

**Randolph Community Forest  
Second Stewardship Plan - 2014 to 2023**



**Prepared for:  
The Randolph Forest Commission  
Town of Randolph  
Randolph, NH**

**December 2013**

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Landowner Approval:

Clark Scroggs, CHAIRMAN  
Signature

April 25, 2014  
Date

This plan has met the approval of **Walter W. Wintturi, New Hampshire Licensed Forester.**

Walter W. Wintturi  
Signature

345  
Forester License Number

April 25, 2014  
Date

This plan has met the approval of **Brad W. Simpkins, Interim Director, New Hampshire Division of Forests and Lands.**

Brad W. Simpkins, Interim Director  
NH Dept. of Resources and Economic Development  
Division of Forests & Lands

          
Date

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**INTRODUCTION TO THE SECOND STEWARDSHIP PLAN  
2014 -2023**

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We are pleased to introduce the Second Stewardship Plan for the Randolph Community Forest (RCF). It reflects a lot of hard work by our professional forestry team: Walter Wintturi, Forester, and Elise Lawson and John Severance, wildlife and wetlands consultants. They deserve the thanks of the whole community.

Ten years ago, the RCF was born. At that time, a great many people made the effort to participate in outlining a vision for the future of the Forest. That vision provided the basic structure of the First Stewardship Plan (2003 – 2013) and has been largely preserved in the statement of goals for the Second Plan. This Plan has two main purposes: to record the achievements made during the first Stewardship Plan period and to lay out the expectations for the Second Plan period.

Among the accomplishments of the First Plan period was the creation of a website, which can be found on-line at [www.randolphforest.org](http://www.randolphforest.org). The creation of this website has had the effect of rendering unnecessary some of the attachments which were found in the First Stewardship Plan. A history of the project, the conservation easement, under which the Town holds the property, and the Town Forest Ordinance, spelling out the administrative rules under which the Forest is managed, can now all be found on the website and need not be repeated as attachments in the Second Plan. Having them on the website is particularly useful in the case of the Ordinance, which is subject to amendment at Town Meeting. Such amendments will now show up on the website as soon as adopted. There was no way to update the language when it was an attachment to a ten-year plan.

The Randolph Planning Board and Forest Commission are both eager to hear the views and suggestions of all those who use or are interested in the RCF, whether they are residents of Randolph or not. Meetings of both bodies are held once a month in the Randolph Town Hall. They are open to the public and the agendas always include opportunities for comment. All major decisions relating to the Forest are taken after specially notified public hearings held by the Planning Board, which are, again, open to the public. Finally, views and suggestions made directly to members of the Forest Commission are also welcome, and the website provides directions for contacting them.

Like the White Mountain National Forest, to which it abuts, the RCF is also a “land of many uses,” and we hope that all those who take advantage of the opportunities the Randolph Community Forest provides will find all their experiences to be informative and enjoyable.

Thank you.

The Randolph Forest Commission

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## **PURPOSE**

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The Second Stewardship Plan has the following purposes:

- 1) To continue to meet the requirements of the Conservation Easement between the State of New Hampshire, Department of Resources and Economic Development, and the Town of Randolph, New Hampshire
- 2) To document the state of the resource situation within the Forest as it exists in 2013 and how it has changed since 2003, describing the history of the land area where relevant.
- 3) To review the activities carried out under the First Stewardship Plan and to build upon them.
- 4) To develop a new action plan which lists the proposals for timber, road, wildlife, and recreation management and for research and educational activities to be undertaken during the life of the Second Plan.
- 5) To document the working relationship which exists between the Town of Randolph and the United States Forest Service with regard to the joint management of certain roads within the Forest and adjacent areas of the White Mountain National Forest and, where relevant, outline actions needed in furtherance of that relationship.

This is the second forest stewardship plan for the Randolph Community Forest. The plan will be revised every ten years, with an updated action plan for the next ten year period. This plan should reference and build-upon the first stewardship plan and will list accomplishments over the past 10 years as well as list actions and opportunities on the Forest over the next 10 years.

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## **FOREST STEWARDSHIP GOALS**

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The following management goals represent an expansion and restatement of the goals included in the First Stewardship Plan as modified in light of the experience of the last ten years.

### **1. FORESTRY PRACTICES**

Encouraging the growth of high quality saw timber, and a more diverse northern hardwood stand, wherever the soils and other ecological conditions are suitable, remain long-term goals of the Town, goals that will not be fully achieved for eighty years or so. The period of the First Stewardship Plan saw the adoption of a strategy aimed at the achievement of these goals and a series of beginning steps taken. These included small clear-cuts for the purpose of diversifying tree species and creating stands of differing age classes in an effort to return the Forest to its natural character.

It remains a goal that the Town's stated preference for all proposed timber harvests and operations observe the recommendations of "Good Forestry in the Granite State," best management practices and other relevant forest management considerations. Harvest area layout will take into consideration aesthetics of the harvest area as seen from different parts of the Town. Techniques to minimize the visual impact will be implemented when appropriate.

The Randolph Planning Board, as the supervisory body in the Town's Forest management structure, held a notified public hearing prior to approving each of the proposals for harvesting projects, referred to it by the Randolph Forest Commission. Public comments were welcomed. This is a requirement of the Town's Forest Ordinance and it will continue to be observed throughout the period of the Second Stewardship plan.

## **2. INCOME CONSIDERATIONS**

It remains a long-term goal of the town to manage the Community Forest sustainably and to earn profits from timber harvesting to cover the management costs of the Community forest. In the event additional revenues are available, the first priority of those funds will be for such purposes as the protection and improvement of the community Forest's biodiversity and adaptation to the changing environment; the enhancement of traditional outdoor recreational opportunities; the encouragement and support of research and educational activities related to the flora and fauna existing within the Town; and the conservation of ecologically important tracts of land within or near the Town. However, it will still be some years before that level of income is reached.

It remains a short-term goal of the Town to earn a sufficient amount of income from timber harvesting to cover payment in lieu of taxes (PILT) to the Town of Jefferson, the costs incurred for road and boundary maintenance, mowing, forestry and wildlife management and other Community Forest related expenditures, and – after such costs are met - payments to the Town in lieu of property taxes at the appropriate current use rate. That level of income was achieved in the last years of the First Stewardship Plan period and the Forest is now making those PILT payments to the Town of Randolph.

## **3. AESTHETICS**

It remains a goal of the Town to encourage the use of harvesting techniques which minimize the visual impact of timbering activities ("light harvesting"), in those areas of the Community Forest such as the southern slopes of Mount Crescent, which are easily seen from the Randolph Hill Road and the Presidential Range. During the first Stewardship Plan period, all clearings created during timbering activities were irregular in shape and made up of small openings so as to present little visual evidence of the disturbance. Within a year or two after harvest, the openings have grown in and are virtually indistinguishable from the surrounding forest.

That said, it is also a goal of the Town to utilize the very best and latest forestry practices and scientific research, for the well-being of the entire forest ecosystem which includes the importance of maintaining viable wildlife species and habitats. This will often involve the creation of permanent and temporary large openings, and long-term monitoring, in coordination with the Forest Service, universities and independent researchers.

## **4. RECREATION**

It remains a goal of the Town to encourage the creation, preservation and maintenance of existing recreational trails and other facilities for both summer and winter use by the public. When timber harvesting takes place, the possibility that it will open up additional opportunities

for new recreation routes will be recognized and some extra efforts may be taken to make that happen.

The development of new trails will always be carefully considered. Trails on the Community Forest must be maintained and designed utilizing Best Management Practices (BMP) to protect soils from erosion or other forms of degradation and to avoid undue disturbance to the habitats of plants and animals. It is also a goal of the Town to encourage the creation and maintenance of appropriate viewing spots or outlooks on recreational trails and maintained roadways.

Hiking trails are to be used only by pedestrians for foot travel, snowshoes and cross-country skiing. The use of the Community Forest by the public for recreation purposes must always be consistent with the terms of the Conservation Easement and the Snowmobile Agreement attached thereto.

During the period of the First Stewardship Plan the Randolph Planning Board, on the recommendations of the Forest Commission, appointed Activity Managers for hiking trails and for snowmobile trails. These organizations have proved to be worthy partners in the management of recreational activities on the Community Forest.

## **5. ECOLOGY**

It remains a goal of the Town to promote the development and maintenance of open areas and other conditions within the Forest which are designed to encourage the proliferation of various species of wildlife, but to do so in a manner which takes into consideration scenic, recreational and botanical values. Forest type and age composition will continue to be managed to increase the amount of aspen and spruce/fir which species provide important wildlife habitat.

A general standard for a healthy forest is to have 3% to 4% of the land area in openings for animal habitat. To meet this standard the Randolph Community Forest should have 300 to 400 acres of open land within it. At present, counting open areas, log landings and roads, the total acreage in open land amounts to about 50 acres. During the first Stewardship Plan, efforts began towards rectifying this lack of open space. Several permanent openings were created and are being regularly mowed and maintained. But there is yet much work to be done in this regard.

It remains a goal of the Town to encourage plant and animal diversity and to ensure that water resources, streams and wetlands are protected by the utilization of best management practices as laid out in the Conservation Easement.

## **6. RIVER CORRIDORS**

Wetlands have a particular importance in the ecological cycle. They provide a natural means of purifying or preserving the purity of water. They provide a unique habitat for a great range of fish, birds, reptiles, animals and plants. And, they provide the opportunity for fishing, swimming and other forms of aquatic recreation.

There are two rivers, with their associated wetlands, which flow through Randolph. They both rise near the watershed at Bowman. The Israel's River flows west to the Connecticut while the Moose River heads east to the Androscoggin.

It is a goal of the Town to protect these river corridors. That goal can be accomplished in a couple of ways. One is the outright purchase of riparian lands which will be added to the Community Forest. The other is the acquisition by the Town of conservation easements affording



such lands permanent protection. Conservation easements owned by the Town will be monitored by the Randolph Forest Commission and the costs will be paid for out of the Forest Revolving Fund. These two approaches to protection for riparian lands are not mutually exclusive and a successful protection strategy may employ a mix, combining both.

## **7. THE CRYSTAL MINE**

A unique feature of the Randolph Community Forest is the existence within it of an old crystal mine. The mine was used during the Second World War to produce crystals used in the war effort for radio equipment. After the War it was closed and has remained closed to commercial use ever since. It is, however, a source of crystals for hobby gem collectors, and the conservation easement under which the Town manages the Forest specifically states that the crystals may be mined for this purpose, but for this purpose only.

It also provides an opportunity for sightseers to visit an old mine both to experience the spectacular effect of being surrounded by crystals and to see how the old mine was once worked.

During the final years of the First Stewardship Plan the mine was plundered by unscrupulous collectors and it is a goal of the Town to make sure that this does not happen again. Whatever steps are deemed necessary to protect the mine in the future will be taken.

## **8. ROADS**

It remains a goal of the Town to maintain the Pond of Safety Road in a condition which enables it to be used by high clearance vehicles to access the Pond of Safety and the region around it. To this end, during the period of the first Stewardship Plan, the Town entered into an enduring contractual agreement with the U.S. Forest Service for the joint management of the Pond of Safety road and other roads which pass through that region of the Community Forest and enter the White Mountain National Forest.

It remains the intent of the Town to keep the Pond of Safety Road open for public access except when its temporary closure is needed to protect the condition of the road or to deal with emergencies. During the First Stewardship Plan a major parking facility was established at the western end of this road, primarily for the benefit of snowmobilers in winter.

It is a continuing goal of the Town to identify roads which can be used for emergency access and other roads which may in future be useful for timbering operations and a start was made in these identifications during the First Stewardship Plan. The goal remains to maintain emergency access roads in a condition that makes access feasible and closing, but maintaining the roadbeds of other roads so that they may easily be reopened as needed. Roads not considered useful for any purpose have been, and will continue to be, closed.

## **9. EDUCATION**

It remains a goal of the Town to use the Forest to educate residents and members of the public about the natural cycles of forest life and about the positive role that sustainable timber management can play. During the period of the First Stewardship Plan, the Forest Commission introduced the practice of celebrating an annual Forest Day, which couples a report on the

previous past year’s activities with a tour into a part of the Forest to view some aspect the those activities. These Forest Tours have been very well received and generally well attended.

It also remains a goal of the Town to use and encourage the use of the Forest as a laboratory where experiments can be carried out relating to sustainable timber management, wildlife habitat enhancement, water quality and soils protection and other relevant subjects. The First Stewardship Plan period saw the creation of fifteen permanent transects on the Community Forest and an adjacent portion of the White Mountain National Forest. These transects provide the infrastructure for future research projects examining animal species, population densities and behavior.

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**ACCOMPLISHMENTS 2003 TO 2013**

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**TIMBER HARVESTING**

Accomplishments

Timber Management:

	<u>Clearcut</u>	<u>Shelterwood</u>	<u>Uneven-age</u>
Acres Treated	367	142	289

Total Acres Treated = 798 acres or 9.9% of the land area managed for timber production.

Timber Harvest:

	<u>Saw Timber</u>	<u>Pulpwood</u>	<u>Fuel wood chips</u>
	701 mbf	20,258 tons	20,085

**TREE FARM CERTIFICATION**

The Randolph Community Forest became a certified Tree Farm in 2007. The American Tree Farm System has high Standards of Sustainability to verify that wood products and wood fiber coming from Tree Farms are from a sustainably managed source. Periodically a third party auditor inspects the RCF to verify that the RCF is meeting these standards.

**WILDLIFE HABITAT IMPROVEMENTS**

	<u>Permanent openings</u>	<u>Alder regeneration</u>	<u>Softwood release</u>	<u>Early successional stand creation</u>
Wildlife Habitat: Acres Created	25	3	22	54

**ROAD NETWORK IMPROVEMENTS AND MAINTENANCE**

The Randolph Community Forest contains an extensive logging road system for access throughout the forest. This valuable asset is dynamic due to erosion, harvest needs and timing, as well as cost. The RCF road system is in better condition as a whole compared to 10 years ago. During the past 10 years most people would agree that the intensity of individual storm events

has increased. This has caused some erosion problems and increased maintenance costs for the RCF road system. Overall, the RCF has been able to stay on top of problem areas, but in some cases, it is difficult to react and repair some locations. Continuation of these severe storms over the next 10 years may be a cause for concern and increased monitoring. The road inventory conducted 10 years ago for the first Management Plan found that there were approximately 26.8 miles of roads containing 202 culverts, 153 water bars, and 10 bridges. A breakdown of individual roads can be found by referring to the Randolph Forest website.

The 2013 road inventory reflects road improvements done over the past 10 years. The road system now includes 11 bridges, 231 culverts, and 220 waterbars.

- Bridges now include a Bailey bridge which the RCF was able to install in a partnership agreement with the WMNF. (See photo below)



- Another notable partnership project completed with the RCF and WMNF is the upgrading of the Pond of Safety Road, providing easier public access to Pond of Safety.
- The RCF also purchased two portable bridges which provide use in various locations based on logging and general access needs. They are used for perennial stream crossings, to maintain undisturbed streambeds and fish passage. (See photo below)



- Several culverts have been upgraded in size to better accommodate storm events
- Several culverts have been installed to match existing stream flows to correct ‘perched’ or elevated outlet that hinder fish passage.
- In many instances culverts have been removed to restore natural water
- On steeper road grades additional waterbars have been constructed to curb stormwater erosion
- Many roads have been ditched, particularly where logging harvests have been conducted over the past 10 years.
- Improved road access has been done to ensure that newly created wildlife openings can be mowed on an annual rotation or at least once every 3 years to maintain them as grassland openings.
- The RFC has continued mowing (brush-hogging) roads and roadsides on a three year rotation.
- Gates were installed and maintained to regulate vehicular traffic at least seasonally depending on road conditions. In some cases roads have been closed or considered for abandonment.
- Two new parking areas have been constructed, one on recently acquired land off Randolph Hill Road near Jim Town Road; and a larger lot primarily for snowmobiles and trailers at the beginning of Pond of Safety Road. The RFC built and created a kiosk at the Pond of Safety parking lot.





Parking lot and kiosk at the Pond of Safety Road entrance

Three of the main road systems are open to the public, subject to gates and bars during mud or rainy season. Further descriptive and spatial location data for inventory and maintenance of culverts, water bars, and bridges will be stored in digital format as a coverage in the Randolph Community Forest geographic information system (GIS).

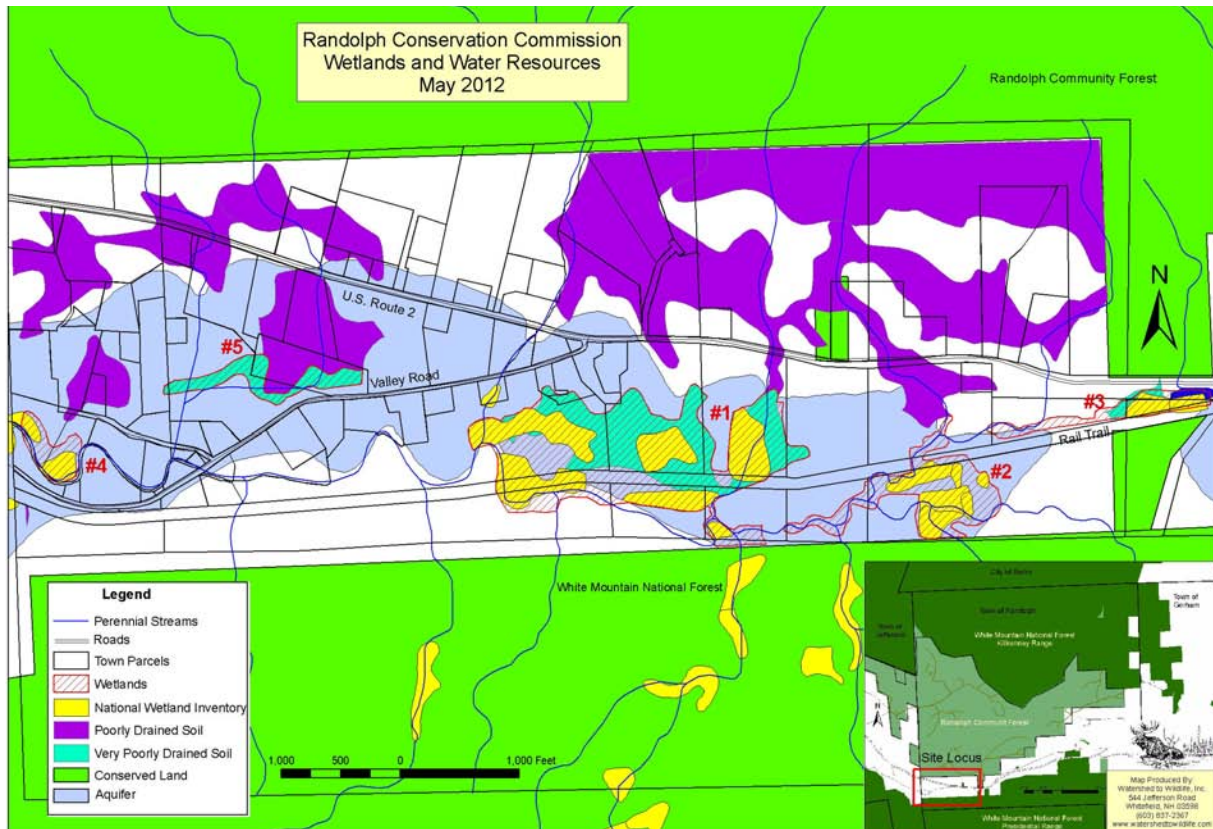
### **WETLAND STUDY**

From 2011 to 2012, the Randolph Conservation Commission hired Watershed to Wildlife to conduct a wetland study throughout the Israel's River area in the Town of Randolph. Five wetlands were identified, inventoried, and assessed as part of an initiative to maintain good water quality and habitat diversity throughout the Town of Randolph. The goal of this project was to provide the Town of Randolph with the ability to work towards protecting or conserving several diverse and critical wetland complexes along the Israel's River portion of Town. The objectives were to:

1. Provide the Town with biological data to help create linkages between the Randolph Community Forest to the north of Route 2 and the Presidential Range of the WMNF to the south of Route 2.
2. Increase public awareness and education in relation to the importance of protecting wetlands and high water quality through data generated, maps, a written report, and a public presentation.
3. Generate biological data to equip the Town of Randolph to work with private landowners in the Israel's River watershed area to protect wetlands on their property.
4. Provide data and information on wetland protection to the Randolph Conservation Commission, which will equip the Town to implement a program to adopt ordinances and Prime Wetland designations for protection of wetlands.

A large aquifer lies beneath the majority of the study area. There are also several perennial stream drainages into the Israel's River, wetlands, and hydric soils. The co-occurrence of these features illustrates not only the hydrologic connectivity of all wetland complexes, but also the importance of maintaining water quality and wetland functional values. Several tracts of land in this study area were acquired by the Town of Randolph, and are now part of the Randolph Community Forest. Other land owners are in the process of putting some of their land into conservation easements to protect. The wetlands studied and ranked are shown below.





Wetlands assessed and ranked during the Israel's River Wetland Study. Even though the wetlands were labeled as distinct wetlands, they are connected hydrologically, and have high functional values.

## VERNAL POOLS

Over the last 10 years, several vernal pools were documented throughout the Forest, and are described in the table below. They were found in all parts of the forest including gravel pits, forested land, and even higher elevation or montane forest. Undoubtedly, there are many more pools throughout the RCF, and they will be continually documented and updated as they are discovered.



A remote vernal pool found off Vernal Pool Road has been monitored for 10 years. The left photo of this pool was taken in the fall of 2002. The right photo was taken late spring 2013. Several vernal pool amphibians and insects were documented.

**Table: Summary of vernal pools documented from 2003 to 2013**

<b>Size</b>	<b>Species</b>	<b>Location</b>
100' x 300'	wood frogs, yellow spotted salamanders, caddis fly larvae, insect larvae, green frogs	Vernal Pool Road
100+ x 300+	wood frogs, insect larvae, yellow spotted salamander	Transect btw wetland road and Pond of safety
50' x 100'	yellow spotted salamanders, wood frog	Pond of Safety Road, old gravel area
Revisit	wood frogs	Timber harvest area north of end of Wetlands Road
30' x 60'	wood frogs, caddis fly larvae	2500' elevation area south of End of High Road
300' x 100'+	wood frogs, yellow spotted salamanders, many insect species.	Vernal Pool Road Part of a beaver pond complex
30' x 30' Plus	grass and sedges, perched VP in wetland above road	High Road
30' x 30'	yellow spotted salamander eggs, wood frog tadpoles, green frog	Softwood Road, near wildlife grassland
10' x 25'	yellow spotted salamander eggs, near Big Ledge Brook	Vernal Pool Road, gravel pit beaver activity
5' x 15'	wood frog tadpoles, green frog	Hunter's Pass
10' x 20'	young wood frogs, green frog tadpoles	High Road, near transect
20' x 6'	Fall documentation	Low Road, unmaintained section



## **GEOGRAPHICAL INFORMATION SYSTEM (GIS)**

The value and importance of maintaining digital formatted data of the Randolph Community Forest was recognized by the Randolph Forest Commission since its beginning. Adjustments to the use, updating, and storage of the multitude of data has evolved over the past ten years. The GIS mapping will undoubtedly continue to be tweaked to best serve the current RFC's future needs, and is an important component of the next ten year Action Plan. Ongoing refinement of the GIS data layers of the first 10 year Action Plan, and continued 'on the ground' fieldwork, increase the accuracy and analysis options.

Currently, all data is stored on a portable hard drive device in the safe at the Town Hall. Data and upgrades are transferred to the hard drive by the Consultants at least on an annual basis. All data is in standard ArcGIS formats to ensure compatibility with past data and mapping layers. Back-up copies of all data are stored by the consultants in two off site locations.

The RFC has ongoing discussion with local Fire Chief and Wardens to identify locate potential staging areas and helicopter landings for integration into the Randolph GIS and mapping. The large wildlife openings and log landings are mapped with GPS coordinates available.

## **PERMANENT TRANSECTS**

By the end of 2010, fifteen permanent transects were placed throughout the Randolph Community Forest and Pond of Safety tracts of the White Mountain National Forest. Permanent transects are a way of monitoring trends in populations of plants, plant communities, song birds, and wildlife over time. Following a transect involves walking a fixed route across a site, and making observations at periodic intervals or stations along the transect. Each transect contains iron pins at the start and end as well as every 1,000 feet. Each one runs 2,000+ to 4,000+ feet, with most running for 3,000 feet. They represent a variety of habitat types found on the RCF including: wetlands, beaver ponds and vernal pools; montane forest (over 2,500 feet elevation);



This is the start of Transect #5 on the Wetlands Road. It crosses into the White Mountain National Forest and ends at the edge of Pond of Safety. There is a large vernal pool right on the Town and National Forest Boundary.

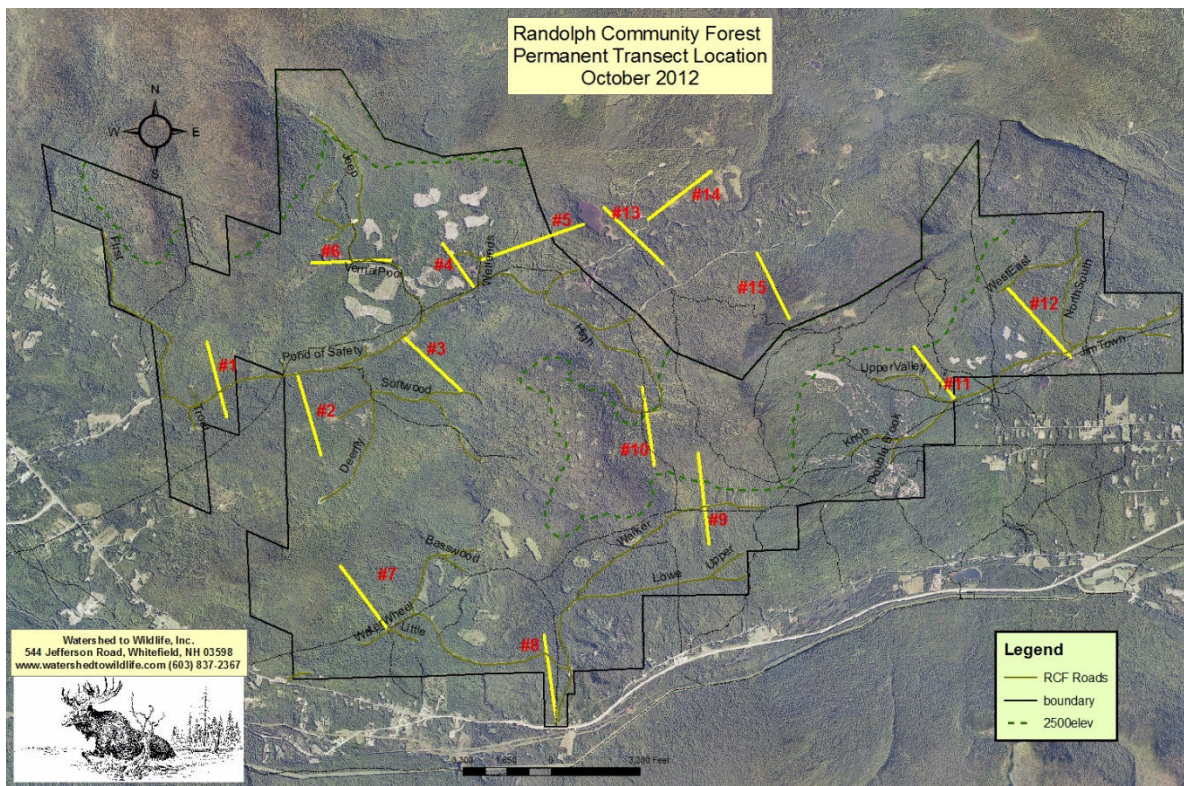
permanent openings; early successional habitat; dense softwood stands; mature hardwood stands; riparian zones; ledge outcrops; slopes of all aspect and exposure; many edge habitat types. The start of each transect can be accessed via existing roads using four-wheeled drive or snow machines depending on the time of year.

It is hoped that these transects will be used for a variety of projects including: song bird population surveys, winter track counts for determining wildlife presence and trends in populations, vegetation surveys, and water quality monitoring and testing. The location of all transects is in the GIS mapping database, which includes descriptions of each transect and start locations. These transects are ready to be used for long term and short term data collection and research projects.



Transect #3 runs through the middle of this permanent wildlife opening, which was created in 2007. The transect starts on Pond of Safety Road, heads south across Stag Hollow Brook, and finishes near Elderberry Road off Softwood Road.





Fifteen permanent transects located throughout the RCF and adjacent Pond of Safety Tracts of the WMNF.

## EDUCATION

Education and public involvement is a large component of the Randolph Community Forest. Residents of Randolph are very involved with their community, and take an active role in management decisions on the Forest. The RFC established an annual “Meet Your Forestry Team” event, which is scheduled for the first Saturday in August every year. Having it on the same day every year allows for predictable, consistent timing and proves to get as much involvement as possible from the public. Generally during these events, the Forest Commission and the Forestry team consultants would give annual updates with a slide show and handouts. A field tour followed the indoor portion of the day. These events ran from 9:00 am until 1:00-2:00 pm. They were not only attended by Randolph residents, but also by people from neighboring communities and even farther away.

Other education material produced included:

1. Brochures for public distribution
2. Maps for handouts and full size plots for public viewing
3. Handouts of yearly accomplishments at the annual event.
4. Newsletters describing events, history, and general information on the Forest
5. A new website (see following section for further description).





Field tours on the Randolph Community Forest can be a hands-on experience.

### **COMMUNITY FOREST WEBSITE**

At the start of 2013, the Randolph Community Forest launched its own website. It can be found at [randolphforest.org](http://randolphforest.org). The project was spearheaded by Randolph Forest Commission member, Doug Mayer.



This is the first thing you will see when you go to the newly created Randolph website – [randolphforest.org](http://randolphforest.org)

The new website offers easy to access education and information for anyone interested in learning more. It has information on Forest happenings, documents (RFC minutes, first stewardship plan, conservation easement language, partnership agreements, and forest ordinance), partnership organizations with links to pertinent websites, and list of things to do on the forest. It is hoped that the forest website will be used by residents and any interested people not only to learn about the happenings, but also to participate. It offers another venue for Randolph residents and people from surrounding communities, the chance to be part of activities on the Forest, as well as part of the decision-making process.

## **RECREATION**

The Randolph Forest Commission continues to recognize the importance of public access and recreation on this multi-use forest. Improved access, parking, and road conditions have provided opportunities for many different recreational activities including fishing and hunting, snow machine riding, hiking, biking, and cross-country skiing, etc.



A remote warm-up cabin on one of the snowmobile trails in the RCF.

### ***Snowmobile Trail System***

Several projects have been completed by the Waubek-Methna Snowmobile Club that maintains the trail system on the forest. Trail relocation projects were done to reduce soil erosion on two sections of trail. Another trail relocation was done to benefit trail users and property owners that abut the forest. In 2009 the Club built a warming hut at the end of the Walker Road to enhance the snowmobiling experience.



### ***Cross-Country Skiing***

The RCF road and hiking trail system together with “skid” trails used by loggers to remove wood, provide an opportunity for cross-country skiers to enjoy their sport. Trail assurance markers have been put up to identify them.

### **BOUNDARY LINE AND TRANSECT MAINTENANCE**

The property lines were repainted and brushed out where necessary. The west, south and east property lines have been repainted during the past two years. The north property line is being repainted this fall. The transects have been brushed out for ease of visual location as well.

### **ACQUISITION OF NEW LAND**

The Randolph Forest Commission has been successful over the past 10 years in acquiring additional properties and land in key locations. The acquisition of approximately 15 acres north of the Randolph Hill Road now provides a parking area and centralized trailhead, a new wildlife opening, and direct Public access to the Randolph Community Forest to the Jim Town Road.

Another 11.3-acre property was donated to the Randolph Community Forest by the Carpenter Family in memoriam. It is located south of Route 2, and contains frontage along the Moose River.

A more recent acquisition is 79 acres formerly known as the Farrar Farm located at the southern end of the RCF. This parcel contains a critical wildlife corridor with a highly functional wetland complex riparian floodplain along and including a section of the Israel’s River, and a connecting link to the White Mountain National Forest. With the exception of a small strip of land known as Bowman, this is the only direct connection to the vast lands of the White Mountain National Forest south of Rte. 2. (Please refer to the mapping section at the end of this Plan to better understand the locations of these new parcels.)



Portions of the Israel’s River along the Farrar Tract and now part of the Randolph Community Forest. This plan will recommend allowing shrubs and trees to grow along the buffer to increase riparian buffer.

## **CRITTER CAMS**

The Randolph Forest Commission purchased two ‘Critter Cams’; sealed cameras with protection from the elements and motion detection activation to place in various locations of interest along wildlife trails and other hotspots. These cameras are becoming quite popular and proving to be a fairly low cost yet effective way to document wildlife presence, time and date. The electronic devices can be downloaded on site or the memory cards switched providing continual observations.

An example of the success and potential value of Critter Cams is the recording of a short video of an American pine marten (*Martes americana*) on the RCF, living proof of a threatened and endangered species in the RCF. Previous live trapping studies did not produce any direct proof that pine martens existed within the RCF.

The cameras are also useful for documentation of more common species such as whitetail deer, black bear, moose, coyote, bobcat, fisher, beaver, etc.



Pine Martin on the Randolph Community Forest

## **MONTANE HABITAT ASSESSMENT**

Fieldwork and documentation was done for the high elevation montane forest and ledge outcrop areas at and above 2,500 feet. The RFC stated that these fragile areas were protected high elevation zones, not to be considered for commercial logging. Some of the justification for this decision is presence of thinner, fragile soils, slow regeneration (often stunted growth), subalpine conditions and general habitat with groves of high-elevation spruce-fir. Several exemplary natural plant communities are documented by the Natural Heritage Bureau, a subsection of DRED, in these montane forests. Species such as the boreal chickadee and other songbirds were observed during fieldwork in these areas.



Areas above 2,500 feet are considered no cut zones within the RCF. There are several hiking trails maintained by the Randolph Mountain Club that offer the main access into these areas.

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## FOREST RESOURCES

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This plan is tiered to the 2003 Randolph Community Forest Stewardship Plan. The 2003 plan contains descriptive information about forest history, geology, soils, water, wildlife, visual resources, recreation, road system and timber. This information will not be repeated in this plan. What is contained in this plan is a description of forest resources that have changed (changed condition) during the past ten years.

The Randolph Community Forest is a certified Tree Farm in the American Tree Farm System. Tree Farm requires that some elements are required to be in every forest management plan. Those elements are included in this section.

### **SPECIAL SITES**

The Crystal Mine is a special site in the forest. It contains a vein of crystal quartz that was mined for radio crystals during WWII, and since been a place where hobby mineral collectors go for specimens. This site has regional significance.





### **INVASIVE SPECIES**

In 2003 the only invasive species seen on the forest was colt's foot which occurred in a few places along the edges of roads or ditches. During the past ten years purple loosestrife has been seen growing in two locations by the edges of roads which indicate they were carried in on vehicles. These plants were uprooted, bagged, and disposed of to keep them from spreading.

In 2013 the forest acquired a tract of land that has 6-12 patches of Japanese knotweed growing in a field. The tract also has at least one patch of Japanese barberry but it does not appear to be spreading.



A few stems of Purple Loosestrife were found and removed on the Forest in 2013. This clump was removed from the Junction of Pond of Safety Road and High Road.

## **FOREST HEALTH**

The 2003 plan discusses the common northern hardwood and softwood insects and diseases occurring within the forest. They are not a significant factor affecting the health of the forest ecosystem.

A potential threat is the Emerald Ash Borer. An outbreak of this insect was discovered in Concord, NH in March 2013. It is also present in Quebec, Canada. Some compartments of the forest have a significant volume of white ash, 16-20%.

## **INTEGRATED PEST MANAGEMENT**

Integrated pest management strategies will be used to try to contain the spread of invasive plants, especially purple loosestrife and Japanese knotweed, and an invasive insect, the emerald ash borer. Purple loosestrife shall be controlled by uprooting and bagging individual plants where they are found growing. Patches of Japanese knotweed shall be cut at ground level in June and early August. After the August cut, herbicides will be applied to the tops of cut stems followed by repeated treatment to any surviving stems the next growing season. During field mowing, the patches should not be cut to reduce their spread in that manner.

The State of New Hampshire has placed a ban on bringing firewood into the State and into Counties to restrict the spread of destructive insects. This is one of the strategies to control Emerald Ash Borer (EAB). In the future the State may use bio-controls to reduce the rate of spread of EAB. The State is trying to identify, cut and remove affected green ash trees in Concord. Stands that have a high number of ash trees in the Randolph Community Forest shall be inspected annually looking for the potential presence of EAB. The spread of this insect will be monitored and if it appears imminent that it will be in the forest then trap and sink trees will be made to try and contain the spread. Ultimately, stands with a significant volume of ash shall be thinned to utilize the trees before they are infected.

## **HIGH CONSERVATION VALUE FORESTS**

The Randolph Community Forest provides a key protected land area between the Kilkenny Unit of the White Mountain National Forest to the north and the main body of the WMNF to the south. The recent acquisition of a tract of land added to the forest maintains a continuous link of land for wildlife to use to move between areas of these forests. This does not meet the Tree Farm definition of a high conservation value forest but it is regionally significant.

## **TIMBER**

During the past ten years the timber resource was managed to provide income, and improve the age/size class distribution of stands with a focus on removing heavily ice storm damaged trees. The result of this effort is shown in the following table:

Balanced size classes, forest-wide

Size class	Balanced range	Actual % area	Difference
<b>Regeneration</b>	5 to 10	6.68	OK
<b>Saplings + Poles</b>	35 to 45	39.14	OK
<b>Small sawtimber</b>	25 to 35	53.91	+18.91
<b>Large sawtimber</b>	10 to 15	0.27	-9.73

This table illustrates that the forest is being managed on a sustainable basis. During the next ten years, harvest prescriptions will be made for stands in the small sawtimber size class to replace stands in the regeneration size class which will move up to the sapling and pole stage. Since the mean stand DBH is 23 inches and greater for the large sawtimber size class, this will take more time to develop. There are stands that have been designated for extended rotation in compartments allowing them to eventually reach this size.

Most of the forest soils are in Soils Group IA as defined by the Natural Resource Conservation Service’s Important Forest Soils Groups. Group IA consists of the deeper, loamy, well drained soils that are more fertile and have the most favorable soil-moisture conditions. These soils favor sugar maple, yellow birch and beech, sugar maple being predominant. Tree growth increases at an average of 0.4 cord/year in this soil group.

More information about Soils Group and wood productivity will be discussed in the compartment timber narratives that follow. Refer to Map# 6, Forest Soils Group.

### COMPARTMENT 1A TIMBER NARRATIVE

No timber harvesting occurred in this compartment during the past ten years. A planned timber sale will take place in 2013 with harvesting to follow in 2014-15. This sale is included in the 2003 Action Plan. Therefore, the current age class/size distribution of stands is similar to what it was in 2003 as shown in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
<b>Regeneration</b>	5 to 10	1	-4
<b>Saplings + Poles</b>	35 to 45	12	-23
<b>Small sawtimber</b>	25 to 35	88	+53
<b>Large sawtimber</b>	10 to 15	0.00	-10.00

### Stocking

In 2003 the average basal area was 67 sqft/acre, a stand density that provides trees room to grow. In 2013 the basal area increased to an average of 93 sqft/acre.

### Timber Volume

The basal area increase means increased wood volume in the compartment as shown in the following comparison:

	<u>2003</u>	<u>2013</u>
Sawtimber	2.002 million bdft	2.782 million bdft
Pulpwood	435,141 cubic feet	710,664 cubic feet
Total saw+pulp	689,452.7 cubic feet	1,095,881.3 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume:

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total
sugar maple	1,728,054.8	62.1	478,050.8	67.3
white ash	585,568.6	21.1	70,003.5	9.9
yellow birch	269,064.5	9.7	59,625.8	8.4
red spruce	84,928.1	3.1	8,979.6	1.3
balsam fir	36,847.7	1.3	5,914.2	0.8
black cherry	36,503.9	1.3	13,236.7	1.9
quaking aspen	15,179.7	0.5	8,644.6	1.2
American beech	11,897.4	0.4	41,722.4	5.9
paper birch	5,632.3	0.2	4,120.3	0.6
red maple	4,142.7	0.1	19,999.6	2.8
basswood	3,892.4	0.1	367.0	0.1
<b>Total</b>	<b>2,781,712.2</b>	<b>100.0</b>	<b>710,664.5</b>	<b>100.0</b>

This information illustrates the productivity of Group IA soils, 69%. The other soil groups are Group IB, 23%, and Group IIB, 8%. Group IB soils are slightly less fertile than group IA soils. Group IIB soils are poorly drained and productivity is much less than Group IA soils. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer.

### COMPARTMENT 1B TIMBER NARRATIVE

Most of Compartment 1B is located south of Stag Hollow Brook. Stands in this compartment were not examined in 2013 because harvesting activities took place in all stands in 1997-98 so there was not much potential for stand prescriptions for this plan period. In other words the prescription is “let the trees grow another ten years”. Details about the compartment may be found in the 2003 plan.

Compartment 1B is not very productive for northern hardwoods. The Soil Groups in it are Group IC, 47%, Group IIB, 34%, and Group IA, 19%. Group IC soils are the outwash sands and gravels by Stag Hollow Brook. Productivity is good for softwoods but mediocre for hardwoods. Group IIB soils are poorly drained, not productive.

### COMPARTMENT 2A TIMBER NARRATIVE

The Beaver Pond Timber Sale took place in this compartment in 2008-9. Also, a cutting unit of the Pillsbury Timber Sale took place in 2012. The volumes shown below are after the timber sale. The purpose of these sales was to create a new regeneration age class in the compartment and increase the amount of early successional species it. The upshot of these sales is illustrated in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
<b>Regeneration</b>	5 to 10	13.54	+3.54
<b>Saplings + Poles</b>	35 to 45	56.24	+11.24
<b>Small sawtimber</b>	25 to 35	30.22	OK
<b>Large sawtimber</b>	10 to 15	0.00	-10.00

The increase in the regeneration size class above 10% is temporary and will decrease to 7% by 2023.

#### Stocking

In 2003 the average basal area was 58.6 sqft/acre, a stand density that provides trees room to grow. In 2013 the basal area increased to an average of 89.6 sqft/acre.

#### Timber Volume

The basal area increase means increased wood volume in the compartment as shown in the following comparison:

	<u>2003</u>	<u>2013</u>
Sawtimber	2.049 million bdft	2.418 millionbdft
Pulpwood	690,591.2 cubic feet	985,038.8 cubic feet
Total saw+pulp	957,377.6 cubic feet	1,321,220 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume:

<b>Species</b>	<b>Total Net Board-foot Volume</b>	<b>% total</b>	<b>Total Net Pulpwood Volume</b>	<b>% total</b>
<b>sugar maple</b>	1,480,349.5	61.2	558,910.9	56.7
<b>yellow birch</b>	386,007.6	16.0	153,667.4	15.6
<b>balsam fir</b>	209,047.4	8.6	64,922.9	6.6
<b>red spruce</b>	179,338.4	7.4	32,589.3	3.3
<b>red maple</b>	75,738.2	3.1	72,564.5	7.4
<b>American beech</b>	47,016.6	1.9	69,054.5	7.0
<b>quaking aspen</b>	24,406.2	1.0	4,823.8	0.5
<b>white ash</b>	16,556.7	0.7	16,960.3	1.7
<b>pin cherry</b>	0.0	0.0	7,247.1	0.7
<b>paper birch</b>	0.0	0.0	3,419.1	0.3
<b>black ash</b>	0.0	0.0	879.1	0.1
<b>Total</b>	2,418,460.6	100.0	985,038.8	100.0

This information illustrates the productivity of Group IA soils, 31%. The other soil groups are Group IB, 58%, Group IIB, 7%, Group IC, 3%, and Group IIA, <1%. Group IB soils are slightly less fertile than group IA soils. Group IIB soils are poorly drained and productivity is much less than Group IA soils. Group IIA soils are soils that make forest management impractical due to steep slopes or extreme rockiness. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer.

## **COMPARTMENT 2B TIMBER NARRATIVE**

The Pillsbury Timber Sale took place in this compartment in 2011-12. The volumes shown below are after the timber sale. The purpose of this sale was to create a new regeneration age class in the compartment and increase the amount of early successional species it. The upshot of this sale is illustrated in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
Regeneration	5 to 10	6.14	OK
Saplings + Poles	35 to 45	45.90	+0.90
Small sawtimber	25 to 35	47.96	+12.96
Large sawtimber	10 to 15	0.00	-10.00

This compartment is nearly balanced. During the next ten years some pole stands will move into the small sawtimber size class and regeneration cuts will be taken from the small sawtimber size class.

**Stocking**

In 2003 the average basal area was 67.2 sqft/acre, a stand density that provides trees room to grow. In 2013 the basal area increased to an average of 75 sqft/acre.

**Timber Volume**

The basal area increase means increased wood volume in the compartment as shown in the following comparison:

	<u>2003</u>	<u>2013</u>
Sawtimber	4.294 million bdft	3.849 million bdft
Pulpwood	1,090,596 cubic feet	1,394,281 cubic feet
Total saw+pulp	1,645,038 cubic feet	1,974,779 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume:

Timber volumes

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total
sugar maple	2,226,625.2	57.8	646,764.9	46.4
yellow birch	884,433.9	23.0	363,130.5	26.0
red spruce	245,603.2	6.4	58,599.8	4.2
balsam fir	131,112.2	3.4	92,138.3	6.6
red maple	129,859.0	3.4	104,116.0	7.5
white ash	125,364.8	3.3	36,776.8	2.6
American beech	37,293.1	1.0	53,824.1	3.9
paper birch	28,531.5	0.7	19,223.5	1.4

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total
quaking aspen	27,443.9	0.7	14,930.9	1.1
black cherry	12,802.2	0.3	492.4	0.0
pin cherry	0.0	0.0	612.6	0.0
black ash	0.0	0.0	3,670.7	0.3
<b>Total</b>	<b>3,849,069.1</b>	<b>100.0</b>	<b>1,394,280.6</b>	<b>100.0</b>

This information illustrates the productivity of Group IA soils, 68%. The other soil groups are Group IB, 3%, Group IIB, 26%, and Group IIA, 3%. Group IB soils are slightly less fertile than group IA soils. Group IIB soils are poorly drained and productivity is much less than Group IA soils. Group IIA soils are soils that make forest management impractical due to steep slopes or extreme rockiness. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer.

### COMPARTMENT 3A TIMBER NARRATIVE

The Bowmen Timber Sale took place in this compartment in 2006. The volumes shown below are after the timber sale. The purpose of this sale was to create a new regeneration age class in the compartment and increase the amount of early successional species it. The upshot of this sale is illustrated in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
Regeneration	5 to 10	5.59	OK
Saplings + Poles	35 to 45	22.27	-12.73
Small sawtimber	25 to 35	70.39	+35.39
Large sawtimber	10 to 15	1.76	-8.24

### Stocking

In 2003 the average basal area was 85.5 sqft/acre, a stand density that provides trees less room to grow than the previous compartments. In 2013 the basal area increased to an average of 97.5 sqft/acre.

### Timber Volume

The basal area increase means increased wood volume in the compartment as shown in the following comparison:



	<u>2003</u>	<u>2013</u>
Sawtimber	4.017 million bdft	4.465 million bdft
Pulpwood	1,106,653 cubic feet	1,075,942.3 cubic feet
Total saw+pulp	1,617,106.8 cubic feet	1,686,948.6 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume:

Timber volumes

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total
<b>sugar maple</b>	3,164,507.2	70.9	710,570.4	66.0
<b>white ash</b>	745,314.5	16.7	107,607.5	10.0
<b>yellow birch</b>	250,863.4	5.6	119,211.4	11.1
<b>red maple</b>	110,889.2	2.5	57,060.1	5.3
<b>red spruce</b>	61,341.6	1.4	16,606.0	1.5
<b>American beech</b>	38,418.7	0.9	38,229.5	3.6
<b>paper birch</b>	28,248.4	0.6	8,478.2	0.8
<b>black cherry</b>	28,221.9	0.6	5,515.4	0.5
<b>balsam fir</b>	25,060.7	0.6	5,180.8	0.5
<b>quaking aspen</b>	6,577.3	0.1	5,076.8	0.5
<b>eastern hemlock</b>	5,487.8	0.1	707.0	0.1
<b>pin cherry</b>	0.0	0.0	1,209.9	0.1
<b>Total</b>	4,464,930.7	100.0	1,075,942.3	100.0

This information illustrates the productivity of Group IA soils, 71%. The other soil groups are Group IB, 26%, Group IIB, 25%, and Group IIA, 1%. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer, significant.

### COMPARTMENT 3B TIMBER NARRATIVE

The Bowmen Timber Sale took place in this compartment in 2006-7. The volumes shown below are after the timber sale. The purpose of this sale was to create a new regeneration age class in the compartment and increase the amount of early successional species it. The upshot of this sale is illustrated in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
<b>Regeneration</b>	5 to 10	5.84	OK
<b>Saplings + Poles</b>	35 to 45	55.25	+10.25
<b>Small sawtimber</b>	25 to 35	38.90	+3.90
<b>Large sawtimber</b>	10 to 15	0.00	-10.00

**Stocking**

In 2003 the average basal area was 67.4 sqft/acre, a stand density that provides trees room to grow. In 2013 the basal area increased to an average of 80.0 sqft/acre.

**Timber Volume**

The basal area increase means increased wood volume in the compartment as shown in the following comparison:

	<u>2003</u>	<u>2013</u>
Sawtimber	2.282 million bdft	2.240 million bdft
Pulpwood	594,334.9 cubic feet	823,660.7 cubic feet
Total saw+pulp	888,621.9 cubic feet	1,121,447.0 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total
<b>sugar maple</b>	1,260,747.6	56.3	519,340.8	63.1
<b>white ash</b>	399,248.8	17.8	40,980.2	5.0
<b>American beech</b>	229,905.3	10.3	101,260.7	12.3
<b>yellow birch</b>	155,591.4	6.9	47,911.8	5.8
<b>red maple</b>	67,432.6	3.0	60,348.7	7.3
<b>eastern hemlock</b>	34,639.0	1.5	4,417.7	0.5
<b>red spruce</b>	25,666.5	1.1	10,309.6	1.3
<b>quaking aspen</b>	24,210.1	1.1	15,347.3	1.9
<b>basswood</b>	20,411.2	0.9	6,615.1	0.8
<b>balsam fir</b>	20,013.2	0.9	938.1	0.1

<b>paper birch</b>	2,723.3	0.1	14,164.6	1.7
<b>unidentified species</b>	0.0	0.0	0.0	0.0
<b>striped maple</b>	0.0	0.0	374.0	0.0
<b>pin cherry</b>	0.0	0.0	505.4	0.1
<b>black cherry</b>	0.0	0.0	1,146.7	0.1
<b>Total</b>	2,240,589.0	100.0	823,660.7	100.0

This information illustrates the productivity of Group IA soils, 80%. The other soil groups are Group IB, 16%, and Group IIA, 4%. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer, again significant.

#### COMPARTMENT 4A TIMBER NARRATIVE

The stands in Compartments 4A and 4B were heavily damaged by the 1998 ice storm. The Jim Town Timber Sale took place in this compartment in 2007-8. The volumes shown below are after the timber sale. The purpose of this sale was to remove and utilize ice storm damaged trees and regenerate a new age class within stands. The upshot of this sale is illustrated in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
<b>Regeneration</b>	5 to 10	3.63	-1.37
<b>Saplings + Poles</b>	35 to 45	7.70	-27.30
<b>Small sawtimber</b>	25 to 35	88.67	+53.67
<b>Large sawtimber</b>	10 to 15	0.00	-10.00

#### Stocking

In 2003 the average basal area was 88.6 sqft/acre, a stand density that provides trees room to grow. In 2013 the basal area decreased to an average of 83 sqft/acre. This decrease is due to the removal of ice storm damaged and/or mature trees within stands.

#### Timber Volume

The basal area decrease is reflected in the wood volume decrease in the compartment as shown in the following comparison:

	<u>2003</u>	<u>2013</u>
Sawtimber	2.226 million bdft	1.586 million bdft
Pulpwood	477,624.9 cubic feet	459,282.0 cubic feet
Total saw+pulp	766,812.9 cubic feet	674,744.3 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume:

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total
sugar maple	773,874.3	48.8	239,275.2	52.1
yellow birch	428,296.3	27.0	77,915.4	17.0
red spruce	107,589.7	6.8	15,606.5	3.4
eastern hemlock	91,617.2	5.8	22,606.0	4.9
red maple	76,433.2	4.8	37,434.3	8.2
American beech	66,120.5	4.2	38,152.9	8.3
balsam fir	19,829.1	1.2	8,369.5	1.8
quaking aspen	9,771.5	0.6	954.8	0.2
paper birch	7,362.0	0.5	18,247.3	4.0
white ash	5,649.4	0.4	720.1	0.2
<b>Total</b>	<b>1,586,543.0</b>	<b>100.0</b>	<b>459,282.0</b>	<b>100.0</b>

Group IA soils are 44% of this compartment, Group IB, 41%, and Group IIA, 15%. This may explain why this compartment is not as productive as compartments 1A, 2B or 4B. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer, not so significant.

#### COMPARTMENT 4B TIMBER NARRATIVE

The Jim Town Timber Sale took place in this compartment in 2007-8. The volumes shown below are after the timber sale. The purpose of this sale was to remove and utilize ice storm damaged trees and regenerate a new age class within stands. The upshot of this sale is illustrated in the following table:

Balanced size classes

Size class	Balanced range	Actual % area	Difference
Regeneration	5 to 10	8.12	OK
Saplings + Poles	35 to 45	46.34	+1.34

Balanced size classes

Size class	Balanced range	Actual % area	Difference
Small sawtimber	25 to 35	45.54	+10.54
Large sawtimber	10 to 15	0.00	-10.00

**Stocking**

In 2003 the average basal area was 66.9 sqft/acre, a stand density that provides trees room to grow. In 2013 the basal area is almost unchanged, 68.7 sqft/acre. This is due to the removal of ice storm damaged and/or mature trees within stands.

**Timber Volume**

The basal area decrease is reflected in the wood volume decrease in the compartment as shown in the following comparison:

	<u>2003</u>	<u>2013</u>
Sawtimber	1.813 million bdft	1.598 million bdft
Pulpwood	331,923.6 cubic feet	439,201.8 cubic feet
Total saw+pulp	563,640.2 cubic feet	651,640.2 cubic feet

Total volumes by species across the entire management unit are presented in the following table, sorted by net board foot volume:

Timber volumes

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total	Total Net Sawtimber Cubic Volume
sugar maple	904,883.3	56.6	196,476.3	44.7	124,963.9
yellow birch	293,286.2	18.4	66,158.3	15.1	39,199.9
American beech	206,200.1	12.9	93,164.6	21.2	22,890.5
white ash	110,104.5	6.9	27,713.6	6.3	14,197.5
red spruce	47,577.3	3.0	8,377.6	1.9	6,483.0
red maple	24,236.8	1.5	20,952.6	4.8	3,099.4
paper birch	8,031.6	0.5	12,372.5	2.8	1,058.7
eastern hemlock	3,879.8	0.2	5,449.5	1.2	545.5

Timber volumes

Species	Total Net Board-foot Volume	% total	Total Net Pulpwood Volume	% total	Total Net Sawtimber Cubic Volume
unidentified species	0.0	0.0	0.0	0.0	0.0
striped maple	0.0	0.0	1,755.9	0.4	0.0
quaking aspen	0.0	0.0	233.7	0.1	0.0
pin cherry	0.0	0.0	1,520.9	0.3	0.0
black cherry	0.0	0.0	1,942.4	0.4	0.0
balsam fir	0.0	0.0	3,083.7	0.7	0.0
<b>Total</b>	<b>1,598,199.6</b>	<b>100.0</b>	<b>439,201.8</b>	<b>100.0</b>	<b>212,438.4</b>

This information illustrates the productivity of Group IA soils, 61%. The other soil groups are Group IB, 34%, Group IIB, 2%, and Group IIA, 3%. The table above also shows the percentage of white ash as it relates to the potential loss caused by the emerald ash borer, some significance.

**THREATENED AND ENDANGERED SPECIES NHB DATABASE**

According to NHB records there are four documented species or exemplary habitats within the Randolph Community Forest and several others within the one mile extended buffer of the RCF. The natural communities, vertebrate species, and plant species documented are in the tables below:



Randolph Community Forest Stewardship Plan (2014 to 2023)

NHB records on the property(s):

	Mapping Precision	% within tract	Last Reported	Listing Status		Conservation Rank	
				Federal	NH	Global	State
<b>Natural Community</b>							
High-elevation spruce - fir forest system	Good	<1	2007	--	--	-	S4

NHB records within one mile of the property(s):

	Last Reported	Listing Status		Conservation Rank	
		Federal	NH	Global	State
<b>Vertebrate species (For more information, contact Kim Tuttle, NH F&amp;G at 271-6544)</b>					
American Marten ( <i>Martes americana</i> )	2001	--	T	G5	S2
Smooth Green Snake ( <i>Opheodrys vernalis</i> )	2011	--	SC	G5	S3
<b>Natural Community</b>					
Montane - subalpine circumneutral cliff	1999	--	--	--	S2
Montane - subalpine acidic cliff	1999	--	--	--	S4
Hemlock - spruce - northern hardwood forest	2006	--	--	--	S3
Subalpine cold-air talus shrubland	1999	--	--	--	S1



**NEW HAMPSHIRE NATURAL HERITAGE BUREAU**

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 PHONE: (603) 271-2214 FAX: (603) 271-6488

Plant species		Federal	NH	Global	State
mountain sweet-cicely ( <i>Osmorhiza berteroi</i> )	2003	--	E	G5	S1
dwarf birch ( <i>Betula minor</i> )	1999	--	T	G4	S2
Hornemann's willow-herb ( <i>Epilobium hornemannii</i> )	1999	--	T	G5	S2
northern arrowhead ( <i>Sagittaria cuneata</i> )	1904	--	E	G5	S1
ovoid spikesedge ( <i>Eleocharis ovata</i> )	1943	--	E	G5	SH
Auricled Twayblade ( <i>Neottia auriculata</i> )	1908	--	E	G3	S1
Broad-leaved Twayblade ( <i>Neottia cornvallioides</i> )	2005	--	T	G5	S2
green adder's-mouth ( <i>Malaxis unifolia</i> )	1893	--	T	G5	S2
fragrant wood fern ( <i>Dryopteris fragrans</i> )	2002	--	T	G5	S2

Listing codes: T = Threatened, E = Endangered SC = Special Concern  
 Rank prefix: G = Global, S = State, T = Global or state rank for a sub-species or variety (taxon)  
 Rank suffix: 1-5 = Most (1) to least (5) imperiled. "--", U, NR = Not ranked. B = Breeding population, N = Non-breeding, H = Historical, X = Extirpated.

Many of the above communities and species are located in Montane forest (above 2,500 feet in elevation) and are protected by the RFC's policy of no commercial timber harvesting in these areas. It is highly likely that other species may exist but have not been documented due to the cost and time required to thoroughly inspect the RCF. With budget and staffing restraints the NHB is limited and clearly behind on species documentation, particularly of the North Country.

**WILDLIFE**

Overall conditions for wildlife and fluctuations of wildlife populations on the Randolph Community Forest are similar to those found in northern New Hampshire. Additionally, conditions for wildlife are mostly similar to the original assessment done in 2003, for the first Stewardship Plan. There are a few noted changes. An American pine martin (*Martes Americana*) was documented with a video critter cam. In January 2006, Canada lynx (*Lynx Canadensis*) tracks and scat was documented on the Randolph Community Forest, indicating suitable carrying capacity habitat may exist. Signs of bobcat (*Lynx rufus*) have also been documented on the RCF.

There has been a decline in the moose population on the RCF since 2003, as well as for all of New Hampshire. The cause of decline was believed to be an increase in winter tick infestations resulting from milder winters. Over the last couple of years, the moose population seems to be making a slow recovery. A noticeable increase in wild turkey (*Meleagris gallopavo*) presence has occurred on the RCF, probably in large part to the increase in wildlife opening creation and mowing during the past ten years.



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## ACTION PLANS FOR THE RANDOLPH COMMUNITY FOREST

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### #1 – EDUCATIONAL PROJECTS

**Action A** – Continue to present at least one slide show and field tour per year to the public (*Started in 2003*). Ideas for slide shows include, but are not limited to:

- Annual ‘Meet Your Community Forest Management Team’ event
- Winter presentation or workshop on any component of the Forest
- Invite specialists to give presentations on a specific component of the forest (examples include geology, wildlife ecology, soil science)

**Action B** – Post all educational slide shows and/or handouts on the website for public access

### #2 – GIS MAPPING

**Action A** – Continue to create, update and maintain database. (*Ongoing/Annually*)

- New data layers
- Additional field inventory data
- Update of previous actions and implementation such as forest stand prescription completion, culvert replacements, wildlife opening completed, etc.

**Action B** – Continue to update the portable hard drive at the Town Office.

**Action C** – Annually produce and distribute at least one full-sized plot displaying various RCF features, areas of interest, and changes within the Forest.

### #3 - WILDLIFE HABITAT IMPROVEMENTS

#### Wildlife Habitat Improvements

**Action A** – Maintain the following openings through bi-annual mowing:

<u>Compartment</u>	<u>Stand</u>	<u>Compartment</u>	<u>Stand</u>
1A	16	2B	37
2B	41	2B	42
2B	49	4B	27
4B	28		

**Action B** – Create additional wildlife openings in Compartment 3A, stand 11, 6 acres and Compartment 3B, stand 14, 6 acres. These openings would be created by clearing the trees off of them through planned timber sales in 2016. After these openings are established, mow them bi-annually.

**Action C** – Locate and document additional areas for larger openings throughout the RCF

- Consider creating one or two larger opening, 10 to 20 acres in size for added diversity of wildlife species.

**Action D** – Examine existing openings in Compartments 1A, 2A & B, 3A & B and 4A & B for the feasibility of using prescribed burns to maintain them. If there are openings that can be maintained this way, then follow-up with developing prescribed burn plans and conduct the burns through contracting.

#### #4 - TIMBER SALES

##### **Action A** - Recommended Prescriptions

The following timber sale projects are planned to be carried out over the next 10 years.

<u>Compartment</u>	<u>Stand</u>	<u>Acres</u>	<u>Prescription</u>	<u>Years Planned</u>
3A	2	73	Group selection	2016
	55	80	Group selection	
	8	137	Group selection	
	10	24	Group selection	
	11	115	Clear cut 6 acres	
	12	49	Clear cut 10 ac. out of 49	
	22	104	Group selection	
	23	92	Group selection	
3B	1	72	Group selection	2016
	9	117	Group selection	
	10	90	Clear cut 2-10 acre	
	11	54	Patch cut 14acres out of 54	
	12	38	Patch cut 10acres out of 38	
	13	176	Group selection	
	14	26	Clear cut 6 acres	
2A	1	120	Thin	2018
	12	94	Clear cut 24acres out of 94	
	14	208	Clear cut 40acres out of 208	
	23	71	Clear cut 20acres out of 71	
2B	5	71	Patch cut 23acres out of 71	2020
	6	114	Patch cuts 35acres out of 114	
	9	39	Clear cut 10acres out of 39	
	16	165	Clear cut 40acres out of 165	
	20	206	Patch cut 15acres out of 206	
	32	76	Clear cut 24acres out of 76	

## **#5 – ROAD NETWORK BRUSH HOG MOWING**

**Action A** – Brush hog the entire road system on a three year rotation, i.e. one third of the roads per year, including ditch lines where appropriate

**Action B** – Install a gate across High Road just past Hunters Pass. The gate can be opened or closed based on the road conditions and judgment of the Randolph Forest Commission. Work with the snow machine club to repair and restore the upper portion of High Road for winter use.

**Action C** – Move the Bowman Gate up to the junction from the start of the road to the junction of Water Wheel Road and Walker Road.

## **#6 – CULVERTS AND DITCHING**

**Action A** – Enhance fish passage, aquatic connectivity, and future storm erosion by upgrading large culverts

- Replace stainless steel culvert at the Jefferson entrance of Pond of Safety Road near the gate with a bridge
- Replace any culvert 48 to 96 inches in diameter over perennial streams. There are 8 culverts which are 48 to 96 inches in diameter which should be replaced with a bridge or bottomless culverts to restore stream ecology to a more natural condition
- Apply for grant funding to help restore the stream system

**Action B** - Replace 10 to 15 culverts per year or as needed

- Upgrade size and configuration where necessary
- Add new culverts where deemed needed
- Consider aquatic connectivity improvements where possible

**Action C** - Reconfigure water bars as needed on an annual basis

- Construct new water bars where deemed necessary
- Seed and loam or riprap where applicable

**Action D** - Inspect and evaluate bridges annually, particularly those on the North South Road and the West East Road off the Jim Town Road. (Repair or replace as needed for access, road maintenance, and future timber harvesting).

**Action E** – Repair or replace the bridge located on the former Farrar lot south of the rail-trail. This bridge provides access for annual mowing of the largest and only meadow on the RCF properties.

**Action F** - Evaluate abandoning some roads or blocking wheeled traffic

**Action G** - Seed and mulch adjacent slopes where deemed necessary to prevent erosion and/or sedimentation in flowages. (*Annually*)

## **#7 – BOUNDARY LINE AND TRANSECT MAINTENANCE**

**Action A** – Cut brush and saplings as needed along the transect network.

**Action B** – Repaint and mark the Forest boundary lines every 10 years or as needed.

**Action C**—Survey, monument corners and paint the boundary around recently acquired properties.

## **#8 –MEMORIAL TREE AREA**

**Action A** – Designate an area of mature forest or opening for the purpose of dedicating an existing tree or planting a NH native tree in celebration and memory of a loved one.

## **#9 – INTERPRETIVE TRAIL**

**Action A** – Create an interpretive trail with proper signage plats either along existing sections of trail or an entirely new trail.

**Action B** – Improve a trail to the Crystal Mine with protective language, possibly joining and complimenting Action A (above).

## **#10 - APPLE TREE RELEASE AND PRUNING**

**Action A** - Locations at the newly acquired former Farrar property and end of North South Road log landing. Unlike much of the North Country area, the RCF, with the exception of the Farrar property, was not historically used as farmland and thereby lacks apple trees. The few existing apple trees provide additional diversity to the RCF potentially benefiting numerous wildlife species.

## **#11—INTEGRATED PEST MANAGEMENT**

**Action A** –Reduce the spread of Japanese knotweed by cutting the patches at ground level in June, followed by another cut in early August and a herbicide application to the tops of cut stems. Repeat this process the following summer on any surviving stems.

**Action B** –Stay informed about the spread of the emerald ash borer. Annually examine stands in Compartments 1A, 1B and 2B for die-back or mortality. If the EAB is found on or near the forest, consult with State of New Hampshire, Forest and Lands entomologists for further actions to take.

**#12 – COMPLETE THE NEW PUBLIC PARKING AREA NEAR THE RANDOLPH HILL ROAD ENTRANCE**

**Action A** - Locate and layout an appropriate area for hikers, skiers, and general access for the Public. Consider making this a trailhead point with a kiosk of information.

- Remove trees leaving a minimum of 100' buffer from boundary where possible
- Stump and grade area with slopes for proper drainage
- Seed and mulch area for erosion control
- Gravel in the future

**#13 – REDEVELOPMENT OF THE RECENTLY ACQUIRED FARRAR FARM TO ENHANCE ITS CAPACITY TO CONTRIBUTE TO THE ACHIEVEMENT OF THE PURPOSES SET FORTH IN THE GOVERNING CONSERVATION EASEMENT**

**Action A** – Relocate or remove unnecessary structures

**Action B** – Renovate the two-story garage to provide summer living quarters upstairs for scientists/scholars doing research on the Forest

**Action C** – Release apple trees to provide food for wildlife

**Action D** – Explore ways to protect animals crossing the highway

**Action E** – Work to preserve the wildlife habitat and water quality of the Israel's River

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**FUTURE OPPORTUNITIES FOR THE RANDOLPH COMMUNITY FOREST**

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**#1 - TRAVEL CORRIDORS AND WILDLIFE CONNECTIVITY**

**Opportunity A** - Analyze potential wildlife travel corridors in relationship to linking at a landscape scale utilizing GIS and further fieldwork.

**Opportunity B** - Coordinate with NH Fish & Game, Gorham Town Forest, White Mountain National Forest, and US Fish and Wildlife Service.

**#2 - WILDLIFE MONITORING AND INCREASED INVENTORY**

**Opportunity A** – Continue to advertise and seek research projects utilizing the new transect network within the Forest and WMNF Pond of Safety permanent transects.

**Opportunity B** - Organize and train volunteers to assist with track counts and documentation

**Opportunity C** –Should future song bird studies be conducted, work with WMNF staff to ensure uniform, standard identification and codes be implemented.

### **#3 - GRANT WRITING**

**Opportunity A** - Submit a minimum of two proposals seeking funding on an annual basis. Examples of proposal submissions could include, but not be limited to:

- Wildlife habitat management activities
- Aquatic connectivity- specifically perched culverts
- Research projects within the Forest
- Education and workshop grants
- Recreational Trail development, improvements, and links

### **#4 - RARE SPECIES INVENTORY AND MONITORING**

**Opportunity A** - Expand fieldwork focused on co-occurrences of natural resources within the RCF

- Analyze GIS data such as hydrology, geology, soils, etc
- Identify and locate talus sites
- Identify and locate areas with higher pH readings (water and soil)

### **#5 - INVASIVE SPECIES MONITORING AND CONTROL**

**Opportunity A** - Continue to document invasive species throughout the RCF

- Develop an invasive plant eradication program through volunteers
- Consult and partner with New England Wild Flower Society and/or UNH Cooperative Extension

### **#6 – WATER MONITORING PROGRAM**

**Opportunity A** – Consider establishing a network of accessible sampling points throughout the Forest

- Partner with and as an adjunct to the existing volunteer river assessment program (VRAP) already in place down-stream from the Forest.
- Record temperature, pH, specific conductivity, and turbidity
- Consider the feasibility of college students or volunteers continuing the sampling in future years

**Opportunity B** - Create a GIS database of existing VRAP sampling locations and new sites within the Forest with attribute data linked to spatial locations.

- Update at least annually

**#7 - RESEARCH PROJECTS WITHIN THE FOREST**

**Opportunity A** - Determine research possibilities, funding opportunities, Public interest, and Conservation Easement goals.

**#8 - ADDITIONAL RECREATIONAL OPPORTUNITIES**

**Opportunity A** - Establish a remote campsite(s)

**Opportunity B** - Identify a public picnic area(s)

**Opportunity C** - Construct a public sledding hill at the former ‘scar’ repair site off Jim Town Road.

**#9- RIPARIAN BUFFER ALONG THE ISRAEL’S RIVER**

**Opportunity A** –Build on the previous wetland study done for this area by analysis of the need for and/or benefits of improving the buffer along the RCF section of the Israel’s River banks.

**#10 - WILDLIFE HABITAT IMPROVEMENT**

**Opportunity A** –Encourage the growth of softwood to create more winter habitat for wildlife by regenerating softwoods or doing timber stand improvement where feasible.

**#11 – TAPPING SUGAR MAPLE TREES**

**Opportunity A** – Explore the possibility of tapping maple trees for the purpose of producing maple syrup where appropriate. This could involve working with abutting landowners where feasible.



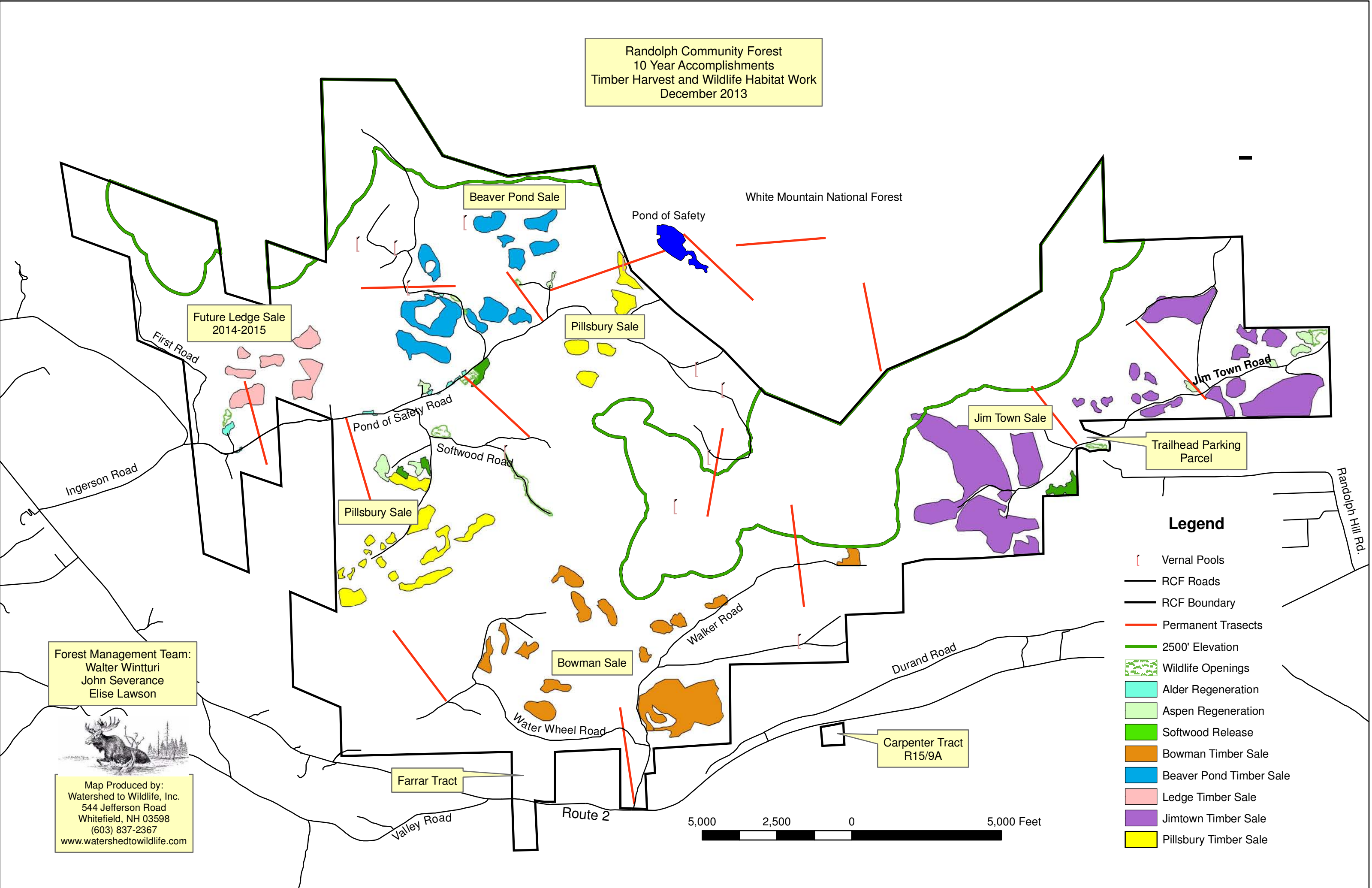
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**MAPS**

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Randolph Community Forest  
 10 Year Accomplishments  
 Timber Harvest and Wildlife Habitat Work  
 December 2013



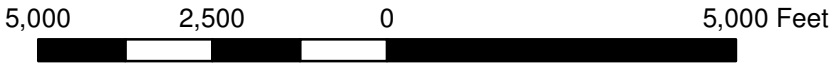
White Mountain National Forest

Forest Management Team:  
 Walter Wintturi  
 John Severance  
 Elise Lawson



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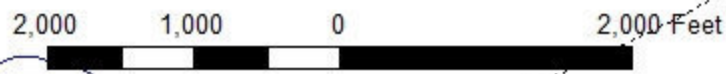
- Legend**
- Vernal Pools
  - RCF Roads
  - RCF Boundary
  - Permanent Trasects
  - 2500' Elevation
  - Wildlife Openings
  - Alder Regeneration
  - Aspen Regeneration
  - Softwood Release
  - Bowman Timber Sale
  - Beaver Pond Timber Sale
  - Ledge Timber Sale
  - Jimtown Timber Sale
  - Pillsbury Timber Sale



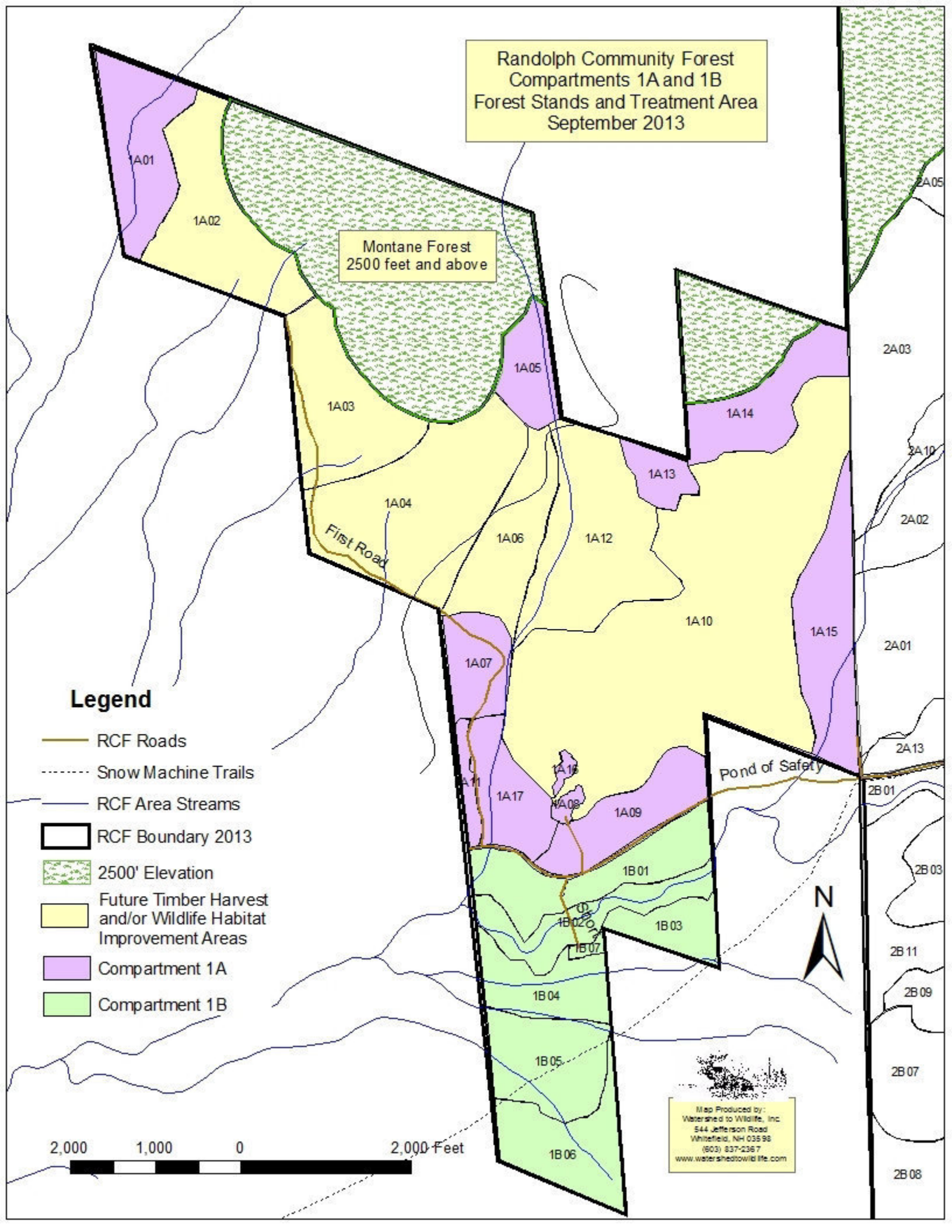
Randolph Community Forest  
 Compartments 1A and 1B  
 Forest Stands and Treatment Area  
 September 2013

Montane Forest  
 2500 feet and above

- Legend**
-  RCF Roads
  -  Snow Machine Trails
  -  RCF Area Streams
  -  RCF Boundary 2013
  -  2500' Elevation
  -  Future Timber Harvest and/or Wildlife Habitat Improvement Areas
  -  Compartment 1A
  -  Compartment 1B



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# Compartment 1B - Overstory Vegetation Summary

Compartment area 169 acres: 0% regeneration, 0% saplings, 43.2% poles, 55.6% small sawtimber, 1% openings

## Characteristics by Stands

stands	Stand area (ac)	Forest type	Size class	Basal area (sq.ft/ac)	Med. dbh (in)
3	15.0	aspen-birch	pole	26.7	10.13
4	24.0	aspen-birch	pole	35.0	9.14
5	34.0	aspen-birch	pole	38.0	10.00
6	33.0	sugar maple (pure)	small sawtimber	74.0	12.27
7	2.0	unidentified species (pure)	non-forested	0.0	0.00
1	36.0	northern hardwoods	small sawtimber	64.0	10.56
2	25.0	northern hardwoods	small sawtimber	50.0	10.80

## Area by forest type and size class

Forest type	regeneration	sapling	pole	small sawtimber	large sawtimber	non-forested	Total
aspen-birch	0.0	0.0	73.0	0.0	0.0	0.0	73.0
Sugar maple	0.0	0.0	0.0	33.0	0.0	0.0	33.0
opening	0.0	0.0	0.0	0.0	0.0	2.0	2.0
northern hardwoods	0.0	0.0	0.0	61.0	0.0	0.0	61.0
<b>Total</b>	0.0	0.0	73.0	94.0	0.0	2.0	169.



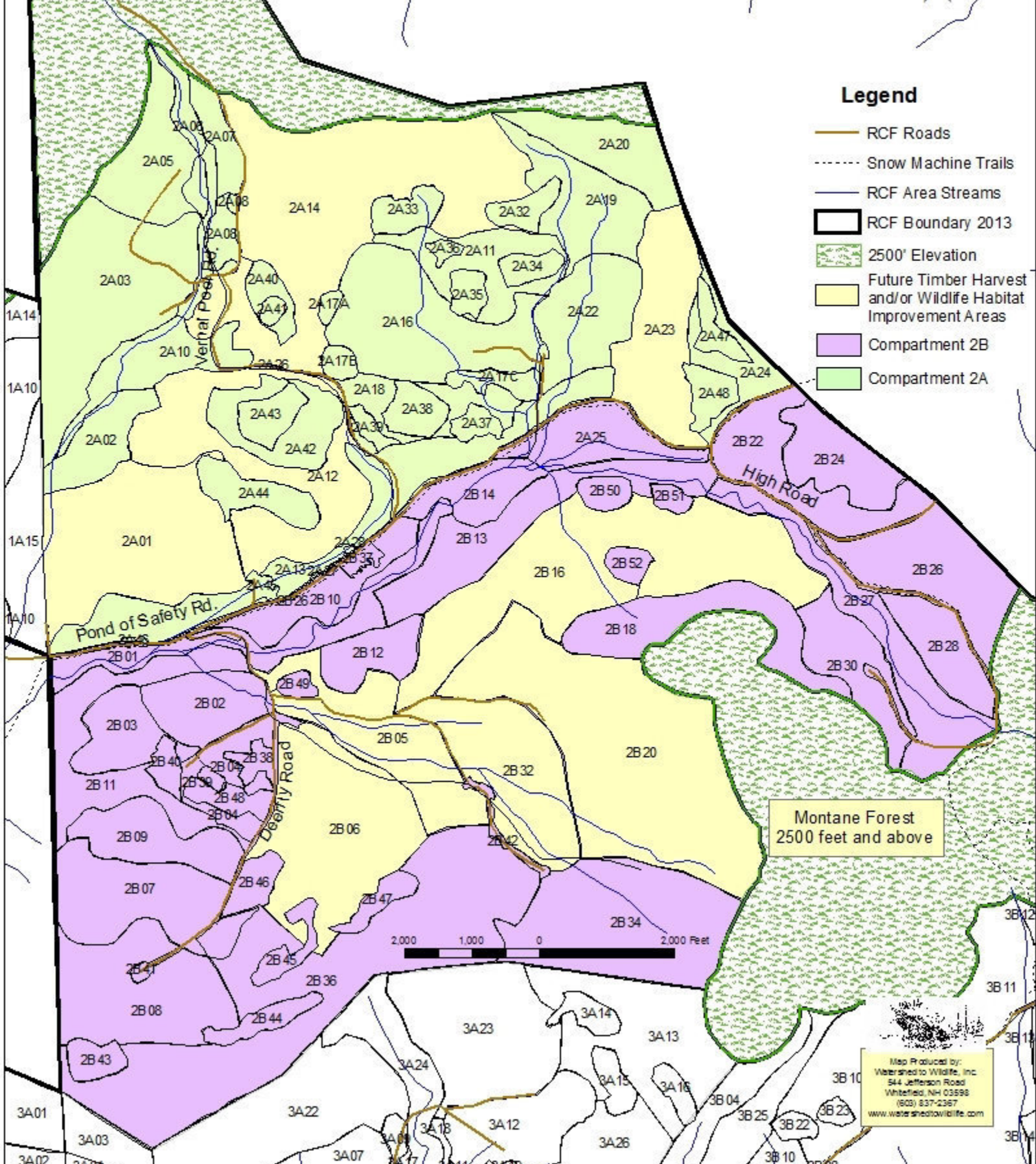
Randolph Community Forest  
 Compartments 2A and 2B  
 Forest Stands and Treatment Area  
 September 2013

Montane Forest  
 2500 feet and above



**Legend**

- RCF Roads
- Snow Machine Trails
- RCF Area Streams
- RCF Boundary 2013
- 2500' Elevation
- Future Timber Harvest and/or Wildlife Habitat Improvement Areas
- Compartment 2B
- Compartment 2A



Montane Forest  
 2500 feet and above

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# Compartment 2A - Overstory Vegetation Summary

Compartment area 1,406 acres: 13.5% regeneration, 0.2% sapling, 55.9% poles, 30.2% small sawtimber, 1% openings

## Characteristics by Stands

stands	Stand area (ac)	Forest type	Basal area (sq.ft/ac)	Size class	Med. dbh (in)
1	123.0	northern hardwoods	106.7	small sawtimber	11.90
2	29.0	northern hardwoods	54.0	small sawtimber	11.22
3	115.0	northern hardwoods	97.1	small sawtimber	10.65
5	51.0	northern hardwoods	60.0	pole	9.78
6	20.0	northern hardwoods	80.0	small sawtimber	12.00
7	16.0	northern hardwoods	114.0	pole	8.95
8	10.0	paper birch (pure)	104.0	pole	4.88
10	37.0	spruce-northern hardwoods	154.0	pole	7.43
12	94.0	northern hardwoods	100.0	small sawtimber	10.64
13	93.0	spruce-northern hardwoods	68.8	pole	9.35
14	208.0	northern hardwoods	90.0	pole	9.90
11	36.0	northern hardwoods	78.3	pole	10.38
16	91.0	northern hardwoods	31.4	pole	9.36
17	17.0	Northern hardwoods	0.0	regeneration	0.00
18	25.0	northern hardwoods	154.0	pole	9.39
19	49.0	northern hardwoods	93.3	pole	8.38
20	40.0	spruce-fir	105.0	small sawtimber	12.67
22	49.0	spruce-northern hardwoods		pole	9.30
23	71.0	northern hardwoods	106.7	pole	9.67
24	22.0	northern hardwoods	54.0	regeneration	0.00
25	37.0	northern hardwoods	97.1	pole	9.42
26	1.0	quaking aspen (pure)	60.0	regeneration	0.00
27	1.0	quaking aspen (pure)	80.0	regeneration	0.00
28	1.0	quaking aspen (pure)	114.0	regeneration	0.00
30	1.0	opening		non-forested	0.00
31	1.0	opening		non-forested	0.00
32	10.0	northern hardwoods	100.0	regeneration	0.00
33	12.0	northern hardwoods	68.8	regeneration	0.00
34	8.0	northern hardwoods	90.0	regeneration	0.00

stands	Stand area (ac)	Forest type	Basal area (sq.ft/ac)	Size class	Med. dbh (in)
35	7.0	northern hardwoods	78.3	regeneration	0.00
36	3.0	northern hardwoods	31.4	regeneration	0.00
37	6.0	northern hardwoods	0.0	regeneration	0.00
38	13.0	northern hardwoods	154.0	regeneration	0.00
39	4.0	northern hardwoods	93.3	regeneration	0.00
40	10.0	northern hardwoods	105.0	regeneration	0.00
41	3.0	northern hardwoods		small sawtimber	11.64
42	33.0	northern hardwoods	106.7	regeneration	0.00
43	13.0	northern hardwoods	54.0	pole	10.15
44	21.0	northern hardwoods	97.1	regeneration	0.00
stand 45	3.0	aspen	60.0	sapling	1.00
46	1.0	opening		non-forested	0.00
47	9.0	aspen	114.0	regeneration	0.00
48	12.0	aspen	104.0	regeneration	0.00

### Area by forest type and size class

Forest type	regeneration	sapling	pole	small sawtimber	large sawtimber	Total
<b>northern hardwoods</b>	166.0	0.0	597.0	384.0	0.0	1,147.0
<b>Paper birch</b>	0.0	0.0	10.0	0.0	0.0	10.0
<b>spruce-northern hardwoods</b>	0.0	0.0	179.0	0.0	0.0	179.0
<b>spruce-fir</b>	0.0	0.0	0.0	40.0	0.0	40.0
<b>aspen</b>	24.0	3.0	0.0	0.0	0.0	27.0
<b>Total</b>	190.0	3.0	786.0	424.0	0.0	<b>1,403</b>

# Compartment 2B - Overstory Vegetation Summary

Compartment area 1,952 acres: 6.1% regeneration, 0% saplings, 45.5% poles, 47.6% small sawtimber, 1% openings

## Characteristics by Stands

stands	Stand area (ac)	Forest type	Size class	Med. dbh (in)	Basal area (sq.ft/ac)
1	49.0	spruce-fir	small sawtimber	11.27	88.0
2	36.0	northern hardwoods	pole	10.00	80.0
3	29.0	spruce-fir	pole	7.73	85.7
4	20.0	aspen	pole	7.41	74.0
5	71.0	northern hardwoods	pole	10.00	82.9
6	114.0	northern hardwoods	pole	9.73	95.0
8	85.0	northern hardwoods	small sawtimber	10.82	59.2
10	32.0	spruce-fir	pole	9.44	78.0
12	24.0	spruce-northern hardwoods	pole	7.95	86.0
14	25.0	spruce-fir	regeneration	0.00	0.0
16	165.0	northern hardwoods	pole	10.44	112.3
18	56.0	spruce-northern hardwoods	small sawtimber	11.69	65.0
20	206.0	northern hardwoods	small sawtimber	12.00	70.0
22	52.0	northern hardwoods	pole	9.73	46.3
24	37.0	spruce-fir	pole	8.12	56.7
26	64.0	northern hardwoods	pole	9.04	35.7
27	63.0	spruce-northern hardwoods	small sawtimber	12.62	86.7
28	31.0	spruce-fir	pole	9.14	23.3
30	39.0	northern hardwoods	pole	8.26	51.7
32	76.0	northern hardwoods	small sawtimber	11.44	122.9
34	112.0	northern hardwoods	small sawtimber	11.52	100.0
36	218.0	northern hardwoods	small sawtimber	11.39	91.4
13	64.0	northern hardwoods	small sawtimber	10.88	86.0
37	4.0	unidentified species (pure)	non-forested	0.00	0.0
38	6.0	spruce-northern hardwoods	regeneration	0.00	0.0
39	2.0	quaking aspen (pure)	regeneration	0.00	0.0
40	7.0	spruce-northern hardwoods	regeneration	0.00	0.0
42	5.0	opening	non-forested	0.00	0.0
43	10.0	northern hardwoods	regeneration	0.00	0.0

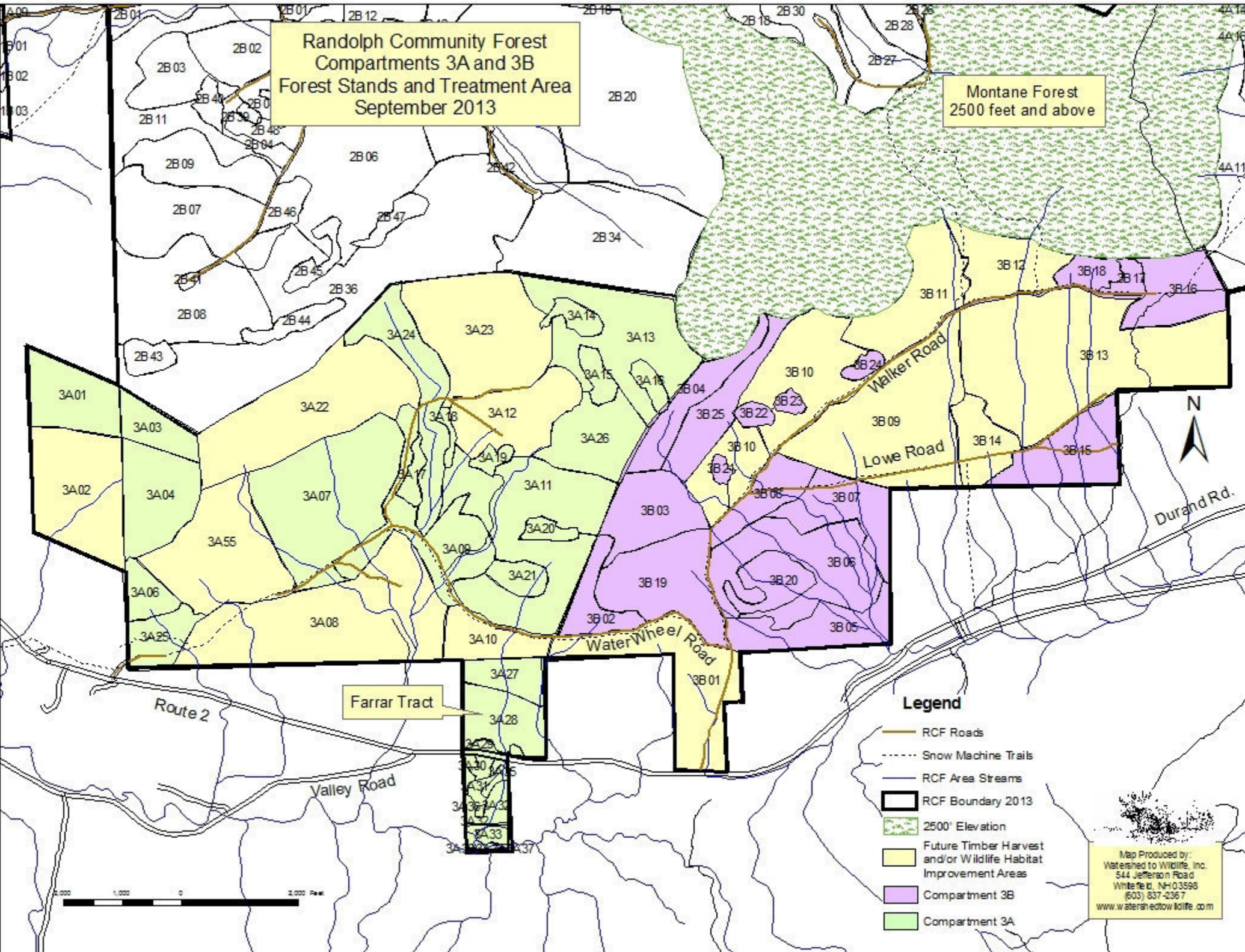
stands	Stand area (ac)	Forest type	Size class	Med. dbh (in)	Basal area (sq.ft/ac)
44	11.0	northern hardwoods	regeneration	0.00	0.0
45	9.0	northern hardwoods	regeneration	0.00	0.0
46	11.0	northern hardwoods	regeneration	0.00	0.0
47	9.0	northern hardwoods	regeneration	0.00	0.0
48	10.0	aspen	regeneration	0.00	0.0
49	4.0	opening	non-forested	0.00	0.0
50	8.0	northern hardwoods	regeneration	0.00	0.0
51	4.0	northern hardwoods	regeneration	0.00	0.0
52	7.0	northern hardwoods	regeneration	0.00	0.0
11	64.0	northern hardwoods	pole	9.25	45.7
9	39.0	northern hardwoods	pole	10.43	125.5
7	72.0	yellow birch (pure)	pole	8.80	50.0
41	2.0	opening	non-forested	0.00	0.0

### Area by forest type and size class

Forest type	regeneration	sapling	pole	small sawtimber	large sawtimber	non- forested	Total
spruce-fir	25.0	0.0	129.0	49.0	0.0	0.0	203.0
northern hardwoods	69.0	0.0	644.0	761.0	0.0	0.0	1,474.0
aspen	12.0	0.0	20.0	0.0	0.0	0.0	32.0
spruce-northern hardwoods	13.0	0.0	24.0	119.0	0.0	0.0	156.0
Non forest	0.0	0.0	0.0	0.0	0.0	15.0	15.0
Yellow birch	0.0	0.0	72.0	0.0	0.0	0.0	72.0
<b>Total</b>	119.0	0.0	889.0	929.0	0.0	4.0	1,952.0

**Randolph Community Forest  
Compartments 3A and 3B  
Forest Stands and Treatment Area  
September 2013**

Montane Forest  
2500 feet and above



**Legend**

- RCF Roads
- Snow Machine Trails
- RCF Area Streams
- RCF Boundary 2013
- 2500' Elevation
- Future Timber Harvest and/or Wildlife Habitat Improvement Areas
- Compartment 3B
- Compartment 3A



Map Produced by:  
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# Compartment 3A - Overstory Vegetation Summary

Compartment area 1,255 acres: 5.6% regeneration, 0% saplings, 22.2 % poles, 70.3% small sawtimber, 1.8% large sawtimber, 1% openings

## Characteristics by Stands

stands	Stand area (ac)	Forest type	Size class	Med. dbh (in)	Basal area (sq.ft/ac)
55	80.0	sugar maple (pure)	small sawtimber	12.25	128.8
7	109.0	sugar maple (pure)	pole	9.45	92.7
6	14.0	spruce	regeneration	0.00	0.0
2	73.0	northern hardwoods	small sawtimber	12.77	106.0
4	47.0	northern hardwoods	small sawtimber	11.58	103.3
8	137.0	northern hardwoods	small sawtimber	11.45	82.5
9	55.0	northern hardwoods	pole	9.64	22.0
10	24.0	northern hardwoods	small sawtimber	10.65	103.3
11	115.0	northern hardwoods	pole	9.70	108.0
12	49.0	northern hardwoods	small sawtimber	11.88	110.0
1	39.0	northern hardwoods	small sawtimber	10.80	78.6
3	20.0	northern hardwoods	small sawtimber	12.00	83.3
13	78.0	sugar maple (pure)	small sawtimber	10.98	90.0
17	6.0	aspen	regeneration	0.00	0.0
18	3.0	sugar maple (pure)	regeneration	0.00	0.0
19	5.0	sugar maple (pure)	regeneration	0.00	0.0
20	6.0	sugar maple (pure)	regeneration	0.00	0.0
21	11.0	northern hardwoods	regeneration	0.00	0.0
14	9.0	northern hardwoods	regeneration	0.00	0.0
15	9.0	northern hardwoods	regeneration	0.00	0.0
16	7.0	northern hardwoods	regeneration	0.00	0.0
stand 22	104.0	sugar maple (pure)	small sawtimber	12.96	94.5
stand 23	92.0	sugar maple (pure)	small sawtimber	13.87	94.0
stand 24	51.0	northern hardwoods	small sawtimber	11.24	70.0
stand 25	22.0	maple	large sawtimber	18.00	160.0
stand 26	42.0	spruce-northern hardwoods	small sawtimber	11.64	73.3
stand 27	21.0	northern hardwoods	small sawtimber	14.32	126.7
stand 28	25.0	spruce-northern hardwoods	small sawtimber	10.74	126.7
stand 29	1.0		non-forested	0.00	0.0

<b>stands</b>	<b>Stand area (ac)</b>	<b>Forest type</b>	<b>Size class</b>	<b>Med. dbh (in)</b>	<b>Basal area (sq.ft/ac)</b>
<b>stand 30</b>	1.0		non-forested	0.00	0.0

### **Area by forest type and size class**

<b>Forest type</b>	<b>regeneration</b>	<b>sapling</b>	<b>pole</b>	<b>small sawtimber</b>	<b>large sawtimber</b>	<b>Total</b>
<b>Sugar maple</b>	14.0	0.0	109.0	354.0	22.0	499.0
<b>spruce</b>	14.0	0.0	0.0	0.0	0.0	14.0
<b>northern hardwoods</b>	36.0	0.0	170.0	461.0	0.0	667.0
<b>aspen</b>	6.0	0.0	0.0	0.0	0.0	6.0
<b>spruce-northern hardwoods</b>	0.0	0.0	0.0	67.0	0.0	67.0
<b>Total</b>	70.0	0.0	279.0	882.0	22.0	1,253.0

## Compartment 3B - Overstory Vegetation Summary

Compartment area 1,095 acres: 5.8% regeneration, 0% saplings, 55.3% poles, 38.9% small sawtimber, 1% openings

### Characteristics by Stands

stands	Stand area (ac)	Forest type	Size class	Med. dbh (in)	Basal area (sq.ft/ac)
1	72.0	northern hardwoods	pole	9.42	94.5
2	22.0	northern hardwoods	small sawtimber	11.07	86.0
3	40.0	northern hardwoods	regeneration	0.00	0.0
4	29.0	northern hardwoods	pole	9.11	60.0
5	66.0	northern hardwoods	small sawtimber	10.59	77.1
6	72.0	northern hardwoods	small sawtimber	13.45	44.0
7	37.0	northern hardwoods	small sawtimber	11.24	74.0
8	25.0	northern hardwoods	pole	8.67	15.0
9	117.0	northern hardwoods	small sawtimber	12.21	112.0
10	90.0	northern hardwoods	small sawtimber	10.61	90.0
11	54.0	northern hardwoods	pole	9.84	148.0
12	38.0	northern hardwoods	pole	9.40	120.0
13	176.0	northern hardwoods	pole	9.26	109.2
14	26.0	northern hardwoods	pole	7.13	100.0
15	44.0	northern hardwoods	pole	7.79	85.0
16	37.0	northern hardwoods	pole	9.54	65.0
17	7.0	northern hardwoods	regeneration	0.00	0.0
18	12.0	northern hardwoods	pole	8.00	10.0
19	59.0	northern hardwoods	pole	9.53	88.6
20	22.0	northern hardwoods	small sawtimber	14.38	74.0
21	3.0	northern hardwoods	regeneration	0.00	0.0
22	5.0	northern hardwoods	regeneration	0.00	0.0
23	4.0	northern hardwoods	regeneration	0.00	0.0
24	5.0	northern hardwoods	regeneration	0.00	0.0
stand 25	33.0	northern hardwoods	pole	9.00	30.0

## Area by forest type and size class

Forest type	regeneration	sapling	pole	small sawtimber	large sawtimber	Total
<b>northern hardwoods</b>	64.0	0.0	605.0	426.0	0.0	1,095.0
<b>Total</b>	64.0	0.0	605.0	426.0	0.0	1,095.0

Randolph Community Forest  
 Compartments 4A and 4B  
 Forest Stands  
 September 2013

**Legend**

-  Hiking Trails
-  RCF Roads
-  Snow Machine Trails
-  RCF Area Streams
-  RCF Boundary 2013
-  2500' Elevation
-  Compartment 4B
-  Compartment 3A

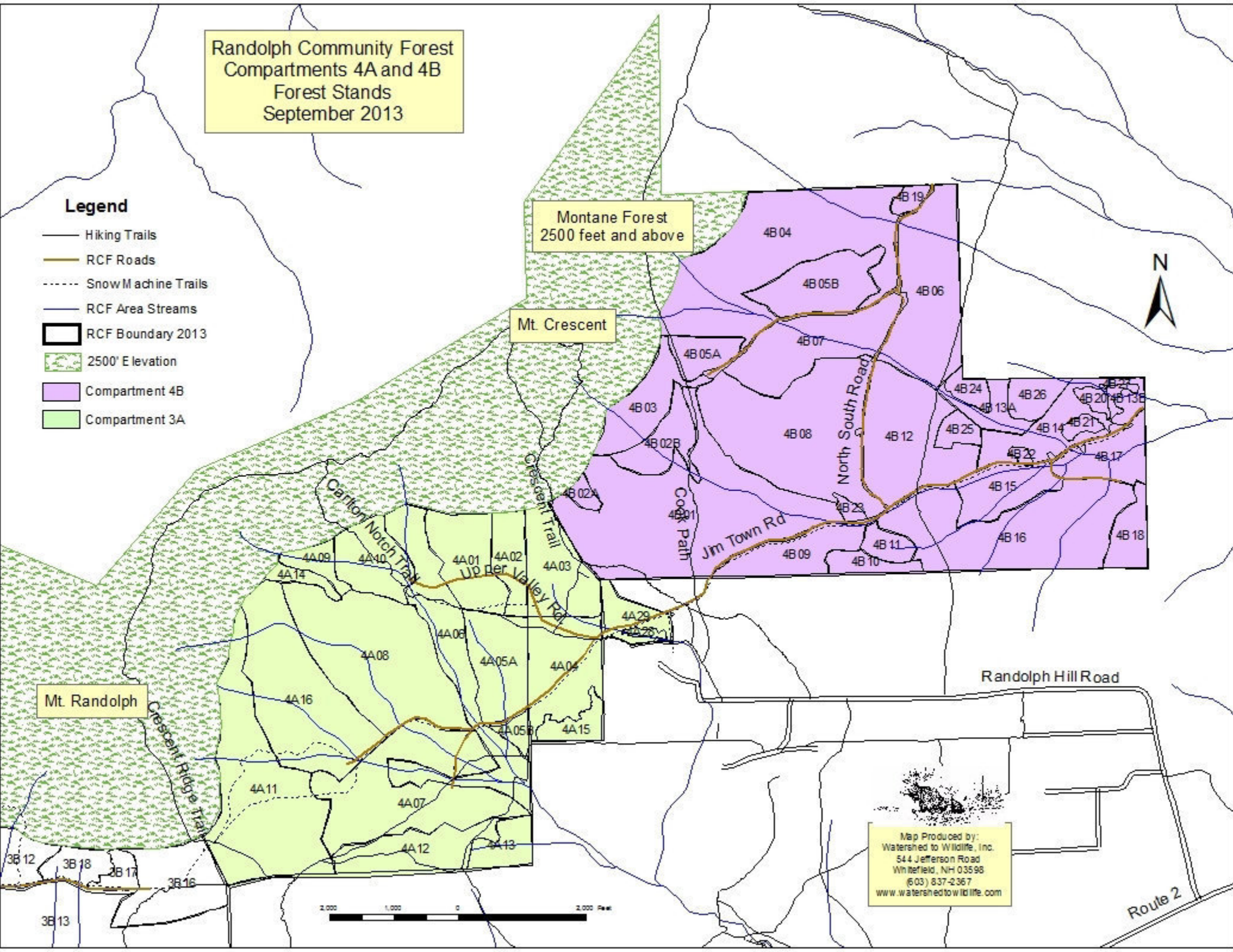
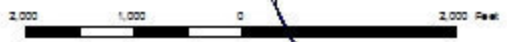


Montane Forest  
 2500 feet and above

Mt. Crescent

Mt. Randolph

Map Produced by:  
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# Compartment 4A - Overstory Vegetation Summary

Compartment area 662 acres: 3.6% regeneration, 0% saplings, 7.7% poles, 88.7% small sawtimber, 0.5% openings

## Characteristics by Stands

stands	Stand area (ac)	Forest type	Size class	Med. dbh (in)	Basal area (sq.ft/ac)
5	38.0	northern hardwoods	small sawtimber	12.34	87.0
7	80.0	northern hardwoods	small sawtimber	10.85	77.1
2	17.0	northern hardwoods	regeneration	0.00	0.0
1	32.0	sugar maple (pure)	small sawtimber	11.05	88.9
3	35.0	sugar maple (pure)	small sawtimber	11.14	93.3
9	9.0	northern hardwoods	small sawtimber	10.64	100.0
10	26.0	spruce-northern hardwoods	small sawtimber	11.35	56.7
4	41.0	northern hardwoods	pole	6.30	57.1
6	60.0	spruce-northern hardwoods	small sawtimber	12.25	96.0
8	90.0	northern hardwoods	small sawtimber	11.97	70.0
11	93.0	northern hardwoods	small sawtimber	10.62	76.0
12	30.0	northern hardwoods	small sawtimber	10.82	65.0
13	14.0	northern hardwoods	small sawtimber	11.33	48.0
14	7.0	northern hardwoods	regeneration	0.00	0.0
15	10.0	spruce-fir	pole	5.91	57.5
stand 16	80.0	northern hardwoods	small sawtimber	10.99	69.0

## Area by forest type and size class

Forest type	regeneration	sapling	pole	small sawtimber	large sawtimber	Total
northern hardwoods	24.0	0.0	41.0	434.0	0.0	499.0
Sugar maple	0.0	0.0	0.0	67.0	0.0	67.0
spruce-northern hardwoods	0.0	0.0	0.0	86.0	0.0	86.0
spruce-fir	0.0	0.0	10.0	0.0	0.0	10.0
<b>Total</b>	24.0	0.0	51.0	587.0	0.0	662.0

# Compartment 4B - Overstory Vegetation Summary

Compartment area 887 acres: 8% regeneration, 1.6% saplings, 44.1% poles, 44.9% small sawtimber, 0.1% openings

## Characteristics by Stands

stands	Stand area (ac)	Forest type	Size class	Med. dbh (in)	Basal area (sq.ft/ac)
1	133.0	northern hardwoods	small sawtimber	11.75	85.9
8	98.0	northern hardwoods	pole	7.09	66.0
2	23.0	northern hardwoods	regeneration	0.00	0.0
3	26.0	northern hardwoods	small sawtimber	10.80	50.0
4	113.0	northern hardwoods	small sawtimber	11.00	70.0
5	44.0	northern hardwoods	pole	6.72	35.7
6	63.0	northern hardwoods	small sawtimber	12.49	70.0
7	46.0	northern hardwoods	small sawtimber	13.26	86.0
9	25.0	northern hardwoods	pole	7.36	52.2
10	8.0	northern hardwoods	regeneration	0.00	0.0
11	8.0	Beaver Pond Area	non-forested	0.00	0.0
12	58.0	northern hardwoods	pole	7.00	70.0
13	17.0	northern hardwoods	small sawtimber	11.76	68.3
14	25.0	northern hardwoods	pole	4.76	74.0
15	23.0	northern hardwoods	pole	9.78	75.0
16	88.0	northern hardwoods	pole	9.34	58.0
17	21.0	spruce-northern hardwoods	pole	8.22	68.8
18	14.0	northern hardwoods	sapling	3.91	94.0
19	4.0	northern hardwoods	regeneration	0.00	0.0
20	4.0	northern hardwoods	regeneration	0.00	0.0
21	3.0	northern hardwoods	regeneration	0.00	0.0
22	2.0	northern hardwoods	regeneration	0.00	0.0
23	3.0	northern hardwoods	regeneration	0.00	0.0
24	6.0	northern hardwoods	regeneration	0.00	0.0
25	7.0	northern hardwoods	regeneration	0.00	0.0
26	11.0	northern hardwoods	regeneration	0.00	0.0
27	3.0	Wildlife opening	non-forested	0.00	0.0
28	2.0	Wildlife opening	non-forested	0.00	0.0
29	9.0	northern hardwoods	pole	9.89	76.0

## Area by forest type and size class

<b>Forest type</b>	<b>regeneration</b>	<b>sapling</b>	<b>pole</b>	<b>small sawtimber</b>	<b>large sawtimber</b>	<b>Total</b>
<b>northern hardwoods</b>	71.0	14.0	370.0	398.0	0.0	853.0
<b>spruce-northern hardwoods</b>	0.0	0.0	21.0	0.0	0.0	21.0
<b>Non forest</b>						13.0
<b>Total</b>	71.0	14.0	391.0	398.0	0.0	887.0

Randolph Community Forest  
NH Forest Soil Group Classification  
September 2013

