil map and soil descriptions are attached.

**Management access:** Access to Wu Ledges is via two routes: 1) A 50' wide easment from the near end of Pine Hill Lane, off TH #1 (the East Warren Rd.) 2) A 50' wide strip of land abutting Route 100. This is part of the Wu Ledges property, but has limitations in that it leads to a ford in the Mad River and then directly on to the property. Use of this access is subject to laws and regulations applicable to stream crossings. The Town owns properties adjacent to, and north (Austin) and south (Lareau) of the 50' wide strip. Access to Wu Ledges via these lands has not been explored and, except

|   |  |
|---|--|
|   | for foot travel, would likely not be considered.   |
| <b>Presence of threatened and endangered species:</b> | No threatened/endangered species have been mapped on or near the Wu ledges parcel. The Natural Community Inventory conducted by Brett Engstrom in 2008 identifies three natural communities as "significant", three plants as "uncommon" and three plants as "invasive". |
| <b>Cultural importance:</b>                           | The Wu Ledges parcel is too rugged for traditional agricultural purposes, but may have been tapped for maple sap or served as pasture for sheep. With its proximity to the Mad River, use by native americans should be investigated.                                    |
| <b>Map information:</b>                               | A GIS map is included in the plan.<br>Items with an asterisk are shown on the map:<br>* North arrow (required)<br>* Scale bar (required)<br>* Legend (required)<br>* Locator map<br>* Stand boundaries   |

## EXISTING CONDITIONS FOR '1'

---

|                                  |   |
|----------------------------------|---|
| <b>Land area:</b>                | Land area: 54 Acres   |
| <b>Landuse history:</b>          | This stand probably developed from sheep pasture over 100 years ago. A single tree selection harvest was conducted in portions of the stand in 2002. Access was from an adjoining property.   |
| <b>Forest Type:</b>              |   |
| - Existing                       | Northern Hardwoods  |
| - Potential                      | Northern Hardwoods  |
| <b>Successional trend:</b>       | Mature stand of sawlog size northern hardwoods. Species composition is 35% sugar maple, 18 % beech, 15% hemlock, 11% white ash, 6% yellow birch and associated species. Regeneration is generally inadequate, consisting of scattered beech with fern ground cover. |
| <b>Forest health:</b>            | No problems were noted with the exception of a moderate amount of beech bark disease.   |
| <b>Site quality:</b>             | Site index is 60 for sugar maple. The site is good to excellent with signs of enriched soils noted.   |
| <b>Approximate age:</b>          | 85  |
| <b>Trees per acre:</b>           | 169   |
| <b>Basal Area (BA):</b>          | 122   |
| <b>Growth Rate:</b>              | 2 %   |
| <b>Stocking:</b>                 | Stand 1 is fully stocked and approaching the "A" line on the northern hardwood stocking guide   |
| <b>Stand Volume:</b>             | 5355 board feet/acre  |
| <b>Habitat and wildlife use:</b> | Good for upland species such as deer, bear, bobcat and forest dwelling song birds. The limiting factors for wildlife would be the proximity to existing housing, planned housing, and year round trail use.   |
| <b>Recreational</b>              | With the exception of a few small, but significant, wetland areas the   |

|   |  |
|---|--|
| <b>opportunities:</b>                   | recreation potential is good throughout the stand. There are a number of hiking/mountain biking trails existing in portions of stand.                    |
| <b>Potential for timber production:</b> | Good to excellent site for timber production. There is a good species mix and stem quality is quite good. Limiting factors will be steepness and access. |
| <b>Potential for other uses:</b>        |  |
| <b>Water quality issues:</b>            | Stand 1 contains a few small significant wetland areas, a vernal pool and headwaters of an unnamed stream that flows to the Mad River.                   |
| <b>Important natural features:</b>      | Mature hardwoods with scenic ledges  |

## MANAGEMENT PLANS FOR '1'

---

**Landowner's objectives for this stand:** Manage for extensive recreation, wildlife enhancement, biological diversity and periodic income from timber. Over time, hemlock and spruce may become a larger component of the stand.

### Silvicultural Prescription

|   |  |
|---|--|
| <b>Recommended silvicultural system:</b>          | Uneven-aged management, favoring Sugar maple, yellow birch, white ash and beech. Target maximum diameter is 24 inches. The desired cutting cycle is 25 years.  |
| <b>Details of the silvicultural prescription:</b> | No harvesting will be scheduled for the next 10 years or until access issues are improved. As a long range goal, the stand will be managed under an uneven-aged system to meet objectives as developed through public input. |

### Planned Activities

|                  |  |
|------------------|--|
| <b>2013:</b>     | Inventory and develop a sustainable trail system |
| <b>Priority:</b> | 1  |
| <b>2014:</b>     | Blaze and paint property boundaries              |
| <b>Priority:</b> | 2  |
| <b>2022:</b>     | Update plan                                      |
| <b>Priority:</b> | 1  |

## EXISTING CONDITIONS FOR '2'

---

|                          |  |
|--------------------------|--|
| <b>Land area:</b>        | Land area: 57 Acres  |
| <b>Land use history:</b> | Too steep for traditional agriculture, portions of this stand may have been used to pasture sheep. |
| <b>Forest Type:</b>      |  |
| - Existing               | Hemlock-Hardwoods  |
| - Potential              | Hemlock-Hardwoods  |

|   |   |   |
|---|---|---|
| <b>Successional trend:</b>              | Generally occupying the ridge tops and steeper portions of the forest, stand 2 is a sawlog size stand of hemlock/hardwood. Species composition is: 65% hemlock, 10% red maple, 9% sugar maple, 8% yellow birch and 5% red spruce. |   |
| <b>Forest health:</b>                   | No problems noted with the exception of a moderate amount of beech bark disease.  |   |
| <b>Site quality:</b>                    | Site index is 50 for sugar maple. Much of this stand is located on steep slopes and ledgy ridge tops.   |   |
| <b>Approximate age:</b>                 | 85  | <b>Size class:</b> Small Sawlogs (11.5 - 17.5") |
| <b>Trees per acre:</b>                  | 347   | <b>Mean Stand Diameter:</b> 9.72 in.            |
| <b>Basal Area (BA):</b>                 | 179   | <b>Acceptable BA:</b> 125                       |
| <b>Growth Rate:</b>                     | 2 %   | <b>Timber Quality:</b> medium                   |
| <b>Stocking:</b>                        | Slightly overstocked and above the A line on the mixedwood stocking guide. There is no overstocked condition on the hemlock stocking guide, but the stocking here is well over the b' line.                                       |   |
| <b>Stand Volume:</b>                    | 11200 board feet/acre   |   |
| <b>Habitat and wildlife use:</b>        | This stand is mapped deer wintering area, but also provides habitat for other upland species.   |   |
| <b>Recreational opportunities:</b>      | Hiking and mountain bike trails take advantage of the dry and firm ridge top conditions in much of the stand  |   |
| <b>Potential for timber production:</b> | Steep slopes and rocky outcrops will restrict harvesting on portions of this stand. The quality of trees present is quite good.   |   |
| <b>Potential for other uses:</b>        |   |   |
| <b>Water quality issues:</b>            | There are no specific water quality concerns in stand 2.  |   |
| <b>Important natural features:</b>      | Steep slopes, rock outcrops, talus ridge and spectacular ledges are located within portions of stand 2.   |   |

## MANAGEMENT PLANS FOR '2'

---

**Landowner's objectives for this stand:** Manage for wildlife habitat, biological diversity, extensive recreation and periodic income where feasible.

### Silvicultural Prescription

**Recommended silvicultural system:** Uneven-aged management, favoring Hemlock, yellow birch, spruce and sugar maple. Target maximum diameter is 24 inches. The desired cutting cycle is 25 years.

**Details of the silvicultural prescription:** No harvesting will be scheduled over the next 10 years or until access issues are improved. Because of the steep, rugged terrain, portions of this stand are inoperable. The long range goal will be to manage this stand under an uneven-aged aged system to meet objectives as developed by public input.

### Planned Activities

**2013:** Inventory and develop a sustainable trail system.  
**Priority:** 1  
**2014:** Blaze and paint property boundaries.  
**Priority:** 2  
**2022:** Update plan  
**Priority:** 1

## EXISTING CONDITIONS FOR '3'

---

**Land area:** Land area: 11 Acres  
**Landuse history:** Former agricultural land used for pasture and to grow hay.  
**Forest Type:**  
 - Existing Riparian  
 - Potential Riparian  
**Successional trend:** Semi-open shrubland that borders the Mad River and serves as a riparian buffer.  
**Forest health:**  
**Site quality:**  
**Approximate age:** 20 **Size class:** Open & shrubs  
**Trees per acre:** **Mean Stand Diameter:**  
**Basal Area (BA):** **Acceptable BA:**  
**Growth Rate:** **Timber Quality:** low  
**Stocking:**  
**Stand Volume:**  
**Habitat and wildlife use:** Provides fish, aquatic and riparian related habitat.  
**Recreational opportunities:** Provides access to river for fishing and other water related activities.  
**Potential for timber production:** No timber production planned for this area.  
**Potential for other uses:**  
**Water quality issues:** Acts as important riparian buffer for Mad River.  
**Important natural features:** Includes a ford crossing the mad river and is just down stream from Lareau swimming hole.

## MANAGEMENT PLANS FOR '3'

---

**Landowner's objectives for this stand:** Maintain as high quality riparian buffer.

### Silvicultural Prescription

**Recommended silvicultural system:**

**Details of the silvicultural prescription:** Enhance riparian buffer, maintain floodplain community and effectiveness as a high water release zone.

## Planned Activities

**2013:** Improve or enhance flood plain and riparian forest as recommended by river scientists.

**Priority:** 1

**2022:** Update plan

**Priority:** 1

## SUMMARY TABLES

### Overview of Planned Activities

| Unit | 2013  | 2014  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022  |
|------|---|---|------|------|------|------|------|------|------|---|
| 1    |    |    |      |      |      |      |      |      |      |    |
| 2    |  |  |      |      |      |      |      |      |      |  |
| 3    |  |   |      |      |      |      |      |      |      |  |

### Detailed plans by year

- 2013 -

| UNIT | PRIORITY | ACTIVITY   |
|------|----------|--|
| 1    | 1        | Inventory and develop a sustainable trail system                                       |
| 2    | 1        | Inventory and develop a sustainable trail system.                                      |
| 3    | 1        | Improve or enhance flood plain and riparian forest as recommended by river scientists. |

- 2014 -

| UNIT | PRIORITY | ACTIVITY                             |
|------|----------|--------------------------------------|
| 1    | 2        | Blaze and paint property boundaries  |
| 2    | 2        | Blaze and paint property boundaries. |

- 2022 -

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

| UNIT | PRIORITY | ACTIVITY    |
|------|----------|-------------|
| 1    | 1        | Update plan |
| 2    | 1        | Update plan |
| 3    | 1        | Update plan |

### Comparison of management units on the property

| UNIT | ACRES | COVER TYPE         | STAND DIAMETER | BASAL AREA | SILVICULTURAL SYSTEM  |
|------|-------|--------------------|----------------|------------|---|
| 1    | 54    | Northern Hardwoods | 11.48 in.      | 122        | Unevenaged mgmt. Maximum diameter 24 inches. Cutting cycle of 25 years. |
| 2    | 57    | Hemlock-Hardwoods  | 9.72 in.       | 179        | Unevenaged mgmt. Maximum diameter 24 inches. Cutting cycle of 25 years. |
| 3    | 11    | Riparian           |                |            |   |